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Anti-depression public works: federal-aid roadbuilding, 1920-22

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Anti-depression public works:
Federal-aid roadbuilding, 1920-22

by

John Oscar Davis

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

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Major: Agricultural History and Rural Studies

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Signature was redacted for privacy.

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For the Major Program
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ABSTRACT

Construction of a U.S. highway system for automobile traffic began soon after World War I substantially as extensive anti-depression public works. Construction grew also from public support for roads for autos, prior development of plans and funds, and a brief depression’s lower building costs. A new highway program expanded quickly in 1920-22, using federal funds states and counties matched, making participation a state or local option. The expansion’s extent and location depended partly on existing roadbuilding and taxing systems; on patterns of geography, settlement, and economics; and on wishes of many governments’ officials and constituents. In early 1919, Congress had added to 1916 appropriations for the program and designated it to reduce unemployment expected in demobilization. When the economy did slow in 1920-22, better roads were widely in demand, even where government activity to offset depression was unusual. Citizens debated using the program locally to add jobs and spending while markets of farm and factory goods were slow—a proposition opposed by some taxpayers, supported by many in labor unions or commerce, and discussed by voters before referendums on road bonds. Many areas relied less on farmers’ labor or taxes, turning to state taxation of vehicles and gasoline for roadbuilding’s growing costs. Congress set a hiring preference for veterans; some local groups urged excluding from road work Hispanic or transient white men. Every state spent some of the program’s funds, though variations were large. The Midwest outspent the South, North Atlantic, Plains, or West. States paved main routes; elsewhere, they spread improvements among rural areas by low-cost projects of grading or graveling. By mid-1922, an era when few Americans lived near a paved or graveled highway changed, and roads in many areas used new engineering standards, agreed on by state and federal agencies. The federal-aid program lacked the size to change quickly the nation’s economic course, though its spending in a depression supported efforts by states and localities in their other roadbuilding. A Progressive effort at balancing economic trends, it provided unemployment relief and economic stimulation in ways later useful in the 1930s and in planning the Interstate system.
CHAPTER 1

INTRODUCTION

The modern roadbuilding that in America helped support 1920s prosperity, provided the largest kind of work-relief of the 1930s, and stimulated the economy again in the Cold War developed in many of its forms quickly in 1920-22. Historical studies have considered many aspects of highway construction's growth in the 1900s, though few have concentrated on 1920-22, when increasing amounts of cash and machinery aided road work, changing practices in many of the nation's rural areas. Indeed, the 1919 policy Congress set for using road work to reduce unemployment has been noted, yet without much description of the policy's application, which first occurred in a brief depression in 1920-22. Reports from the period by highway agencies and newspapers can indicate whether the new program operated in every state, whether it expanded quickly and to much scale, how people perceived the program and its spending in a depression, and how the program affected government functions.

Rural communities came under active supervision by agencies in state and national capitals in building main roads. In many areas, a custom of farmers building and keeping up nearby roads, part of a heritage of yeomen's participation in government, changed also. Many men had left rural areas in the war and a postwar boom, and efforts to build and maintain roads in 1919 and early 1920 were slow for lack of laborers. Then, a new federal program, supplying capital and stimulating spending in 1920-22, helped create a large rural market for construction by many companies, able to employ men from communities far from the project. In the depressed economy by mid-1920, more men sought work as laborers, and construction costs for wages and supplies declined, increasing incentives for local and state governments to provide matching funds and begin work in the program. Such governments, including many unaccustomed to providing jobs in depressions, raised considerable amounts to share in the federal program of reduced-cost public works, lowering unemployment while improving their roads for auto traffic and commerce. The federal-aid work also increased the value of connecting other roads by
improvements through states' and localities' independent programs, whose postwar spending grew rapidly.

By 1920, the federal program of matching funds to build highways had built little since its approval in 1916. Yet awareness since 1916 of its plan to make new funds available yearly, to be spent within time limits, had helped stir planning by states and localities. World War I had put people, money, and equipment to work at other tasks than roadbuilding. In 1919, the program’s funds were increased in preparation for unemployment expected as the economy changed from military to peacetime production. By mid-1920, a postwar economic boom was slowing and the highway program expanding, using war-surplus construction machinery donated to states and a reserve of funds and plans prepared earlier. Many in industry, agriculture, and commerce would experience poor trading until mid-1922 or later. For the federal-aid highway program, rapid expansion in 1920-22 was due partly to the depression’s change in conditions for construction, to efforts at improving roads while reducing unemployment, and to popular support for such efforts. Speeding a change of road work from farm chore to wage labor, the construction of 1920-22 began a kind of public works in rural areas that would provide jobs and stimulate the economy often in the rest of the 1900s.

The federal road program was trying to respond also to changing travel conditions. The program’s early inactivity, producing few highways during or soon after the war, occurred in a period Irving Bernstein describes as one of growth for auto use and the auto industry. When Congress increased highway funds in 1919, its purposes, he notes, were to repair wartime damage to highways and “to provide employment, especially for demobilized soldiers.” The 1919 measure, which also aimed to stimulate spending, resulted partly from wartime planning on how to manage returning to a peacetime economy at war’s end. Similar planning in 1942 would include Bernstein’s study. Roadbuilding’s effect in one state, North Carolina, on employment in 1920-22 and on the 1920s economy was described by Cecil Kenneth Brown in 1930, during another depression. The auto, Brown contends, required new kinds of road surfaces, diminished counties as road agencies, and changed tax structures. Such change accelerated in much of the nation in 1920-22, when conditions for construction improved and incentives included those in the federal program.

Expansion of the road program (a cooperative effort by county, state, and federal governments) in a depression affected the countryside and its residents in ways identified in studies of related topics. Robert H. Wiebe describes growing interrelation of communities with distant economic and political centers in the nation in 1877-1920 from better transportation and communications and more-effective organizations. For Bruce E. Seely, the 1916 road program was consistent in form with a growing
centralization of power in the nation after the 1870s. Seely notes that, besides the 1916 law’s requirement that states have highway agencies to obtain its funds, federal road officials wanted the new program “to end the pattern of counties constructing all roads under loose or nonexistent state supervision.” Also, pre-war theories and wartime experience persuaded many that centralized or coordinated actions could moderate an industrial economy’s boom-bust cycles by measures such as spending for public works. By 1921, the program’s result—increased road work in a depression, a practice frequent in U.S. cities in the late 1800s though rare in rural communities—prompted opposition from some farmers in many areas. Earlier in the 1900s, varied reforms attempted in farming areas had stirred resistance from many rural people, before centralizing trends in World War I increased such changes, according to David B. Danbom. Thus, a 1914 program for voluntary participation by matching federal funds for agricultural extension, he contends, had been considered in the South a way to battle the boll weevil though in parts of the North an additional expense for farmers’ taxes. Even before the 1916 road program, Hal S. Barron argues, farmers often resisted road improvements as the projects of townspeople, engineers and other urban professionals, and state governments. To many northern rural residents in the early 1900s, local control of roads remained important, a symbol for them of participation in government and a way to keep farmers’ taxes low, Barron and Danbom contend. Indeed, in the South the statute-labor system requiring work by each community’s men on roads to pay their taxes, practiced in America since the colonial period, remained the most widely used method of making and keeping roads by 1916, Howard Preston Lawrence argues.3

The statute-labor system, waning in the late 1800s and early 1900s as cities, counties, and states developed road functions and relied on cash taxes, would change further in many rural communities in the post-World War I depression. Through their statute labor, men paid taxes assessed on their property and a poll tax due from each man. In the North, many men in rural townships in the early 1900s still paid road taxes in labor, though many urban men by the 1870s paid in cash. As street expenses steadily rose, the poll tax’s importance declined for some cities; its small revenues failed to match collection costs in large populations. Men in cities and those in the country in the 1890s sometimes hired laborers to work off their road tax. In Virginia, the statute-labor system ended in 1894 when a court approved a road worker’s challenge, Peter Wallenstein notes. In other southern areas by the early 1900s, influential men gained exemptions from statute labor, some men hired others to work off their tax, fines for non-payment were small, and supplying teams or tools brought tax concessions. Black men, many of whom owned little taxable property and were not expected to pay a poll tax, were worked on roads often as convicts, a practice, like statute labor, weakened by the 1920-22 depression’s rising unemployment and
expanding road work for wages. In parts of the Plains and the West, rural settlement was insufficient for effective statute labor, and so keeping up nearby roads was sometimes a task for urban boosters. Many people had left the nation’s rural areas in the early 1900s and during the war. By 1920, with auto traffic growing, the statute-labor system had a smaller pool of workers, for less than one-third of Americans lived on farms.4

During the depression, the custom of statute labor also encountered efforts to levy poll taxes on women (strengthening payment in cash instead of work) and to exempt from the taxes ex-servicemen (further weakening the notion they applied to every man). And in the depression’s better conditions for construction, many states and counties implemented public works, particularly roadbuilding, often financed by bonds, repayable in cash instead of labor. In rural areas, the new federal program built many projects whose size and complexity needed efforts exceeding nearby rural communities’ resources of skills, materials, equipment, and laboring men. Construction businesses could convert cash into those resources, drawing from beyond the community. Even in more-modest projects such as applying gravel surfacing, the new program supplied cash to rural areas, paying wages that surpassed the value of many men’s earlier statute-labor taxes. The auto, and money spent to aid in its use in 1920-22, further changed public works in many rural areas from tasks using community labor to ones using government funds. Statewide taxation increased, offsetting reliance on local taxes on land. Revenue increased from sources that were small or lacking in earlier depressions, from states’ auto registration fees and gasoline taxes. States and counties by 1920 were spending more on roads in their own programs, making contracts with construction businesses instead of notifying local farmers of a day to turn out for work on the roads. Yet the federal program, ready with a reserve of funds and plans and intending to use them to offset a depression, drew many states and counties into spending in its projects while the economy was slow. That countered a custom of responding to economic depressions by retrenchment—cutting public spending to give tax relief to landowners, which many farmers in 1921 and 1922 said they still favored. Nevertheless, highway spending of 1920-22 showed many rural people how such continuing government efforts could affect them and the economy of their community. Rural roads thereafter remained a project built with quickly variable public funds, expanding in the rest of the 1900s as needed for improving travel while traffic grew and for reducing unemployment and stimulating the economy. By late 1921, those were possibilities consistent with federal planning, evident in comments by the road program’s chief. Speaking in Omaha, Nebraska, to a national group of state highway officials, Thomas H. MacDonald said federal money already appropriated “is not all you are going to get for this kind of work.” He urged the officials “to go back to your states and tell the people that this is a permanent
scheme of construction. There may be times when only the minimum amount of work will be done, but there will always be road improvement." The federal Agriculture Department planned both to build roads in the program in good times and "to use this scheme of work to furnish employment during financial depressions."  

Dealing with a matter still importantly under community authority, the new program on roads permitted much local initiative in starting projects and shared supervisory powers with states. In that, it resembled the 1914 Smith-Lever Act's agricultural extension program, which also made grants of federal funds where they were matched by other governments. To avoid dealing directly with counties from a Washington office, which had slowed an experimental federal effort of 1912, the 1916 road program was to work with counties only through agencies of states, which would strengthen state authority and simplify federal tasks of administration. Thus, the 1916 program often was called the federal-aid highway program, indicating its grants of funds for road work under its supervision, or the federal-state highway program, reflecting its cooperation with states. The programs of 1912, 1914, and 1916 were voluntary; in each the requirement of matching federal funds by those of states or localities left participation to local decision. The 1916 program would allow more decentralization of authority than that used for other national purposes by earlier Progressives described by Samuel P. Hays. Thus, many postwar debates over choosing routes or issuing road bonds proceeded within states, and most protests by farmers were about agencies of their states or counties. Late-1921 changes in federal highway law would increase states' authority in the program, heightening concerns in many rural localities.  

Method  

Measuring how much the new program expanded in the depression is possible using states as units of comparison. State lines mattered in the program, for sometimes states similar in such ways as size, population, or wealth had large differences in their participation in the program, attributable partly to factors including financial preparation or political decisions. States' highway agencies differed in their policies, funds, and goals, also affecting work in the new program. The federal funds were allotted to states and spent upon agreement between federal and state officials. Amounts of states' spending in the program are comparable using totals published by the federal agency, the Bureau of Public Roads, part of the Agriculture Department. The totals for work to June 30, 1922, which the bureau calculated at the close of the federal fiscal year, indicate the roadbuilding activities in the worst of the depression. Before 1920, the program had completed little work in the nation, so that work by mid-1922 had been done mostly in the depression. The totals allow comparing work of two time periods—projects
completed by June 30, 1922, and projects still under way. In some states, activity in those periods shifted. Some states that were early leaders, completing many projects, cut their participation in projects under way; other states began slowly, completing few projects, yet with increased efforts in 1922 had many projects under way.  

Comparison of states is best made within regions, containing groups of states with similar conditions. Regional patterns in road work emerge. Within regions, states sometimes made similar choices in their road work. Totals allow comparison of states' spending of federal aid, their mileage of work, and the kind of work in projects they chose to begin. Many states in some regions, for example, spent large amounts on concrete paving, a costly surfacing needed for heavy traffic; others spent mostly for sand-clay surfacing, less costly and useful for light traffic. For paving projects, funds included larger amounts for materials and equipment, leaving a smaller proportion for unskilled laborers' wages than in projects for graveling. Such comparisons help indicate how many men the federal-aid projects employed in the depression, an item rarely included in totals published by federal or state agencies, and what kinds of tasks formed the work of many of the men.

The context of road work in 1920 is indicated in state totals for several measures of early-1900s settlement, economic development, and roadbuilding. In these, state totals often form regional patterns, in items such as number of farms, wage earners, or autos or proportions of population that was urban or of land that was in farms. How the economy affected people in general in the postwar boom and in the depression is reflected in comparisons of state totals for residents' incomes, as reported yearly on federal tax returns. State totals for incomes are compared within regions. And like state totals for some other data, they are compared within the nation in maps that rank totals at three levels among the forty-eight states.

Besides such comparisons of data, anecdotal comments help describe the road program in 1920-22. Information from state highway agencies and newspapers offer possible reasons for states' differences in data totals and illustrate the totals in terms of individual projects. Concerns of some particular groups are indicated in newspapers that circulated primarily among farmers or labor union members or blacks. Data and anecdotes are considered within each of five regions. Other chapters consider topical issues instead of being limited to a particular region.

The comparisons and discussion seek to explore four questions. First, did the new program operate in 1920-22 in all forty-eight states? Certainly, states differed in 1920 in their preparation for roadbuilding, particularly in their systems for financing large projects. Second, was the new program able to expand quickly and to large scale during the brief depression? Advocates of postwar roadbuilding as a
source of jobs in a depression had said the federal-aid road program could start projects rapidly throughout the nation, but managing such a program of construction in many counties at once would be new for many states. Some states spent large amounts in the program in 1921, others expanded the program by 1922, and still others were preparing in 1922 for an expansion yet to take place. Third, did public sentiment play a role in the program's expansion in the period? Proponents said roadbuilding would aid commerce or hire the unemployed; opponents called for lower taxes. And fourth, what effect did the program of 1920-22 have on structures used for various social and governmental functions? In some states, the program helped change public finance, recruitment of labor for road work, business and government capacity for construction, or cooperation among local, state, and federal agencies. And in later depressions, some officials might consider efforts similar to those of 1920-22.

Dissertation Organization

Chapters are grouped as two parts. In part one, states are units of comparison. The forty-eight states are grouped as regions, each considered in a chapter. Thus, five chapters discuss in turn the North Atlantic, South, Midwest, Plains, and West regions. Another chapter, concluding part one, compares states without reference to a regional boundary, ranking them among the forty-eight states as well as describing effects of a condition occurring across several states, the aridity of the Great Plains belt of counties.

The chapters on regions describe a context for 1920-22 roadbuilding. They use data and anecdotes to characterize previous road work in a region, states' development by 1920, and how states' economies fared in the depression. The chapters compare states' roadbuilding in terms of mileage, kind of work, and spending of federal funds. To aid in comparison, the five chapters on regions are organized in similar sections.

Each, for example, has a section on development by 1920, in which census data and anecdotes describe experience within the region of building roads before the new program. In particular, comparisons are made on such issues as how many autos or how many autos per person states had or what their chief crops were. States varied widely by 1920 in how extensive were their systems of roads or railroad tracks, when they had formed state highway agencies, how they had obtained labor for road work, and the size of their rural and urban populations.

Each regional chapter also has a section describing the depression in terms of individuals' incomes. State totals for amounts individuals reported on federal income-tax returns are compared by year to indicate trends of each state's economy. In many states, a boom is reflected in the 1920 total,
followed by much lower totals for 1921 and some recovery in the total for 1922. Dividing the totals for taxable income by totals for 1920 population yields a truer indication of wealth for states in most regions, particularly the South, where many people had incomes below the $1,000 that required filing a tax return. States with low totals had large problems in financing a quick expansion of public works in a depression, even with federal funds to pay part of the cost, and often they had fewer auto users for whom to provide roads.

Another section of the chapters on regions notes economic conditions of the depression's early months. Anecdotes from newspapers and highway agencies' reports indicate conditions in industry, agriculture, and road work in early months of 1921, when the new road program was expanding. A section discusses how states in each region raised funds to match the program's federal allotments. Some states lacked funds and left the task to counties, whose resources varied. States and counties often raised funds by issuing bonds, for which they asked voters' approval, providing occasions for expressions of sentiment on road work. Many states changed their revenue systems, forming state funds for highways, raising vehicle fees, or taxing gasoline. In a section on 1920-22 roadbuilding in the chapters on regions, anecdotes indicate construction conditions, and data totals help compare states in spending federal aid, completing work, and choosing among kinds of construction.

In part two, chapters describe several kinds of responses to the new federal-aid program. A chapter notes farmers' opposition to road work and compares states' efforts to spend their federal aid for low-cost kinds of construction to extend road improvements to more communities. Another chapter discusses such opposition in Iowa, where autos were in use on many farms and where every county participated in the new program. A chapter points to ways some men sought to use various preferences to direct the new program's hiring, particularly amid the labor mobility of the Southwest, where access to construction jobs by local or non-local men or among whites, blacks, and Hispanics was unsettled after the war. And a chapter argues the 1920-22 roadbuilding and that of the 1930s Depression provided experience useful again during and after a war in the 1940s, when jobs, economic stimulation, and better travel were objectives in planning a system of superhighways. For those objectives, some officials and planners of the mid-1940s and 1950s considered federal spending for roads still an effective activity, though it often had been small in 1920-42 compared to that by states and localities or to the varied projects of private construction.

A concluding chapter discusses the federal-aid road program of 1920-22 and relates its operation in rural areas to issues in several historians' studies. It uses elements of Wiebe's notions of an organizational basis of change as a way to interpret the 1920-22 road work with federal aid in states and
localities. It considers the road work's significance for rural communities, often in ways similar to those noted by Danbom and Barron, who have elaborated on Wiebe's description. Changes in 1920-22 in several rural customs in roadbuilding prompted frequent protests yet also considerable accommodation.

Early federal efforts in highways attempted to meet needs of rural people as travelers, postal customers, buyers and sellers in wider markets, landowners affecting location of roadways, and, in the early 1900s, often the chief taxpayers and laborers for roads. By 1920, urban and rural people were increasingly traveling roads in the countryside, driving autos, and so producing tax revenues for improvements. Rural roadbuilding in many areas had been changing in the early 1900s from a chore required of local farmers as a form of taxes to a job done for wages, making it work that could employ many men when needed. A post-World War I increase in roadbuilding by federal, state, and local governments speeded the change to wage work on roads, particularly amid a depression era's concerns for employment. Federal-aid road construction, a proposal from the 1800s, began in 1920-22 in many communities in a depression. Its activity differed then from a rural custom of cutting local public spending and property taxes while farmers' incomes were low. Yet it showed continued spending could aid people of rural communities and those from elsewhere. Starting projects for such spending would be difficult in many areas of the nation in 1920-22, particularly those with few people or autos.
PART ONE

FEDERAL-AID ROAD WORK IN 48 STATES

The new national program for auto highways had effects that varied by location. Offering to pay half the cost of construction, it supported an era of roadbuilding by other governments—states and some counties—that responded as they could and chose to do. Differing in their resources, some states used the program extensively, others relatively little. State officials chose varying ways to raise and spend the funds, and they chose from a range of projects. Terrain and other diverse conditions affected the task of building.

Much of the federal-aid roadbuilding—if measured among counties, states, or regions—can be associated with some conditions of settlement by 1920. Thus population, area, mileage of roads, number of motor vehicles, residents' income, and other measures of rural and urban development indicate much about how governments might participate in the new program. Political and administrative officials, aware of such factors and pursuing intentions of their own, further affected how governments used new road funds. Some officials, for example, sought particularly to hire many of the depression's jobless men, others to build a few main roads for heavy traffic, and others to spread improvements over a large mileage of roads. They tried to shape road projects to conditions of their area's development by 1920.

States may be compared by grouping them in five regions (figure 1). Forming regions allows comparison of states in subgroups of similar location and conditions. Yet regions are only a way of comparison in five chapters, for in 1920-22 the new road program operated through agencies of federal and state
Five Regions for Comparing Road Work

Figure 1. Forming five regions allows closer comparison of states' activities in federal-aid roadbuilding of 1920-22.

Governments. Plans were approved and coordinated by states, even where counties provided funds to match federal aid. Federal funds, measuring participation in the program, were allocated as totals for each state.

States or regions with small values on measures of development usually spent less in 1920-22 in federal aid for roads. That reduced the number of jobs they could create in a depression. Indeed, how much federal aid a state might receive depended by law on three such factors—population, area, and mileage of rural postal roads. Some states increased the number of jobs by choosing particular kinds of road projects. And some states in their road work outspent others similar to them, indicating better preparation of funds or a priority for better roads or more jobs, related partly to constituents' incomes before and during the depression (figure 2).
Figure 2. Changing patterns in individuals' incomes show in totals from 48 states ranked in three groups of 16 states. Data from Treasury Department, Internal Revenue, *Statistics of Income*, 1920-1922.
Reports of road construction in 1920-22 by public agencies rarely mention how many people the projects employed, yet they specify much about the work. Thus, state totals for spending of federal aid can indicate how many jobs the new program provided and how quickly the new program expanded before economic conditions improved, by mid-1922 in many areas. Similarly, the measures of development can indicate, in general comparisons, how a state could spend much or little on roads in an early period of auto traffic.

One important measure was net income of a state’s residents, indicating pre-depression wealth, the depression’s effect, support for roadbuilding, capacity for paying state and local taxes and buying autos, and extent of recovery in 1922. State totals for incomes individuals reported on federal income-tax returns allow comparison of how the economy affected residents in general in the states. In figure 2, the forty-eight states are ranked in three groups: sixteen states with highest values (dark shading), sixteen near the median value (light shading), and sixteen with lowest values (unshaded).

Such income often varied in regional patterns, whether in 1920 totals when divided by population (figure 2, upper left); in increases in the totals from 1919 to 1920 (upper right); in decreases from 1920 to 1921 (lower left); or in changes from 1920 to 1922, indicating extent of recovery (lower right). Though the totals omit incomes of less than $1,000, for which individuals were not required to file returns, they indicate trends that affected many other people than those who paid the tax.¹
CHAPTER 2

THE NORTH ATLANTIC REGION

In roadbuilding after World War I, officials of Atlantic-area states from Maryland to Maine often sought to provide for heavy traffic. Of the eleven states, most were small, and several were populous and industrialized. Autos and trucks often traveled extensive road systems connecting rural communities and urban centers, and main highways were developing for travel to regions to the south and west. The new federal-aid road program could operate through well-established state highway departments in this region where they appeared first.

The postwar economy extended prosperity in much of the region in 1919 and early 1920. Then, a depression brought layoffs among factory workers and cut incomes of farmers and others in trade and commerce. When spending declined in much of the economy, funds were available in the new federal-aid road program, through which contractors’ crews and equipment could be hired and road materials bought. Support for improving roads was widespread in the region. In many of its areas, motor vehicles were numerous in the traffic and were gaining commercial uses. (States of the region are shown in figure 1, page 11.)

The federal funds for roads were available to North Atlantic states in considerable amounts, set by the program’s allotment formula. The region had several states ranking high in two of the formula’s elements (population and mileage of rural post roads) if not in the third (area). Federal funds were to be matched by equal amounts from local or state funds, an incentive for officials to fit projects to local needs and wishes. Matching the funds, even in large amounts, often was made easier here in 1920-22 using revenue systems formed in the states’ early experience in road work.¹

Development by 1920

Road work occurred in a context of local characteristics, some of which were similar in much of a state or region. Such factors as intensive settlement and high income, for example, indicate locations of auto traffic and tax capacity. They show areas that likely had other conditions: funds for roads,
popular support for government spending for roads, and public officials who took those factors into account and sought road projects. To obtain federal money for projects, state or local officials would put up at least as much in funds they raised. Throughout the nation, officials tried to match road projects of various kinds with local characteristics, seeking approval from constituents and from agencies of county, state, and federal governments. In the North Atlantic region, urban settlement and a developed industrial economy would influence the kind and amount of road work.

Much of the region had been governed as states some 130 years. Seven states were the nation’s most thickly settled, and nine ranked among the eleven smallest in area. Indeed, average state area was one-fourth that in the nation. People had experienced travel for years on some of the nation’s most compact and elaborated road systems, built and improved before federal aid.²

Here as elsewhere, issues that had preceded autos would still interest Progressives, when forming the federal road program in 1916 or implementing it by 1920. Community autonomy and other traditions in road work were eroding, influenced by urban and state governments and the economy. By 1870, taxes paid in cash provided road work in Massachusetts’ larger urban areas, though its rural areas still relied on tax payment in labor. That year, a speaker before Maine’s Board of Agriculture emphasized rural roads’ continuing local significance. Routes were hard to change, he said, for “almost every selectman has some friend whose personal rights must be taken care of,” often a farmer seeking to keep a road he had built. Soon, improvement in roads seemed more promising with a single change, a road-scaper machine. Marketed by 1879 for hitching to horses, it increased effects of local efforts at small cost. Several states in the 1880s and 1890s eased limits on localities’ road work. Yet raising state authority to coordinate road conditions remained difficult, as in Massachusetts, where legislation for such a change brought debate from 1887 into the 1890s. Many there failed “to realize the great importance of a better and more complete system of highways,” G. A. Perkins, state highway commission chairman, said in 1894. Opponents claimed costs would raise local taxes. Still, “it was maintained that manufacturers, teamsters, and farmers would be greatly benefited by the construction of a general system of roads, as the cost of transportation would be greatly reduced.” By the early 1900s, the region had many roads that localities had improved.³

To counter weather and heavy traffic, officials sought durable surfaces for many roads. By 1904, seven states ranked in the top half of states in the nation in surfaced mileage. Such early road improvement was greatest in states that were urbanized and leaders in commerce and industry—Massachusetts, New York, New Jersey, Connecticut, and Pennsylvania. Still, large mileages were surfaced also in more-rural Vermont and Maine. The cost of durable surfaces required greater funding. Though New York since 1898 had offered to match local funds for road work, many townships there kept collecting road tax in labor, the form of payment for 66 percent of the tax in 1904. New York approved $50
million in road bonds in 1905 and another $50 million in 1912. By 1914, the pattern of rankings from ten years earlier largely continued. New York led the region in surfaced roads, the four other industrializing states also had increased their mileage, and the five still ranked in the top half of the nation’s states.4

Such road work resulted from efforts of local governments, organized groups, and the earliest state highway departments. The region provided a majority of members in bicyclists’ League of American Wheelmen. The group began a good-roads effort in 1888 and influenced congressional approval of a U.S. highway commission in 1892 and an Office of Road Inquiry in the Agriculture Department in 1893. Also in 1893, Massachusetts created the nation’s first state highway department. Six North Atlantic states formed departments by 1900, when bicycles and a few automobiles were showing new possibilities of speed.5

Extensive road systems grew from dense settlement. By 1920, ten of the region’s states were among the nation’s top twenty-one in road mileage per square mile of state area. Elaborate systems developed also in railroads; seven states ranked among the nation’s top thirteen in 1919 in track mileage per square mile. Many people lived in urban areas. For coastal states from New Hampshire to Maryland in 1920, at least 60 percent of population was urban, except for Delaware, where it exceeded 50 percent. In the region’s northern areas, settlement was more rural.6

Traffic of autos and trucks spread in the early 1900s and World War I. By 1919, New York’s total for registered motor vehicles was the nation’s largest. Pennsylvania ranked third and Massachusetts tenth. Neighboring states shared much traffic, as a highway official noted in 1921 of New Jersey: “Situated as it is, between New York and Pennsylvania, this state is one of the most travelled in the country.” Projects complete in New Jersey by late 1921 would include a paved route from New York to Atlantic City by way of Trenton and Camden. For heavy traffic, its surfacing would be mostly 18 to 20 feet wide. Motorized traffic was noticeable even in smaller states. Though Rhode Island had few vehicles in 1919, the total was 20 for each mile of its rural roads, the nation’s highest ratio. Motorists escaped congestion most often in the region’s northern areas, except in summer, when vacationers’ autos added to traffic. Auto ownership’s rapid growth since 1910 had increased support and funds for road improvements.7

Much of the nation’s industry and commerce had developed in the region. New York and Pennsylvania led the forty-eight states in number of wage earners in 1919. The average per state for the region was nearly twice what it was for the nation. Factories and commerce provided to railroads much freight, potential truck cargo if roads improved. Track systems remained small in several of the region’s states, yet freight traffic had supported growth of some of the nation’s leading track mileages in New York and Pennsylvania—large states and centers of commerce extending beyond the region.8
Agriculture provided other freight and supported residents in many rural areas. Improved farmland in 1920 occupied about half of Delaware and Maryland and exceeded a quarter of area in four other states. Since the 1860s, the region's coastal areas had been among those producing truck crops—fruits and vegetables for urban consumers. By 1895, truck crops grew in large amounts near Baltimore, Philadelphia, and New York City, requiring quick shipment by rail and wagon. 

**Describing the Depression**

Like much of the nation, the region participated in a boom in 1919, though prosperity varied by location. New York had the nation's largest amount in statewide totals for residents' net incomes reported that year on federal tax returns. Indeed, New York's total was more than twice that of any other state in the nation. Pennsylvania ranked second, Massachusetts fourth, and New Jersey seventh. By contrast, three states—Vermont, Delaware, and New Hampshire—ranked among the nation's lowest nine in incomes, partly from ranking among the smallest eight in population. Though income totals indicate comparative size of states' economies, the figures are incomplete, for no tax returns were required for incomes below $1,000. (North Atlantic states' totals for individuals' incomes 1919-22 are compared among totals for forty-eight states in figure 2, page 12.)

To describe states' economies more completely, dividing the state totals for incomes by state population for 1920 yields a state's taxable personal income per capita. Even considering its large population, the region fared well in the 1920 prosperity. Of the eleven states, eight ranked in the top one-third of the nation's states in per-capita taxable personal income. The region's poorest state had levels of such income exceeding those of nineteen other states in the nation. Such income could support auto use and produce tax revenues for working on local roads and matching federal highway funds.

The region shared in the nation's economic boom in 1920 and depression in 1921, indicated by yearly changes in state totals for taxable personal income. In 1920, the total fell from 1919 levels for only one of the region's states, Delaware, and the totals rose at least 20 percent for eight of its other states. In 1921, totals fell for all the nation's forty-eight states, though many large declines were outside the North Atlantic region. The region's largest declines, at least 20 percent each, were in Connecticut, Maryland, and Delaware. Elsewhere in the region, declines were of at least 10 percent. New York, with the region's largest total, in 1921 had the smallest percentage decline.

Though the depression reduced 1921 incomes, totals remained above levels of 1919 in much of the region, particularly in states with largest incomes. Only in Maryland, Delaware, and Connecticut did statewide income totals in the region fall in 1921 below levels of 1919. Those three were among thirty-two such states in the nation. Still, the economy in the region declined rapidly from the 1920 boom, and
many people, particularly among those with income low enough to be exempt from federal tax returns, experienced losses and unemployment.\textsuperscript{13}

When the depression eased by late 1922, many incomes remained below those of the 1920 boom. In each of the eleven states, 1922 income totals exceeded levels of 1921. The largest percentage increases over 1921 were for Delaware, New Jersey, and Connecticut. The smallest was for Pennsylvania, though it had spent more in federal aid than many states in the nation. And despite extensive roadbuilding and some improvement in much of the economy by late 1922, only two North Atlantic states that year recovered their income levels of the 1920 boom. In them, the margin over 1920 was small, less than 2 percent.\textsuperscript{14}

The comparisons indicate conditions in general, yet, within states, income trends varied widely in localities. Layoffs in New Brunswick, New Jersey, by late 1920 made buying food difficult for many people. Housewives boycotted and picketed stores, sometimes throwing customers’ purchases onto the street. When those activities closed forty-five shops of butchers and bakers in early 1921, retailers claimed they could not cut prices until their wholesalers did. Farmers in central New York got advice from their marketing organization to stop holding potatoes and cabbage to reduce a surplus, for imports were keeping prices low. Cabbage was selling at prices that would not pay for hauling it to market if it could be fed to livestock.\textsuperscript{15}

Unemployment was evident in many urban areas. By late 1920, many people were jobless or making less in several large factory areas, according to a labor journal. In New York, “80,000 clothing workers are out, while in the silk center of Paterson, N.J., only 10 per cent of the weavers are at their looms,” making reduced wages. “Wage cuts have been accepted by cotton and woolen workers throughout New England.” And “machinists of the comparatively unskilled type are being laid off everywhere; perhaps they are offered their jobs again in a week at a wage of 25 per cent less.” Layoffs were numerous throughout the nation, and so “for men thrown out of work in one town to move to another in the next state is, for the time being, utterly useless.”\textsuperscript{16}

**Early Months**

A changing economy improved roadbuilding conditions. Yet even before the changes, officials of different states made varied choices about roads. When labor was scarce in 1919, a leader of state highway officials nationwide cautioned against paying high wages for road work, to avoid raising wages for competing work on farms and in factories and mines. For much of 1920, construction wages and prices remained high, labor and freight transportation scarce. Still, much Pennsylvania roadbuilding proceeded, and by winter 1920, when many people had been laid off from their usual jobs, a Pittsburgh labor journal praised the state’s paving work. By 1921, construction would be cheaper, aiding expansion of
roadbuilding in many states, including Maine. Several projects delayed by Maryland officials in 1920, when bids averaged nearly $50,000 a mile, would be built in 1921 for less than $35,000 a mile.\textsuperscript{17}

Labor available for road work, scarce in many areas in the boom, quickly increased. By late 1920, New Jersey officials stopped convicts' road work for winter and said free labor likely would be available in 1921 to carry on the state's road projects. Though convicts had built roads in several states amid wartime labor shortages, New Jersey officials were considering abandoning their use. Also in the labor scarcity during and after the war, some states had entered the construction market as a business might, forming their own workforces of free labor, which the state hired, paid, and supervised directly, presumably more cheaply than through a contractor. Savings from using state labor forces also declined in 1920 amid layoffs in the economy; more men began seeking work, reducing the general level of wages. By late 1920, Maryland cut wages of state road-maintenance crews. By early 1921, New Jersey cut wages of men in its state construction workforce. Later, New York tried to economize by reducing its public workforce's tasks.\textsuperscript{18}

In early 1921, some labor journals called for more road work and noted that funds were available. One of them urged public support for a larger program in Pennsylvania. It was time that "everyone interested in good roads and in keeping the country's labor employed gets behind the movement and urges an early start and a continuity of effort," said Pittsburgh's National Labor Journal. If not, "much of the available appropriations will remain unspent and many men that could well be kept employed on road work will remain unemployed." By January 1921, factory layoffs had grown in many U.S. cities. The federal Employment Service estimated the nation's industrial employment was down one-third from a year earlier. In January, Baltimore's city employment bureau opened, and some 2,000 men--blacks and whites in equal numbers--applied the first day for 100 laboring jobs. In March and April, as roadbuilding season neared, a labor journal in Rochester, New York, urged road work.\textsuperscript{19}

Some advocates of roadbuilding as an employment program urged hiring preference be given local men. "In almost every community there are large numbers of unemployed men," increasing weekly, said Pennsylvania's highway department by May 1921. "The highway department is anxious to relieve this situation in so far as the contracts under its direction will afford employment." It requested contractors on its projects to "seek the services of men living in the community in which they are operating rather than to import labor from a distance." Refining companies, through their Asphalt Association, urged federal-aid roadbuilding to reduce unemployment. In New York, using bonds for such projects as canal terminals was suggested by the state labor federation's president, who estimated the state's unemployed at 500,000.\textsuperscript{20}

As more men sought road work, federal and local officials reduced wage estimates. Federal highway officials reduced their cost estimates for federal-aid projects built by state labor forces or
convicts. Counties' road work, an alternative to federal-aid projects for men seeking jobs, also responded to changing conditions. In mountainous western Maryland, Allegheny County reduced its road laborers' hourly wage from 50 cents to 37.5 cents. Unemployed miners were working on roads there in May, and they adopted resolutions in their union locals favoring the earlier scale. The county made daily wages $6 for a team of horses and their driver and $4 for truck drivers.  

Still, road work and farming continued to compete for labor. Both offered seasonal jobs in rural areas, often for relatively unskilled labor. Though labor was readily available for road work in Pennsylvania in May 1921, state highway officials urged contractors to hire local men yet to avoid taking labor needed on farms. In Massachusetts in 1921, many people laid off in cities took farm jobs. The state's farm-labor market "was flooded with skilled and unskilled workers from the industrial field. Many of these, having had previous farm experience, sought farm openings." Farm wages there declined, making 1921 "the first year since the war that the farmer has found labor sufficiently plentiful to make his own selection at the figure he could afford to pay."  

Early in 1921, road work seemed a way to aid indirectly people who still had jobs. In Pennsylvania, road work might keep up demand for skilled workers' products by paying road wages to unskilled laborers, who would spend them quickly for goods, a Pittsburgh labor journal suggested. "Of course, it isn't to be expected that many weavers, loom fixers, machinists," and others, "in trades far removed from road building, are going to take up work on road building projects," the journal said. It predicted, though, that "the thousands of men that are employed on the roads will have money with which to buy clothing and other articles made by the weavers, the furniture makers, the shoe makers, etc."  

By late spring, though, work on roads or farms could attract many people laid off from skilled jobs. More than 150,000 were jobless in April in Philadelphia, particularly in building trades, said the chamber of commerce. Some 25,000 unemployed men and women, by a labor journal's estimate, paraded in Bridgeport, Connecticut. An official of Bridgeport's Central Labor Union, who was among military veterans in the parade, claimed employers wanted to extend the depression to reduce wartime wage rates. State and federal governments were offering the unemployed no relief, he said. When the city issued $300,000 in bonds for public works, 300 men applied for the jobs in July. Layoffs there affected munition workers and "thousands of Spaniards, Portuguese, Italians and other foreign-born residents," a newspaper reported. In New York City, thousands of other jobless men spent summer on outdoor beaches and in doorways and bread lines. Luckier ones washed dishes for $7 a week, far less than many of them had made in the war in shipyards and construction. The Bowery's job agencies, which usually sent gangs of men west by rail to other regions for work in lumber camps or freight yards, now placed few men; many agencies had closed. A municipal lodging house, said its manager, was
“filled with men coming from smaller towns, because ‘everything has shut down,’ on the chance of a job in New York.” Labor Day’s parade was canceled; parade supporters were mostly from unions of greatest unemployment (teamsters, longshoremen, and metalworkers), opponents from unions with many members still working (the building trades). Even in large cities, local preference in hiring remained important. In late 1921 in Rochester, New York, competition for work brought objections from an ironworkers union that a contractor had imported out-of-town men for constructing public buildings. Even hiring local men might bring objection, as when men from Manhattan’s Chinese neighborhood worked dismantling Camp Upton’s wartime structures on Long Island. Responding to criticism from ex-service men, the contractor said he had offered the work first to former soldiers.24

In 1921, the boom demand for economic resources eased, leaving many of them to roadbuilding. With more men and rail cars for road work, the 1921 building season in New York was “favorable in respect to securing labor and materials and a large amount of work has been accomplished,” state highway officials reported. Indeed, conditions would have allowed other building if New York officials had worked quickly in approval processes for federal-aid projects. Because of “time necessary to secure the approval of the Federal authorities and make such slight modifications in plans as they required,” they said, bids for rebuilding some main routes were opened only by mid-August, allowing no work on many of them in 1921. State officials said the resulting “better understanding of Federal Aid requirements” would help avoid future delays.25

Despite an expanded labor supply, convicts kept working in New York, often on smaller roads. In a depression, their work extended an era’s increased roadbuilding to some localities lacking funds. They worked in eleven projects on state, county, and town highways in 1921 with “very satisfactory results” for the roads and for the men, state officials said. Convicts sometimes worked at “grading and graveling town highways where the townships were too poor to institute such work” without that state aid. Often they worked near prisons, where supervision was easier. Even so, convicts in the region performed labor that prison systems may have let them choose, unlike many rural men in much of the nation under statute-labor laws that in 1921, as they had for centuries, required unpaid labor by a neighborhood’s men to keep up local roads. Using statute labor, rural communities had been limited in road work often by the number of local men.26

Vermont illustrated conditions of many rural areas. For years, Vermont roads had improved in small projects that towns initiated, said S. B. Bates, state highway commissioner. “This has resulted in the construction of limited projects which could be taken care of with local labor, so that the question of assembling a large force on one job has not yet come up—the number of men engaged in any one project seldom exceeding 20.” Many Vermont towns had done their road work when it “interfered the least with agricultural work. Because of this it has been possible to utilize labor that during other parts of the
year were employed locally." Yet the method failed in wartime and postwar labor shortages, which affected even rural areas. "In many of the communities a large part of the labor force has gone into the service or sought industrial employment," Bates said in the 1919 boom. Officials of Connecticut and Vermont had considered using more prison labor in the labor scarcity, which the depression ended in 1920.27

Increasingly, funds were the measure of rural road work. That was true even in the North Atlantic region, where road work for money (by hired labor and by contracts with builders) had developed early. Similar practices were spreading quickly in many parts of the nation as the federal road program, with its new funds that states matched, expanded under the depression's economic conditions. Because a labor surplus had replaced wartime and postwar labor shortages by mid-summer 1921, federal officials canvassed state officials on work being done by state workforces and convicts. Use of such labor earlier on federal-aid projects had been unavoidable, the federal program's chief, Thomas H. MacDonald, told staff members in August, "because of lack of contractors properly organized and equipped" to take road contracts. Even in an earlier economy, unaccustomed to periods of extensive roadbuilding, construction companies with skills and equipment had been developing. Yet they had done so too slowly to prepare for the many contracts states offered in 1920 and 1921, when funds were available, costs and wages declined, and labor supplies grew. By August 1921, MacDonald said, those changes required staff to consider minimizing the methods used amid labor scarcity, to be certain that federal policies in road construction "reflect the best possible business practice under the particular circumstances which prevail."28

Business practices were changing in agencies in many states because of road projects' growing number and size. With funds and plans for a new road system developing and with the depression changing construction conditions, many road projects were beginning. Many were larger than most before. Projects in growing number and size required more laborers than usually lived nearby in the countryside. Large amounts of money--federal highway aid, local funds to match them, and funds of other road programs of states and localities--when spent in 1920-22 would draw hundreds of men to many rural areas for work, solving a perennial problem for making better roads.29

Raising Local Funds

The region was well prepared to expand federal-aid roadbuilding in a depression. The notion that much of modern road work could best be done by agencies extending beyond localities--by agencies such as those of states--won early adoption here. By 1920, most states of the region had operated highway agencies for years, building some roads in programs of their own. In the 1890s, legislatures in the region, before most others in the nation, gave six states duties in road construction. As an 1890s ideal, a stone-surfaced road in rural New York interested a federal official, who said its cost of less than $1,000
per mile could be raised from taxing farmers' land. Even such a cost raised concern among many landowners. Yet building costs rose by the 1900s, partly from arrival of auto traffic, which damaged older kinds of surfaces. Increasingly, state funds here could replace some local taxes. And federal funds further could do so, in road programs Congress approved in 1912 and 1916.30

Neither federal program drew much early participation. In the 1912 program to improve some post roads and gain data for planning a larger federal effort, Congress offered each state $10,000, to be matched by twice as much in state or local funds. Few states in the nation took up the offer. The program's officials said states perhaps considered the amount too small, opposed accepting funds requiring federal supervision, or were unable under their laws to cooperate with the federal government in road work. Still, the initial federal offer gained wider support in the region than in most others. To participate, Maine, Connecticut, and Vermont passed special legislation, and Maryland got federal agreement for some state supervision of the work. In 1913, federal officials added a few sites they picked for varied topography and climate to use remaining funds. In a period when road work in many areas had not yet become a large market for contracting firms, leaving public agencies to obtain much labor, interest in the program produced a ruling that federal-aid road laborers and mechanics were not federal employees. That allowed states and counties to employ men more than eight hours a day and to use convict labor. Also, in each region many local officials objected to federal supervision. Soon, in 1916, Congress required federal-state cooperation in using its road program's funds, seeking to avoid earlier confusion in trying to deal directly from Washington with the nation's some 3,000 counties. Though funds greatly increased, wartime priorities intervened before much work began.31

In 1919, Congress further increased funds to aid states in road work, partly to hire ex-soldiers and others if the postwar economy were to slow. Since the 1912 program's efforts, many states had prepared laws, funds, and plans for road work. Traffic had grown and added military and commercial uses. Local, state, and federal governments were pressed to produce roads for autos. The early 1920s would bring new ways both of funding road work and of cooperating among governments to coordinate roads as systems and pay their costs. As governments offered numerous roadbuilding contracts, construction firms expanded their operations in rural areas. Needs for funds and planning, together with the federal program's methods, advanced state agencies' significance in road work.

By 1920, North Atlantic states differed in funds available for construction and in patterns of roadbuilding authority. Both attributes would affect states' work in the federal-aid program. Some had large amounts ready, such as the funds from Pennsylvania's bond issue. Others lacked funds, prompting talk of new taxes amid economic depression. Several bond issues provided funds quickly in large amounts while deferring tax increases. Fees increased on motor vehicles, and revenues came from a new source, taxes on gasoline. That states could use new bonds, fees, and taxes indicates that a sizable
constituency, in every region, favored postwar road work in a brief depression. Yet such support had limits, shown by frequent opposition in several regions to new taxes and, particularly by farmers, to issuing road bonds. State highway departments had experience both in initiating road projects of their own and in forming projects with counties and townships. Counties and towns continued to operate their own road programs. And in the 1920s, many of these varying jurisdictions began working with federal officials on road projects, receiving funds for projects meeting approval under national standards.

States used bonds often in the region’s urbanizing southern areas. Heavy auto traffic there both increased the need for spending by states and generated large revenues from registration fees to help repay bonds. The urbanizing states thus had more funds to spend in their rural areas than states with less traffic. In Pennsylvania, a $50 million bond issue, which voters approved in November 1918, provided state funds to match federal aid, allowing large road projects in 1920 and 1921. New York relied on bond funds for much of its 1921 construction, though federal aid became a substantial segment of road funding in the state in 1922. Maryland used $4.5 million in bonds and road funds from federal and county governments. When vehicle fees produced less revenue than expected, Maryland enacted a gasoline tax. Working without road bonds, New Jersey, in 1891 the nation’s first state to offer road-building aid to localities, in 1921 relied on funds from counties. It also saved costs on some projects by using a state labor force.

Farther north, Maine’s voters increased the state’s road bonds in September 1919 by a large majority, yet plans ready for postwar projects still exceeded available funds. Massachusetts, Vermont, and New Hampshire, though, built roads without bonds. The Massachusetts legislature in 1921 specified that most matching funds were to come from motor-vehicle fees; counties provided some others. New Hampshire and Vermont also used vehicle fees for matching, together with state funds and those from towns.

The federal program helped provide better roads often where towns had been unwilling or unable to pay for them. Vermont officials sought to use federal funds where roads most needed improvement. Thus, "the towns which have done and are doing the least on their main roads are the ones which are most likely to have those roads improved without cost to the towns." Improving roads in towns was difficult in Rhode Island, particularly where scale of work would be small. Many towns considered use of their own funds impractical, and Rhode Island lacked a program of state aid to them for roadbuilding. In small towns, "appropriation of a few thousand dollars for the light repair of several hundred miles of dirt road is not a great incentive for the building up of an efficient engineering organization," said highway officials. Larger, wealthier towns, though, might plan several years’ improvements and hire a town engineer. Yet Rhode Island’s urbanizing settlement, while raising interest in better roads, obstructed work in the federal program, by whose rules towns in much of the state were not rural areas. In late
1921, when all of Rhode Island’s federal allotment was being spent in twelve projects, state officials considered “rather surprising what a large percentage of roads cannot be improved by Federal aid.” In New Hampshire, though, federal funds aided projects in more than 100 towns. By late 1922, stretches still unimproved on New Hampshire’s state highway system were often where roads went “through towns that cannot afford to raise any very large sum at one time.” In 1921 and 1922, New Hampshire lacked matching funds for some federal-aid projects. In early 1922, it increased license fees, though they could not produce revenue from a large segment of New Hampshire motorists—summer tourists.\(^\text{34}\)

A gasoline tax raised funds for roads in Connecticut and Pennsylvania from early in the depression. The two states in the region were among fourteen in the nation with such taxes by fall 1921. In early 1922, legislatures in Maryland, Massachusetts, and New Jersey considered gasoline taxes for road revenue. Maryland adopted a 1-cent tax effective June 1922. Delaware highway officials in 1922 recommended a gasoline tax.\(^\text{35}\)

In Delaware, funds included those given by a member of a family active in the state’s industrialization. Under wartime agreement with the state in 1917, T. Coleman du Pont spent more than $3 million by early 1922 for building a 100-mile stretch of road. The donation freed state funds for work on other roads, state officials said. Du Pont, a U.S. senator during the depression, discussed employment effects of public works and bonds at hearings of a congressional committee in December 1921. One witness, economist Otto Mallery of Pennsylvania, told Du Pont that 1921 bond issues for state and local public works nationwide totaled some $1 billion, much larger than in any earlier year.\(^\text{36}\)

**Roadbuilding, 1920-22**

North Atlantic states and counties helped stimulate their economies in 1920-22 by using their funds to match federal aid for roads. Though roadbuilding required taxes from residents, some funds came from bonds, deferring taxes. Roadbuilding programs of local, state, and federal governments purchased materials and equipment while the economy had slowed. The funds for improving travel also provided wages in the depression. Spending federal aid varied, and Pennsylvania and New York spent at much higher levels than the ten other states. The differences partly reflect some states’ small area, population, or road mileage—the three elements determining federal aid allotments to states.

Apart from Pennsylvania and New York, states of the region form two groups by totals for federal aid spent for projects completed or under way by mid-1922. A group spending federal aid at medium levels—though above $5 million for each—includes Massachusetts, Maine, Maryland, and New Jersey. At still lower levels were Connecticut, New Hampshire, Vermont, Delaware, and Rhode Island. Totals for spending by forty-eight states are compared in maps of figure 6, page 123.\(^\text{37}\)
Another measure of participation in the federal program is in the work's mileage. It also helps describe the tasks laborers performed. Small amounts of federal aid spent often indicate low mileage of work completed with federal aid. In mileage per state, the region's average was less than one-third the level of the nation's. Yet mileage declined as states used federal aid for paving, as in Pennsylvania and New York. Concrete paving projects complete or under way by mid-1922 in the region totaled 1,343 miles, compared to 971 miles in seven other kinds of road improvements combined. Using the same funds, more mileage could be improved by surfacing with gravel. That was the choice for much federal-aid in New Hampshire, Vermont, and Maine, each of which improved many rural roads, and in Maryland, which graveled roads in its southern sections. Concrete paving projects complete or under way by mid-1922 in the region totaled 1,343 miles, compared to 971 miles in seven other kinds of road improvements combined. Using the same funds, more mileage could be improved by surfacing with gravel. That was the choice for much federal-aid in New Hampshire, Vermont, and Maine, each of which improved many rural roads, and in Maryland, which graveled roads in its southern sections. Putting oil, tar, or pitch on macadamized (graded and packed stone) roads produced a bituminous macadam surface, also a frequent choice in the region. Those materials strengthened macadam surfacing, a prime road type in the wagon era, for faster, heavier traffic of autos. New York had the region's largest mileage for federal-aid projects of bituminous macadam, put on many miles also in Massachusetts, Maine, Connecticut, Maryland, and New Hampshire.18

North Atlantic states neared the national average in mileage of work done with federal aid only for projects that put stronger surfacing on roads—using concrete, bituminous macadam, or, in the period's term for asphalt, bituminous concrete (figure 3). Of five other kinds of road work, the region's states did much less than most states of the nation. Gravel was put on many fewer miles of roads in

Figure 3. Men in a contractor's crew in 1921 applying bituminous paving for a two-lane road in a federal-aid project near Pleasantville, New Jersey. (Photo 23537, Records of the Bureau of Public Roads, RG 30-N, National Archives, Washington.)
the region than the average for the nation. Sand-clay surfacing, popular in federal-aid work in the South and inexpensive where materials were plentiful and traffic was light, was completed on less than 2 miles of North Atlantic roads. Little grading or drainage work was done with federal aid in a region of many older, more-improved roads.39

By mid-1922, the region’s road work had brought into its economy $18.38 million in federal funds, matched by at least as much in state or local funds for federal projects. Expanding the program quickly had been possible in some states. Of the region’s total paid in federal funds, 45 percent (or $8.37 million) went to projects in one state, Pennsylvania. Maryland ranked next at $2.27 million, and three states--Massachusetts, New York, and New Jersey—each received more than $1 million. The states obtained the payments by completing federal-aid projects. Tabulating the funds at mid-1922, the close of a federal fiscal year, coincides roughly with the depression’s easing in much of the nation. The region’s smallest amounts of federal funds by mid-1922 went to four states—Rhode Island, Delaware, Vermont, and Connecticut—whose combined totals formed less than 8 percent of the region’s total. The funds paid for costs of labor, equipment, and materials.40

From those spending totals, the number of jobs created can be estimated. In early 1922, the federal program’s chief stated that 40 percent to 50 percent of roadbuilding funds went for labor at the project site and that 25 percent more went for labor producing equipment and materials. Some $82 million in federal funds, being spent yearly, at the rate then of matching by states and localities yielded about 210,000 jobs, each for a building season of 200 days. Thus, each $390.48 in federal funds spent created one job at the project site for that building season. Because little federal aid was spent in the nation by 1920, estimates would be of jobs created in 1920, 1921, and early 1922.41

Pennsylvania’s completed federal-aid projects had provided six-month jobs for an estimated 21,441 men by mid-1922, nearly half the region’s estimated 47,089 men in such work. The funds provided jobs estimated at more than 4,300 each in Maryland, Massachusetts, and New York. More jobs than estimated were likely in projects such as grading and graveling, in which equipment and material cost less than in paving. Besides men working at road projects, others worked in related industries. In addition to the jobs at federal-aid projects, others were available to men at road projects that states and localities completed entirely with their own funds, which could be more plentiful because federal funds were relieving those governments of some tasks.42

Totals by mid-1922 reflected increased work in the past year, including its winter months. In efforts particularly to provide road work for the unemployed, the federal government and at least three states used road funds in late 1921 for winter work. New Jersey continued its road work into winter, and Delaware kept up work on bridges. Rhode Island planned much work. Its highway officials said cold weather would stop paving, yet some tasks—grading with steam shovels, blasting cuts in ledges, and
installing road drainage—could proceed while traffic was slow. The three states were among at least fourteen in the nation where winter road work was planned to provide jobs.  

Rhode Island officials said that “the federal government through several of its agencies endeavored to stimulate the awarding of contracts in the fall” instead of waiting until spring, seeking higher employment in winter. Those state officials considered working through winter “very desirable.” Yet also, they acknowledged risks for builders in contracting for fixed prices over extended periods “when conditions are changing rapidly,” as they had done often since the war. “When prices were rising rapidly, highway contractors suffered tremendous losses upon contracts awarded a considerable period in advance of their completion. In the same way when prices were declining contractors were able to make substantial profits due to improvement in conditions affecting their costs.” Contractors seemed confident, they said; many were bidding in late 1921 for work lasting through much of 1922. Until recently, Rhode Island could not have offered contracts early, lacking state funds available in advance. With state funds now available, early contracting held benefits, officials said. It would offer “employment to many men during the winter, which is essential at the present time” and give contractors time to move machinery and materials. Risks in bidding affected contractors also in New York. Many of them, eager for road contracts in early 1922, were soon disappointed, for the economy improved, raising costs above those in their bids.  

For contractors and laborers seeking work, activity in the federal program shifted within the region in 1922. After leading most of nation in federal-aid work completed by mid-1922, Pennsylvania particularly cut its spending in work under way then. Spending declined by large amounts also in Maryland, and laborers and materials were scarce even so. Yet New York greatly increased its work in the program in projects under way then, after having spent federal aid at much lower levels. Changes in spending in those and other states reflect such conditions as completion of many projects for which plans were ready, approval of plans for projects that had been delayed, and availability of matching funds. They indicate also that five of the region’s states were relying more on federal aid in the depression, increasingly using larger proportions of federal funds in eligible road projects.  

Laborers in federal-aid projects worked at varied tasks. In 1921, New York increased its work of widening and banking pavements, changing some stretches from two lanes to three, and paving more main routes. For expanding the work, procedures changed in the state’s highway department to solve a problem of “the past several years” in advance preparation of project plans, partly from scarcity of engineers and the size of the program. By mid-1922, the department was able to indicate to its district staffs the projects it wished to build in 1924. That allowed more time to make surveys, consider plans, and search for materials. The time was needed to permit federal officials’ review of plans for the federal-aid projects “now constituting a major portion of our program.”
Construction in 1921 in Massachusetts included paving on at least five projects on a route from Boston west to Springfield, which also would improve travel between northern areas of the region and Albany, Hartford, and New York City. Paving of reinforced concrete, twenty feet wide, was planned on some of those sections. Still, Massachusetts was one of a few states in the nation by late 1921 with large amounts of federal allotments not yet spent; its program would expand in 1922. In mileage completed by 1923, Massachusetts, Maryland, and Rhode Island achieved much despite smaller federal allotments because of state area. 47

Where traffic was lighter, as in Vermont and New Hampshire, much work was in other tasks than paving. Yet even there, projects improved some main routes. In Vermont, "people of all classes, interests and occupations" favored such work, highway officials said, for traffic "far exceeds the capacity of many of the roads built even within recent years." To maintain gravel roads in Vermont amid greater traffic and higher speeds, workers smoothed surfaces and applied binders of oil or other substances. In New Hampshire, men often spread gravel surfacing, particularly on dirt roads in mountainous areas where traffic varied by season. In other projects, they put asphalt or binders on main routes, including the Central Road from Concord to Dover. 48

Graveling projects still relied on skills and equipment available locally in an era when new machinery's use on roads grew. Farmers were among those who could hire out teams of horses for projects of excavation, grading, or surfacing. Yet postwar increases in other road work, often with new equipment, reduced some opportunities for laborers, teamsters, and horse owners. In Connecticut in January 1922, snow-clearing crews at Windsor used "the tractor bought for road work last summer" to pull a snow plow and road scraper. That allowed re-opening roads in several villages in a day, "much more work than several teams of horses could have done." 49

New Jersey and Pennsylvania continued work on sections of a transcontinental road for autos, Lincoln Highway from New York City to San Francisco. By spring 1922, the route had fewer detours in eastern states, paving had increased on midwestern sections, and travel was better on western sections except in Utah and Nevada, said Lincoln Highway Association. "The heaviest traffic of any section" of the route was on New Jersey's 60 miles. Many large trucks were part of heavy traffic on the highway's sections from Philadelphia to points in New Jersey. 50

Nearby, in the same area of heavy traffic for commerce and urban development, a project much larger than typical of rural road improvements was offering many jobs. Building a first Hudson River tunnel for motor vehicles, between New Jersey and New York, began from contracts awarded in March 1922, while wages and material costs were low. The project, officials noted, would help reduce unemployment locally and elsewhere. In estimates for chief engineer Clifford Holland, the contract for its three years would need an average of 600 men a day at the location, peaking at times near 1,500 men. In
those jobs and others supported elsewhere, estimated employment was 10,000 men for a year. The project relied on methods that preceded the federal-aid program—on cooperation between two states and, to speed work and isolate costs, on a special-purpose commission spending largely from state bonds, repaid by road users in tolls. By late 1922, men standing underground in cylinders were digging with hydraulic machines to make the tunnel. Others, including many Poles and Hungarians, shoveled the dirt on toward the surface. Iron plates to extend the tunneling were placed and bolted, mostly by black men and cockney Englishmen. The project would make two vehicle lanes in each direction for nearly two miles. Earlier in 1922, trucks crossing on Hudson ferries had begun hauling freight from New Jersey rail terminals to New York City warehouses, a system Erie Railroad initiated to replace bringing freight over the river in rail cars on barges.51

Roads and Politics

The new road program, though designed to use engineering expertise and a funding formula to replace much political influence, itself stimulated political rivalries, frequently over control of new and growing funds. That would occur both in regions where large agencies were new at the state level and in the North Atlantic region, where states had been active in road work since the 1800s. In New York, for example, officials contested such issues as those of ordering road work by political influence or by commission, of local and state or national government power, and of political parties.

Resembling Good Roads speakers since the late 1800s, a former highway official of New York decried political influence and lack of planning. “I condemn in strong terms the method of having our highway systems depend upon the political wheel,” H. E. Breed, former deputy state highway commissioner, said in January 1921. “The evils of the old system of constant changes due to the coming into power of a different political party create a lack of adhesion to any coherent, continuous plan, the lack of a sense of responsibility beyond the glimmering hope that there will be as little graft as possible and that, such as it is, it will escape the attention of the opposite party.” Road systems would result only from building where traffic was heavy, he told an automotive engineers’ convention.52

The era of expanding roadbuilding raised concerns that local government’s influence was diminished, a result also of wartime experience in much of American society. In a newspaper article on July 2, 1922, Sen. William Borah, R-Idaho, praised the New England town meeting as American government’s foundation, yet he suggested local autonomy had become equated with states’ rights. America’s industrial and economic growth, Borah acknowledged, may “require a redistribution of power between the State and the National Government. That which was local a hundred years ago may have become national.” Still, he contended, “that which is essentially local should be governed by the State.”53
Even while seeking outside aid for their communities, city and county officials and their constituents sometimes considered local government's significance waning as capacities grew at higher levels. In rural areas of several regions, some residents debated new influences on localities in building roads. Yet autonomy was valued as well in cities. Governments of many large cities had provided some unemployment relief in depressions since the late 1800s. By spring 1922, they were sharing that function with state and federal agencies in new ways, and New York City's government was among those emphasizing local efforts. A newspaper reported that "resolutions requesting the Federal and State Government officials to proceed immediately with public works to relieve the unemployment situation were adopted at yesterday's meeting of the Board of Estimate, after its members had spent two hours telling what the city had done for the unemployed." The board, including the mayor and the city's aldermen, was holding a hearing at the request of labor and civic groups, including Brooklyn Chamber of Commerce. While a spokesman read the chamber's resolutions favoring public works, "the members of the Board of Estimate constantly interrupted to ask if the city had not done more for the unemployed than the Federal and State Governments together." The chamber official replied that he did not know; an official of the local Central Trades and Labor Council said the city was doing what it could.54

Road projects in the depression were public works political parties debated in many states. By spring 1922, they were an issue that would continue in the year's campaigning in New York. Economy in government, which had been claimed by Republican Gov. Nathan L. Miller's administration, was attributed by a Democratic official in April in "very considerable" extent to neglect of highway repairs. Roads had been better, he said, under the preceding governor, Democrat Al Smith. Roads were a public service whose condition many constituents could easily perceive. Building and maintaining highways, said the state Democratic party's platform, formed "the largest business enterprise in which the State engages." In a campaign for governor again against Smith, Miller said the state's 1922 roadbuilding was slowed by rainfall and greater reliance on federal funds. Indeed, "one of the unfortunate tendencies of the times" was "the extension of Federal activity into the realms of the State." The issue for Miller, who conceded the federal role as constitutional, was largely one of money, of balancing funds received against federal taxes paid from a state relatively wealthy, industrialized, and populous. Still, the amount of improved mileage was cited as the election neared, in figures for both administrations, published by Miller's highway commissioner. After Smith won in November 1922, his highway commissioner's appointment led to a confirmation contest in early 1923 that included suggestions contracts for federal-aid projects were set to be awarded in the former commissioner's home district. Greater criticism, in politics and the press, centered on patronage and political influence in other road programs, those that had operated for decades using only state and local funds.55
Funds for varied projects, including building roads, came in many jurisdictions in 1920-22 from bonds, deferring tax payments. Many states in the nation used bonds to allow deficit spending, quickly increasing their funds for roadbuilding and expanding governments’ capacities to respond in a depression. Some states, including New York, had used them before 1920. In improved economic conditions by January 1923, Smith favored roadbuilding using regular state revenues instead of bond funds.56

The region contributed to a debate, which included discussions elsewhere in the nation, over bonds and political and economic policies. The issues of public works and increasing the money in circulation were similar to those of the Populists’ 1890s proposal of federal roadbuilding for employment. In 1920-22, bonds of states and counties, matched with federal appropriations, had supported much of the quick expansion of public works in a depression. Yet expanding public works was counter to a widespread practice of retrenchment—cutting public spending and taxation and waiting for the economy to improve. During and soon after the depression, U.S. Treasury Secretary Andrew Mellon of Pennsylvania opposed continuing tax exemptions for government bonds, exemptions that had helped them sell.

During the depression, Mellon’s objection to tax-exempt bonds was related to expansion of public works. In January 1922, he told a House committee in Washington that, in a reporter’s paraphrase, banning tax exemptions “would have a tendency to increase the interest rates and would do much to check extravagance” in spending. An opposing course interested Samuel Gompers of American Federation of Labor. In early 1922, Gompers urged expansion of public works, including roadbuilding, as some had proposed in fall 1921 at a Washington conference on unemployment sponsored by President Harding. Using public credit would avoid a need to drain the treasury, Gompers said. He argued public works could offset an industrial economy’s seasonal and cyclical unemployment, a plan similar to one Pennsylvania had adopted in the war through efforts of state official Otto T. Mallery. In December 1921, Mallery, speaking in Pittsburgh to American Association for Labor Legislation, discussed his plan for saving some public works in good times for use in depressions. Sales of public-works bonds totaled $118 million in November, Mallery said, and more than $1 billion for 1921.57

Bonds of many states and cities had been sold through markets in New York, where many people noted an effort in January 1923 to amend the U.S. Constitution to bar tax exemptions on federal, state, and municipal bonds. The effort had support from Mellon, who urged New York State Chamber of Commerce, considering the issue, not to oppose the amendment. The tax exemption was a federal subsidy of state and municipal governments through the bonds, and the federal government needed to find a substitute for surtaxes or an end to issuance of the bonds, he contended.58

Mellon’s arguments and the chamber’s response dealt with bonds’ economic effect, debated widely in the depression. Some farmers and other taxpayers, for example, contended government bonds took capital needed by businesses for recovery. Such opponents of bonds, seeking to limit their use,
might support a ban on tax exemptions. A committee of the chamber objected to the proposed ban. Ending the tax exemptions, it said, might lead to higher interest rates to cover bond buyers’ taxes, raising federal interest burdens, thus requiring higher income taxes. The bonds, it said, did not take money out of private investment, but, like industrial bonds, provided funds spent for wages and other items and then spent continually as they added to money in circulation. For 1917-20, it said, payers of federal income tax nearly doubled in number while payment amounts rose 74 percent. Thus, it did not seem “the increase in the number of tax-exempt bonds was impairing the productivity or prosperity of the country or drying up the sources of revenue.” The chamber’s committee also opposed “the argument that the power to put out tax-exempt bonds encourages government extravagance.”

Arguments against extravagance in a depression had been made in many states in 1920-22 by opponents of spending for roads. The chamber’s committee said representatives who voted improvements often failed to raise taxes to pay for them. To claims that the exemptions were a federal subsidy of state and local bonds, the committee replied that ending them would raise interest on the bonds, requiring higher state and local taxes. In 1920-22, the federal-aid road program had expanded in the nation only where large amounts in matching funds could be provided from within states. While many states were still developing revenue systems for roadbuilding, bonds by states and counties provided much of those matching funds.

As the depression eased, the region’s economy presented officials and the public with possibilities for new consideration. By late 1922, much of the U.S. economy had improved, and auto sales in the nation set a yearly record, exceeding 1920’s level. Enthusiastic predictions included one that ten more years would bring a car for every family and thus better commuting and suburban development for large urban areas. To a writer in New York City it seemed “probable that with our present street facilities motor travel here is near the maximum,” though he noted the city had adjusted to growth of various kinds before. The 1922 auto sales had been high, he said, because car makers had cut prices quickly and because “the public itself has decided that one of the things it wants most is individual transportation.”

The region led most of the nation in economic recovery. New Jersey and New York even narrowly surpassed their 1920 prosperity, measured by state totals for individual incomes from 1922 federal tax returns. Only three other states did so in the nation. When forty-eight states are ranked by how closely their residents’ income totals for 1922 approximated those for 1920, the North Atlantic region had eight members in the top one-third of states, or as many as the nation’s four other regions combined.
Late in autumn 1922, men still worked in the region’s rural areas at road projects, as they had often since the economy had slowed after mid-1920. Rural areas had experienced an inflow of people, some seeking to subsist by farm work, as in earlier periods of urban unemployment. Some, though, found work on road projects, many of which were using a new form of federal aid that, in this period, also helped draw funds from states’ bonds, license fees, and gasoline taxes quickly into construction. Even people who kept jobs in cities and towns in the depression were aided as they handled orders for material, equipment, and shipping for roadbuilding in the countryside. Thus, with needs and funds for building auto roads set by 1920 for many years to come, rural areas had become a location for public works as needed to offset depressions’ high unemployment and slow commerce. Using state and federal funds and relying less on localities’ labor and taxes, rural road work could exceed the scale it kept in the wagon era.

Wages in road work, in many rural areas of the region, had recently been available much more in construction than in maintenance. A related spread of road equipment—some new, some war surplus—had reduced work in road maintenance formerly open to local men as laborers, horse owners, or teamsters. The expanded construction had other implications for earlier practices. The chances of continuing the old custom of statute labor, of paying taxes through road work, further declined as roads and their building conformed more to common standards, as contractors increased their work on roads, as projects multiplied and grew in size and cost, and as statewide tax systems developed capacity to provide funds regularly for improving roads. Governments relied less on customary statute labor than before, even in the North Atlantic region, where by the 1870s some urban areas used taxes paid in cash to keep up their roads.

In a region where roadbuilding had developed early, such activity increased in 1920-22. The effects of the depression’s early months on industry, agriculture, and road work were important for expanding the new federal road program. Money, materials, labor, and shipping, which had been turned to other uses in and soon after the war, were available in large amounts for road work by late 1920. Pennsylvania, which in the war adopted plans for using public works to counter unemployment, led the region by mid-1922 in federal-aid spending in combined totals for road work completed and that under way. By contrast, Pennsylvania’s plan for a state to expand varied public works in slow economic periods failed to win large funds in the depression and was repealed in improved conditions of 1923. Cooperation with federal officials in road projects had appealed to many state and local officials. States’ practices changed to comply with federal supervision of plans for some roads. In many counties and towns, officials began considering federal standards when building roads nearby. Advantages of cooperation increased in the depression. For local officials, federal funds could be added to those from other sources to support projects offering work while many constituents were unemployed. And
improving main highways raised incentives for states and localities to coordinate their own projects on other roads.

Acceptance of cooperation exceeded that ten years earlier. In the 1912 post-road program, officials of few of the nation's counties and states had accepted an offer of small amounts of federal funds; many had objected to federal supervision. True, four North Atlantic states had participated in the 1912 program, more than in many other areas. By 1922, projects in a new program had been completed at locations throughout the region, and spending in it (in large amounts by several states) had required coordinating plans with federal agencies and changing states' revenue systems. The war had strengthened governmental cooperation and had speeded military and commercial use of motor vehicles in the region as alternatives to congested railroads. By 1920, autos and trucks had become numerous. And by mid-1920, programs to improve roads could reduce the rising unemployment.
CHAPTER 3

THE SOUTH

Motorists going south from the North Atlantic region in 1920 would soon have left concrete roads. Main routes had some improved sections of gravel. On many roads, the surface was smoothed dirt. Less traffic was on the roads. Autos and trucks were fewer, and wagons more numerous. The South, three times the size of the North Atlantic region, had nearly twice as many miles of rural roads yet half as many autos. Its farms were four times the number in the North Atlantic region, though a much smaller share of them had autos. More people lived in the countryside, and cities were fewer and smaller.

Yet here, too, the depression would affect many people. And federal-aid roadbuilding, planned since before the war, would expand as the economy changed. When incomes fell for most southerners in the farming economy and thousands were laid off in the industries and businesses of towns and cities, a postwar labor shortage eased. Soon, hundreds of men were in the South’s rural areas working for wages in a growing construction industry. They were laboring in federal-aid projects, preparing roads for autos in the twelve states south or east of a Virginia-Kentucky-Arkansas border. (The South’s states are shown in figure 1, page 11.)

The kinds of work for men in the road projects would differ from some elsewhere, reflecting southern governments’ choices amid the region’s traffic and funds. Putting concrete surfaces on roads would occupy some men. Yet trucks were rare on roads in the southern countryside, compared to highway shipping’s quick wartime growth in the Midwest and North Atlantic regions. Few southerners in rural areas owned autos in 1920, particularly in the lower South’s states. And funds were scarce, further reduced by the depression, and often unready for use in building roads. Thus, in the South as in some other regions, officials would try to stretch funds over more miles of road by making low-cost improvements. Many men would apply gravel to the road surface, and some would hire out their horses and drive them, hauling gravel at construction sites in wagons. Many would use a chiefly southern method, packing a sand-clay mixture onto roads for surfacing. Others would grade a road to engineered shape and improve its drainage. Some would put bridges over streams.
Every state had an allotment of federal funds, available to help build road projects that state and federal agencies approved as meeting their standards of engineering and financing. States also received war-surplus equipment including large trucks, construction tractors, and shovels. The federal funds could pay up to half the cost of approved projects. The remaining cost would come from state or local funds, a requirement that southern governments met in various ways. They thus opposed two traditional beliefs in much of the nation—that states should not handle large amounts of money and that depressions should be met by retrenchment, cutting public spending to give tax relief and waiting for the economy to improve. With little in state funds available for matching to participate in the federal-aid program, many southern governments needed to raise new revenues. That would be unusually difficult in a depression, while incomes in farming, business, and industry were lower. Often in the South, counties provided the funds in 1920-22 needed to match and obtain federal allotments for roads. To avoid raising taxes for those funds, some counties and states in 1920-22 issued bonds, a method that had financed early-1900s projects of southern land-drainage districts.¹

The South's use of the new road program was influenced by several factors. Changes in the nation's economy in 1920 affected the region's parts in differing ways. States and counties raised funds by various methods, often requiring approval from constituents. Officials of southern governments, from their perceptions of local wishes and funds, made their own decisions on what road work was needed. Autos, growing in some areas, were rare in many. Some southerners, needing work, urged road work even while taxes were unusually hard to pay. Others considered raising public money and spending it in a depression a departure from their earlier experience of dealing with roads.

Development by 1920

The tradition of statute labor, requiring periodic road work of all men of a community, had been practiced in the 1800s in many American states. In the South, it remained the main source of road labor before the federal-aid act of 1916. Though the system formally required work of all men, it was administered locally and often politically, allowing many residents to avoid the chore. Those who did pay road taxes in work, though, applied their brief, unskilled labor or that of their horse teams to roads near them.²

Besides men working to pay taxes in the statute-labor system, convict laborers built roads in southern states in the late 1800s and early 1900s. By 1910, most southern states allowed counties and municipalities to use convicts they held for road work. Southern convicts' work in private economic activities limited their early-1900s labor on public projects such as roads; brokers or officials obtained convicts' release from prisons and leased them to operators of such enterprises as mines, turpentine farms, or brickyards. Yet a large supply of convicts for labor at various tasks was maintained by the
southern practice of arresting and convicting of vagrancy unemployed urban men, particularly those who were black. Later, when postwar labor for improving roads was scarce, federal officials suggested using convicts as a work force for states in all regions. They would change the policy as the economy changed and unemployment grew. By 1923, working county convicts on roads still was permitted in every state except Rhode Island, though the practice was infrequent in northern and western states, whose prisoners usually worked in industries inside prisons.³

Most southerners lived in rural areas. Though migration to cities in the war had reduced the rural South's population, many people remained. Particularly in Mississippi, where urban population was only 13.4 percent of the total, most people lived on farms or in small towns. Even in states where at least one person in four lived in a city or town—in Georgia and the upper South states of Virginia, West Virginia, Tennessee, and Kentucky—millions of other people lived in smaller settlements scattered over wide areas. The urban share of population was greatest where much land was still undeveloped as farms, in Louisiana and Florida. Yet every southern state ranked in urban population below at least 22 of the nation's other states. Still, many people lived in the South’s largely rural states, ranking them near many North Atlantic or midwestern states in population per square mile. A depression in the South might affect many people.⁴

Most rural southerners traveled on small roads by foot, horse, or wagon instead of by auto. Much rural land was undeveloped, concentrating population on acreage developed in farms. That limited to particular areas in states a demand by rural residents for better roads and a tax base to support the work. Only 30 percent of the region was in improved land in farms. Highest percentages were for the Upper South states of Kentucky and Tennessee. Lowest were those of Arkansas, North Carolina, Louisiana, and Florida. Much land was beyond easy access by railroad, waterway, or improved road.⁵

Aided by wartime and postwar improvements in the economy, southerners by 1919 owned nearly a million autos, 12 percent of the nation's total. In each southern state, auto registrations had increased from 1918, yet state totals varied. The war had brought military bases and economic activities affecting southern states including Mississippi, Tennessee, and Florida, and prices had improved for farm goods. In prosperity of 1919, North Carolina residents registered 51 percent more autos than a year earlier. Its total ranked second in the region, after Georgia's.⁶

Despite wartime improvements, the economy had allowed only a small share of southerners to buy autos. Millions of people on small farms relied on horses and wagons. Some were farm owners; others operated most years under farm tenancy, including sharecropping. Indeed, across the lower South, tenants operated a majority of farms in a belt including South Carolina and states westward to Louisiana and Arkansas. The South's autos in 1919, in a population of 24 million, equaled one auto for every 27 people. The ratio of autos to population was closest to balancing in the South's five
Atlantic-coast states. Yet particularly westward through the lower South, people still greatly outnumbered autos. Influencing those levels was auto ownership among farmers. The five states with most autos had the South's highest percentages of farms with autos in 1920; four states with least autos had them on the smallest percentages of farms. Urban ownership was small, rural ownership often rare. In every southern state, people on at least 83 percent of farms did not operate autos. In Mississippi, autos were on 6 percent of farms.7

In southern rural areas in the early 1900s, few roads had been surfaced. Dirt roads carried most traffic. In 1904, the South had 23,422 miles of road with surfacing of any of several types recorded then, including one using widely available materials, a compound of sand and clay. Over the next ten years, the region's mileage of surfaced roads more than tripled. Kentucky and Tennessee, with early travel routes of westward settlement, led the region in surfaced mileage in 1904 and 1909, though by 1914 Georgia had risen to second place, replacing Tennessee. Those three states led the South in improved acreage in farms, which required many roads in rural areas. To aid in road improvements, the South's states formed highway agencies between 1906 and 1917. War-era economic changes increased use of old road systems in some southern states, though by 1920 surfacing was still scarce.8

Southerners were acquainted with needs for road improvements through the Good Roads movement in the late 1800s and early 1900s. Yet widespread support developed only later, when more people owned the auto—the "irrepressible machine" in Cecil Kenneth Brown's 1930 description of change in North Carolina. "While immensely increasing the sentiment for good roads, the automobile changed the whole purpose of road building, swept the county aside as a hopelessly inadequate unit of administration and control, dictated the building of new types of road surface, and brought with it new sources of taxation to finance" construction. Much of such change in North Carolina and elsewhere in the South began accelerating in 1920-22. Besides the spread of autos, factors in the South's expansion of early federal-aid roadbuilding would include the depression era's lower costs and increased interest in jobs, the extent of settlement and wealth in rural areas, and preparation for roadbuilding.9

Describing the Depression

In 1920, the South had no states among the nation's top sixteen in personal income. Still, eight southern states had totals for residents' personal incomes that ranked them in the middle third of states. The four others—Arkansas, Mississippi, South Carolina, and Florida—were in the low group of states. Yet the rankings fail to indicate the South's large proportion of population at lower income levels; for incomes below $1,000, individuals did not have to file federal returns. In 1920, the proportion of such non-filing residents was much larger in the South than in other regions. Millions of southerners operated small farms independently or in sharecropping arrangements, rarely producing much cash income. To
indicate the economy more completely, particularly in the South, state totals for amounts in individual tax returns may be divided by state population, yielding taxable personal income per capita. (Southern states' totals for individuals' incomes 1919-22 are compared among totals for forty-eight states in figure 2, page 12.)

If taxable incomes per capita are compared among forty-eight states, all the South except West Virginia ranks in the low third of states in 1920. Within the region such income did vary. Mississippi, poorest in the nation, had per-capita taxable income for 1920 of $47, well below states ranking nearest—the Carolinas, each at $64, or Alabama and Arkansas, each at $67. Other southern states’ values ranged upward to West Virginia’s $196. The average of forty-eight states, per-capita taxable income of $200, was at least twice the figures of eight contiguous southern states, reaching from North Carolina to Arkansas.

In a postwar period when roadbuilding to accommodate autos would lead to larger, costlier projects, the South’s capacity to tax, for any purpose and by any level of government, was limited by low incomes. Though parts of the Plains and West had population so small as to reduce traffic and taxes, much of the South had a large proportion of population without income for paying much in taxes or buying an auto. While the economy slowed in 1920-22, jobs on roads, and spending from their wages, might support some in the South if the new road program could expand quickly.

Like other regions, the South had areas that experienced the postwar boom. Indeed, the nation’s leader in 1920’s percentage increase over 1919 in residents’ taxable income was West Virginia, whose total rose 94 percent. Florida’s 31-percent increase was sixth. Yet rankings then omit southern states until Louisiana and Alabama, each with increases of 17 percent. Smaller increases occurred in five other southern states. Yet even during the boom, income totals declined in three—Arkansas, Mississippi, and South Carolina.

From 1920, though, decline was swift for all the region, as for the nation. Lower farm prices in late 1920 and in 1921 affected much of the South. For South Carolina, already ranked 46th in per-capita taxable income in 1920, the depression cut its 1921 income total by 37 percent, the nation’s fourth-largest percentage drop. Similarly, Mississippi, the nation’s poorest state in 1920, experienced a 1921 decline of 28 percent, the nation’s ninth largest in percentage, partly from its small number of incomes at taxable levels.

In 1922, much of the southern economy improved. For North Carolina and Mississippi, totals of taxable personal income led the nation in percentage of increase over 1921. Measuring recovery by success at attaining in 1922 the income levels of 1920, though, shows varying results. Residents’ incomes of 1922 surpassed levels of 1920 in North Carolina and nearly regained them in Florida and Mississippi. The other southern states were less successful, particularly West Virginia and South Carolina, each still
at least 30 percent below their 1920 totals. The figures are for economic levels where improvement might have been most likely, where individual incomes were within reach of the $1,000 taxable level. In most areas of the South, many people had incomes well below that level. Still, the figures indicate increased economic activity, which would affect people even at levels where income remained non-taxable.\(^{14}\)

**Early Months**

Much of the southern economy experienced the depression quickly, changing conditions for expanding the new road program. For many farmers, incomes declined. For some of them, road work offered off-farm income; for others, competing with road work in hiring labor could keep them from cutting expenses. For many landowners, roadbuilding raised rural property values. While unemployment grew among wage earners, some labor spokesmen supported roadbuilding for jobs, and others suggested higher taxes on land. And as wages for free labor declined, using convict labor on roads lost its advantage for states.

Farm-produce prices fell after mid-1920, and layoffs increased. A period of prosperity ended for southern cotton growers and for operators in Kentucky’s cattle-feeding industry. Some Georgia farmers had been trying to pay enough in wages to keep farm laborers from seeking urban jobs in the boom, though by late 1920 more laborers were available. Still, from low prices and lack of funds to hire pickers, some farmers left cotton in the field in December. Layoffs and wage cuts affected lumber workers in Arkansas and Florida. Coal miners in Alabama and West Virginia were unemployed during a strike. Lower incomes in rural areas reduced business activity and employment in many towns and cities. Yet roads and improvements to them were helping offset the depression’s effects for producers of milk and butter and for owners of newly accessible land. And many travelers with autos spent part of winter 1920-21 camping in Florida.\(^{15}\)

Amid low prices for staples, southerners planted more food crops and considered off-farm tasks to add income. South Carolina farmers cut acreage in cotton and tobacco and increased it in corn. In obtaining credit and securing it with crops of low value, many landowners encountered problems financing the “furnish” for sharecroppers. That could increase the numbers both of farm tenants seeking off-farm income and of landowners supporting road work locally to help provide laborers’ subsistence. Already, many sharecroppers and other southern farmers had been traveling to make off-farm wages. By the early 1900s, they traveled by railroad to part-season work in commercial production of vegetables and fruit. Road projects, if begun rapidly, could offer some rural and urban southerners work needed in a depression.\(^{16}\)
The economy's decline rapidly improved conditions for road construction. In Georgia in a brief period—fall 1920, a mild winter, and early 1921—road “construction has been surprisingly rapid,” officials said. More-available labor and railcars allowed “contractors to make unexpected progress,” largely from counties matching the new federal funds. In Virginia in late 1919 and 1920, most roadbuilding had been blocked by congested railroads, high costs of labor and materials, and a shortage of engineers. Yet since early in 1921, “these conditions have continued to improve,” the state’s highway commissioner noted that fall. Work was slowed in early 1921 by a continued lack of engineers, though construction expanded in summer. Indeed, more state funds were needed by fall to “take advantage of the large number of contractors who are, or will shortly be, out of work” for the season. The contractors “face the necessity of laying off their labor at the beginning of the winter,” which would “to a considerable extent aggravate the present unemployment.” In Alabama, the labor shortage of 1920, when farmers were trying to keep laborers, changed by 1921, when road contractors had plenty of labor available.17

Rising unemployment increased support for road projects. In February 1921, a labor journal in Augusta, Georgia, noted unemployment nearby and urged readers to contact officials about starting road work with the large amounts recently appropriated. “The kind of labor mostly employed to produce road building materials—stone, lime, cement, sand, gravel, asphalt, tar, etc.—is far from being fully employed,” the journal said. “Men in these lines seek work. And it would be for the public interest, as well as to their individual interest, if these men were working and earning” wages. “Probably labor leaders and workingmen generally could do a great deal to get the country’s road building program promptly under way on a large scale,” it suggested. “Highway commissioners and other public officials controlling such work should be seen and convinced that labor is now plentiful with which to go ahead.” It recommended asking merchants and other community leaders to urge the start of road work. Also that month, when the jobless in Birmingham, Alabama, included former coal miners and steelworkers, a labor journal favored calling a legislative session to consider road work. Among matters to discuss was making use of “the saving to the State of millions of dollars donated by the Federal Government for road building purposes.” For raising state revenues, the Birmingham labor journal suggested higher taxes on speculators holding large acreages. Unemployment increased in spring, though most federal-aid road work awaited a new vote on state bonds. In mid-June, Birmingham’s city commission appealed for civic efforts at food relief. Some men found work with urban contractors at federal-aid projects in counties able to provide matching funds, though jobs nearby on county roads were scarce. Families in mining camps nearby were in conditions that kept growing worse, the state labor federation reported. By mid-June, efforts in the nation’s states and cities to urge public works were endorsed by American Federation of Labor. A different plan, of local cuts in taxes on business and raises in those on speculators’ land holdings, appealed that summer to a labor journal in Richmond, Virginia, which opposed state bonds for roads.18
Opinions on public works partly reflected a group's location in the economy. Many members of craft unions in Richmond's building trades, as indicated by comments of the labor journal there, seem to have expected they would not work on roads, though others might, and that such benefits to the general economy would be slight. Perhaps for similar reasons, road work rarely was mentioned in 1920-22 in several other journals published for union members or blacks in large cities in the South or the Plains. A Houston, Texas, labor journal reported little news of roadbuilding. Yet road work was an issue there in the 1922 general election. A black newspaper in Houston, supporting Republican candidates, opposed a referendum question on local road bonds, arguing new funds would enlarge the county's Democratic patronage. The next month, though, the newspaper supported bonds for port improvements, citing jobs the port was providing for blacks, including those as longshoremen. Similarly, in Norfolk, Virginia, a black newspaper supported issuing port-improvement bonds partly because "it will solve unemployment." Black voters of Norfolk favored the issue in early 1922 by a large margin, and the journal predicted they "will share very appreciably in the expenditure of the money as wage-earners." Black men may have gotten few road jobs near Houston or Norfolk or Oklahoma City, or they may have learned of them in other ways than through the local black newspapers.19

Even within such customary sectors of work, a depression increased chances of competition for jobs. Many men had traveled to southern cities seeking work, and union members in Richmond in January 1922 opposed hiring them. At a Bricklayers Union meeting there, it "was brought out that the Highland Park engine house was constructed in part by bricklayers and other laborers from other states," a practice recently in other building there. The speaker "felt that it was particularly bad policy at this time to give employment to outside workers, while Richmond men by the thousand walk about the streets looking for jobs."20

The supply of jobs open to the increased competition among free laborers was reduced where road work was done by convicts. Some farmers, though, benefited from convict labor, avoiding competition in hiring. Virginia worked convicts on roads in some areas partly to keep farming from competing with contractors in hiring free labor. The practice continued even in a time of high unemployment. By fall 1921, Virginia officials reported "a considerable increase in the prison population available for roads" when compared to the total of fall 1919, when the boom had made free labor scarce. Some 1,350 convicts, from Virginia's prison and county and city jails, were at the state's road camps in fall 1921, working in construction and repair and preparing materials. Their labor also produced savings for the state. Florida had increased its road work by convicts, most of whom were black. Yet in Kentucky, the lower wages and higher unemployment of 1921 presented reasons to reduce convict labor on roads. A Good Roads editorial attributed such changes as Kentucky's to depression-level wages. Though convicts had worked on roads in several regions in 1919 and 1920 in the boom's labor scarcity and high
wages, "with the changing economic situation, it is actually often possible to hire laborers at less than it costs to maintain convicts in road camps."21

Farmers were among men working on roads, and landowners were benefiting from roadbuilding's effect on land values. Road projects made much nearby land more accessible and, for some landowners, led to state purchases of road rights-of-way. Such purchases and their proceedings delayed work and raised costs in 1921 in Virginia, where highway officials urged changing state laws. "In many instances the values of properties, assessed at a few dollars per acre, have, under condemnation, increased from five hundred to fifteen hundred percent." Southern reliance on counties with rural or urban wealth to provide matching funds for federal allotments put much early roadbuilding in counties with developed land and some large landowners.22

Even by early 1922, finding work was no easier in parts of middle Georgia. The depression had stretched to more than a year. The labor-union council in Augusta in January 1922 noted "unemployment which now confronts a large number of both skilled and unskilled workers in this city and vicinity." It appointed a committee to request the city council to provide relief. Its decision followed a speech by a member reported to have "held that the city should provide income to adequately cope with the pressing and dangerous situation."23

Such local relief was more important while winter slowed roadbuilding, delaying work on many projects that could provide wages from federal funds. Yet, partly from good weather, southern states were numerous among those providing highway work in winter 1922-22. Kentucky, North Carolina, West Virginia, and Alabama were among at least fifteen states where road work continued in winter. Those and other kinds of projects offered "several hundred thousand more men" in the nation jobs in public works than in the previous winter, said officials of a committee from President Harding's fall 1921 Conference on Unemployment.24

Raising Local Funds

Resources for supporting public projects were scarce in much of the South. Despite preparations for the new road program, some states still lacked revenues for matching federal allotments. Attempts to correct that during 1920-22 met difficulties and delays and had some success. Voters of several states considered constitutional amendments to allow issuing bonds for roads, and campaigns on those amendments offered debate on using such deficit financing. From new taxes, often on motor vehicles and gasoline, some states shared the revenues with counties, which themselves provided many federal projects' matching funds.

Earlier, Good Roads movements often had set urban boosters against rural residents in contests over higher taxes. Consistent with wishes to avoid those contests and hasten improvements, many states
in the South sought to issue road bonds in 1920-22. To repay bonds, states would tax urban and rural residents and would spread taxes over several years, during which the depression might have ended. Even before the depression, in fall 1920 bonds had seemed a way to increase postwar road work, providing funds to participate in the federal program. Voters approved road bonds in Virginia, West Virginia, and Alabama, and rejected them in Florida. In Alabama, though, a legal challenge blocked use of state bonds in much of the depression: some counties issued bonds for matching federal funds, and roadbuilding slowed.25

The relief that bonds could give from needing immediate tax increases appealed to many voters. Indeed, southern states raised more road revenue from bonds in 1921 than from property taxes. Opinions varied, though, on financing road work in a depression with bonds. Sometimes opinions resembled those from earlier divisions over the need for public funding for internal improvements. In Georgia, the question of issuing $75 million in state bonds for roads in 1922 was supported by some state officials, bankers, and large corporations, according to Augusta’s Labor Review, which endorsed it also. Yet in Virginia, bond sales proposed in 1921 would “saddle fifty million” in debt on the state, warned Richmond Labor Journal. Also, it said, “many of the newspapers throughout the State are beginning to speak out in protest against the scheme. This is particularly true of the country weeklies.” Highway officials said bond sales could end a lack of funds that soon would stop Virginia’s roadbuilding, increasing unemployment.26

Proposals to issue state bonds to improve roads and reduce unemployment could draw support from varied groups. In early 1922 in Alabama, before a second vote on a constitution amendment authorizing road bonds, Birmingham’s Labor Advocate printed a letter of support by officials of Alabama Federation of Labor. “Our conventions have gone on record from time to time unqualifiedly endorsing all movements having for their purpose the building of good roads in our state.” Without bonds, they said, the state would lose federal funds. “It also occurs to us that now is a very appropriate time in which to vote these bonds and build good roads, for the reason it will enable so many people who are out of employment and unable to get work, to secure jobs.” A newspaper in the state’s largest city agreed. “Hundreds of men out of work want the roads to be built,” Birmingham Age-Herald said the day before the vote. “Makers of road building material are waiting on the result to hire these men in their mills and quarries.” In January 1922, Alabama voters authorized state road bonds again.27

Counties’ road bonds, though, raised funds in parts of many states in 1920-22. Support for bonds was obtainable often in the smaller units of government, particularly where a local project lacked state matching funds to obtain federal aid. County road bonds were familiar to many people. Indeed, their frequent use had built opposition, receding after the war from counties’ participation in the more-systematic road programs of state and federal governments. Before the war, many North Carolina
counties issued bonds often and to little effect in permanently improving roads. While counties' sand-clay construction soon deteriorated for lack of maintenance, bonds in growing amounts remained to be repaid. In at least seven southern states, counties approved road bonds in 1920, in amounts totaling more than $27 million. More than a third of that was by counties of South Carolina.24

States' reliance on local bonds for matching funds gave wealthier counties an advantage in roadbuilding. In some states, counties might have to provide half the cost of federal-aid projects. That concentrated in wealthier counties the period's federal-aid work and its increase in jobs. Also, those counties often were urban and industrialized and had more of the unemployed. They often had large amounts of local traffic in 1920-22 and sections of main routes. Yet relying on local initiative and resources could hamper efforts to connect roads as a statewide system, a problem that late-1921 changes in federal law sought to reduce. Bonds were issued for roads in some localities in large amounts, such as the $2.1 million issued by Calcasieu Parish at Lake Charles, Louisiana, or the $2.5 million of Sumter County, South Carolina.29

Where states had road revenues, they allocated them widely to match federal aid, helping relieve counties of that task. In Alabama, some ten counties approved bonds to aid the state after its bond measures were ruled unconstitutional in 1921. Yet road work could expand after January 1922, when the state's voters again authorized bonds from which to match federal aid. Soon, the highway department was seeking bids for projects including one in central Alabama, where in March a Columbiana newspaper noted economic effects. On the project from Lafayette to the Randolph County line, "something like $100,000 will be spent in building the road and work will be furnished a great many now out of jobs." Aided by bond money in 1922, Alabama allotted state and federal funds among all counties and tried to give every county a project before giving any a second one. By late 1922, fifteen of Alabama's sixty-seven counties had not had federal-aid projects. Because Georgia had no state funds for matching federal aid, its counties in 1920-22 had to provide them. That kept some small counties out of the program and, in the other counties, limited projects to local matching capacity. If a state fund were raised, Georgia officials said, federal aid could be matched for counties waiting to participate. Still, by late 1922, the program in Georgia, though it could still be expanded, had worked in projects in all except sixteen of the 160 counties. To expand roadbuilding in 1921, North Carolina increasingly relied on funds from state bonds. Its roadbuilding rose by fall 1921, continued through winter, and grew further by spring.30

On some large projects, counties joined their efforts and funds. In 1920 in South Carolina, declines in employment and farm prices made payment of a new state property tax for roads difficult and left counties with scarce revenue for matching federal funds. The legislature often had been attentive to county leaders, who frequently opposed creating a system of roads that took little account of
county lines and authority. Still, counties worked together on several such projects—a route along the East Coast, a Richmond-Atlanta route, and bridges such as one over the Savannah River.31

Instead of relying on counties to raise funds, some states allowed creation of special-purpose districts. Yet forming such districts within localities to raise revenue could quickly increase uncoordinated taxation and road work. In Arkansas, officers of some 300 independent road districts issued bonds in large amounts and raised property taxes. A landowner could be taxed by several of those districts, and many special laws creating districts lacked provisions for appealing assessments. By early 1921, opponents complained of high taxes in several Arkansas counties. Federal officials recommended creating a state fund for matching federal aid to help equalize localities’ tax burdens. In May, they stopped federal aid to the state until completion of changes, including repair of some new projects.32

Besides bonds, other new funds aided road work. With even small numbers of autos presenting a new item to tax, southern states raised registration fees and began taxing gasoline. That added revenues for public works besides those from taxing land or business activity. With revenues from taxing autos, road users would help pay for travel improvements. Most southern states had adopted taxes on vehicles by 1920, though amounts their taxes produced for road work varied. The South’s $11.9 million in those fees were revenues unavailable for spending on roads in earlier depressions. Louisiana first approved of vehicle fees and gasoline taxes at a 1921 constitutional convention, where a pay-as-you-go plan won against using state bonds, whose advocates would include Huey Long. In 1920, Mississippi’s legislature voted $500,000 for roads from vehicle revenues, though by 1921 most construction under state authority was in federal-aid projects, for which counties provided much of the matching funds. Southern states were among those rapidly adopting gasoline taxes. The six states taxing gasoline in 1920 included one in the South, Kentucky. In 1921, ten states adopted such a tax, including five in the South—Louisiana, Arkansas, Florida, Georgia, and North Carolina. By 1923, gasoline taxes raised funds also in Mississippi, South Carolina, West Virginia, and Virginia.33

The depression and its construction programs aggravated pre-1920 opposition to property taxes. In Tennessee, for example, farmers’ taxes had increased in the early 1900s, though the state needed still more revenues, raising chances of property reassessment. With the problem unsettled, in late 1920 prices for farmers’ produce declined. When retrenchment was sought to allow tax relief, spending for road work and other purposes became an issue in 1922 political campaigns, discussed in chapter 8.34

Thus, southern states rapidly changed many of their taxing methods. Seeking more funds and less reliance on taxing business activities or land, states added taxes on gasoline or motor vehicles. Those were growing sources of revenue, and taxing them had political appeal in making travelers pay for building and maintaining highways. The new methods also taxed urban areas (where traffic was heaviest) more than rural areas. Some states’ voters approved large bond issues, further reducing reliance on
property taxes for road funds. Other states required localities to pay much of the matching funds for federal-aid projects, which in poorer counties precluded participating in the program in other counties raised property taxes. Still, changes in paying for roads had affected much of the South, so that states and many counties had revenues in the depression that were funding public works.

**Roadbuilding 1920-22**

Despite restrictions within which its states worked, the South rapidly expanded federal-aid roadbuilding. Because of wartime priorities and postwar inflation, few states in the nation had built much in the program before 1920. Yet by July 1922, federal funds spent for roads in the South totaled $20.45 million. And amounts similar to those federal funds were provided for matching by southern states, counties, and road districts. The funds of federal, state, and local governments in the new road program represent spending during a depression in addition to customary government activities, which in the South were often comparatively small. State and local governments also provided work in programs of their own on smaller roads.

Southern states could build roads quickly in part because wages had been low in the region and declined further in a depression. Further savings were available using convict labor. Besides millions of dollars, federal aid included numerous war-surplus construction tractors, trucks, and tools distributed to all states for road work. Yet also, southern road work expanded because officials chose to build comparatively inexpensive kinds of road projects.³⁵

Many of those southern projects could be completed with less machinery, relying largely on local labor and teams of mules or horses. Southern federal-aid projects often used local materials, reducing processing and shipping costs. In that, the South benefited from having comparatively little auto traffic. North Atlantic and Midwest states were building many costly concrete roads, with large machines and costly materials, to carry heavy traffic on main routes between industrial areas. In contrast, the South’s federal-aid work frequently sought to smooth and pack surfaces of sand combined with clay. States’ use of federal aid for such low-cost road work is compared in figure 9, page 155.³⁶

Many early federal-aid projects in the South were low in cost, such as putting sand-clay or gravel surfaces on roads, or were basic to travel, such as constructing bridges. The region led the others in applying sand-clay surfacing, often using local men’s skills and their wagons, horses, and mules. The South completed 75 percent of the nation’s sand-clay surfacing in the program by mid-1922; Georgia’s completed mileage ranked first among the forty-eight states. Crews also completed many miles of sand-clay surfacing in the Carolinas, Alabama, and West Virginia. Putting gravel on roads also was a frequent task of men in federal-aid projects in the South, where such projects completed by mid-1922 totaled 994 miles, mostly in Arkansas, Louisiana, and Mississippi. In contrast, concrete paving
completed in southern projects totaled only 212 miles, most of it in Georgia, Virginia, West Virginia, and South Carolina. Of the nation's 25 completed miles of bridges, half the total was in Georgia. New bridges crossed large streams of Georgia's central and southern sections, often replacing ones counties had built before autos were in the traffic.\textsuperscript{37}

That pattern in early projects, which were completed by June 1922, continued in work under way then. Southern officials kept stretching their funds over more miles of roads by choosing three low-cost changes--applying sand-clay or gravel surfacing or preparing roads by grading and draining them. That allowed a region with low income and a less-developed road system to rank second among regions in mileage of federal-aid road projects, when mileages completed and those under way by July 1922 are combined. Of the nation's 31,624 miles in such projects in five regions, 8,113 miles, or more than a fourth, were in the South. The only region to surpass the South was the Plains, where officials often chose graveling projects, whose low cost extended mileage.\textsuperscript{38}

In its projects for improvements of various kinds, by mid-1922 the South's road work had brought into its economy $20.45 million in federal funds. Those federal funds, combined with matching state or local funds, paid for projects in the new program whose cost totaled $46 million. The total, small in the southern economy, was less than 3 percent of the $1.74 billion in incomes that individuals of the region's twelve states reported on their federal tax returns for 1921. Yet in terms of spending for federal-aid projects, the South's total ranked second among those of the nation's five regions. (Southern states' totals for spending federal aid for roads are compared in maps of the forty-eight states in figure 6, page 123.) Of the South's federal funds received by mid-1922, one-fourth, or $5.6 million, went for completed projects in Georgia. Second in the region, North Carolina received $2.6 million. Eight states each had been paid federal funds between $1 million and $2 million. The two other states, Tennessee and Florida, which were slower in beginning federal-aid projects, received smaller amounts.\textsuperscript{39}

The number of jobs federal-aid projects created can be estimated from amounts of federal aid spent. In early 1922, the federal program's chief stated that 40 percent to 50 percent of roadbuilding funds went for labor at the project site and that 25 percent more went for labor off-site producing such items as equipment and materials. He said some $82 million in federal funds, being spent yearly, at the rate then of matching by state and local governments yielded about 210,000 jobs, each for a 200-day building season. Thus, each $390.48 in federal funds spent created one job at the project site for a building season. At that ratio, Georgia's completed federal-aid road projects provided six-month jobs for an estimated 14,434 men by July 1922. That was more than a quarter of the region's estimated 52,391 men in such work at the project sites. In North Carolina, the projects employed an estimated 6,672 men. And in eight of the ten other southern states, federal-aid projects provided jobs estimated in
each to have been for at least 3,000 men. Because little federal aid was spent in the nation before 1920, estimates would be of jobs created during 1920, 1921, and early 1922. 

In addition to projects completed, others were under way in late June 1922, providing work and spending in summer and fall, as the depression eased in the nation and while people in rural areas awaited incomes from fall harvests. Even estimating employment in projects after June 1922 is difficult because of uncertainty about when their work was done. Many projects under way in late June finished in summer and fall 1922: some lasted into 1923. And other projects, in contracts awarded after mid-1922, also provided work in summer and fall. Still, funds in projects under way in mid-1922 indicate how much officials of a state, and often those of its counties, had decided to participate in the program’s road work in a changing period. For, by mid-1922, southerners were experiencing a depression, results of recent construction and planning seasons for roads, and campaigns leading to elections of fall 1922.

In the South as elsewhere, states’ spending in this later period usually exceeded earlier levels. Further, federal-aid projects’ cost generally increased, and the share of state and local matching generally declined, indicating continued participation and greater reliance on federal funds in a depression. Georgia and Tennessee particularly changed spending in the two periods. Georgia’s total for project costs declined by one-third, yet Tennessee’s increased to eight times its earlier level. In every southern state except Georgia, federal-aid projects under way in mid-1922 cost more than those completed by then. In most of the South, the new program was expanding roadbuilding again, exceeding levels of 1920, 1921, and early 1922. For the South’s twelve states, federal-aid projects were under way in July 1922 whose approved costs totaled $77.7 million, up from $46.2 million for the states’ completed projects. In the nation, approved costs for federal-aid road projects increased in totals for thirty-three states and declined in fifteen.

Roadbuilding was a short-term, localized support during a depression, yet it did not become fundamental to the region’s economy in two years. By fall 1922 in much of the South, business had improved in many in towns and cities, supported largely by higher prices for farm produce. By September, price levels in national figures exceeded those of a year earlier for cotton, tobacco, hogs, corn, and cattle, though not for hay, potatoes, butter, or eggs. Travel was better for people in many parts of the region. Improved sections were complete on roads of various types, including main routes. On roads near the southern East Coast, Florida was easier to reach by auto for tourists from the North Atlantic region, who had traveled there by train since the early 1900s. The Virginia-Florida main route also served residents of five states where autos by 1920 were most widely held in the South and where some of the region’s largest amounts of federal aid had been spent. In late 1922, a traveler found that
south of Washington, D.C., the main route was still a dirt road in many areas, though more sections had concrete paving. In the South's twelve states, the new program completed projects by July 1922 costing $46 million in state, local, and federal funds. Other projects in the new program were under way whose approved cost totaled $77.5 million, much of which would be spent in 1922. Funds in such amounts, unavailable for officials to spend in earlier depressions, provided public works in many southern rural areas. Despite concerns that road work would increase taxes and wages in rural areas, the South found labor, funds, and plans to expand construction quickly in 1921 and 1922. The expansion was aided by frequent support from people who expected it would provide jobs and stimulate the economy. Such spending occurred despite a custom of government retrenchment in depressions to provide tax relief. A belief of some advocates of postwar road work—that a federal program could begin construction in many places in the nation quickly enough to reduce a depression's unemployment—gained support in the 1920-22 building in the South.

An estimate from national averages indicates some 52,300 men worked in federal-aid road projects completed in the South by July 1922. Variations from national averages in the South—where wages were lower and a higher share of projects were in low-cost improvements often using local skills, equipment, and materials—suggest more men than estimated worked at the road program's southern projects by then. Still others worked there in road projects continuing in summer and fall 1922. Most men on southern projects applied sand-clay or gravel surfacing. Many projects hired services of laborers and teamsters, horses and mules, and bought grain for feed. Farmers, jobless lumbermen and miners, and men who usually worked in southern towns and cities were among those available in the depression for road work.

Southern officials of states and counties had quickly arranged systems of finance, engineering, and cooperative work with other levels of government. They began road projects to provide better services and prepare for economic development, aware that immediate effects of wages and spending would help improve conditions for many constituents. The federal funds they obtained required matching—often, for lack of state revenues, from county funds, sometimes from bonds instead of immediate taxes. Several southern states issued bonds in large amounts, increased taxes on autos, and began taxing gasoline. State highway agencies, formed earlier in the 1900s yet generally lacking funds before and during the war, increased their capacity to make surveys, plans, land purchases, and contracts for road projects by late 1922.

Southern road work relied less on statute labor of local men, which had been the chief method in the region in 1916. Southern governments continued to build some roads using convicts' labor, which
cut expenses yet limited the number of jobs that public works could provide. Unemployment, though, raised the supply of low-wage laborers available for road work, reducing the economic advantage of using convicts' labor. Contractors using hired labor became a greater part of the region's roadbuilding. The construction of 1920-22 and preparations for it in finance and administration quickly made more of the region's road work a source of labor for cash. With that change, rural areas could provide new work and spending to support the southern economy through the 1920s and later.

Road improvements in the South, completed or under way by mid-1922, totaled 8,081 miles, more than a fourth the national total. Having less traffic than other regions in 1920 allowed the South to begin many projects of low-cost changes to roads, such as sand-clay or gravel surfacing, extending work over more miles. Even such low-cost improvements exceeded immediate travel needs of most southerners—those who were landless, had low incomes, or worked in urban or rural areas without owning an auto. Some projects were for basic needs, such as the many bridges built in Georgia. Others were for economic development, a goal in projects for concrete paving and other work on main routes. Despite an influential preference in southern politics for limited government activities and low taxes, states and counties in 1920-22 funded federal-aid public works scattered across the region, providing jobs in a depression.
CHAPTER 4

THE MIDWEST

Autos and trucks were in use by 1920 by many individuals and businesses in a region of productive farms and factories, from Ohio to Missouri to Minnesota. Shipping and manufacturing had concentrated population, and road traffic increasingly connected cities to each other and to nearby farms. Many travelers followed main routes used in World War I, when trucks made in the Midwest's eastern areas were loaded there with military equipment and driven to Atlantic ports to avoid rail congestion. Transcontinental auto routes were developing, passing through the Midwest as had many of the 1800s turnpikes, canals, and railroads.

By early 1921, the depression brought layoffs, including thousands at factories assembling autos and supplying their parts, especially in Michigan, Ohio, Indiana, and Illinois. The unemployed would seek jobs in agriculture and in the expanding programs of road construction. In 1920-22, many rural areas would offer work in roadbuilding, even during busy periods in farming. Others would continue road projects in winter to provide income for unemployed men. (The Midwest's states are shown in figure 1, page 11.)

Many farmers favored improvements on farm-market roads more than on main roads connecting cities. Cheaper construction such as surfacing with gravel, they often argued, could extend funds, benefiting more rural users of the smaller roads. In May 1921, when Indiana's governor said the state would stop paving roads until cement and labor costs declined, a farm journal agreed, for reasons familiar to Good Roads efforts of the early 1900s, before much auto traffic or highway shipping. Advocating gravel roads, Indiana Farmer's Guide argued that "the folks living back away from the main highways should be given consideration, and helped out of the mud."¹

Officials planning road work partly to relieve unemployment sometimes favored that practice, using cheaper kinds of improvements to spread funds to more mileage. Such projects, possible in areas remote from heavy traffic, also improved rural residents' chances of gaining income from road work. In Minnesota, state officials began winter work to reduce the season's higher unemployment, made worse
by the depression. The winter projects included much graveling and road maintenance “partly for the benefit of local farmers,” sometimes increasing relief by using horses instead of trucks.

Yet where traffic was heavy, officials favored stronger construction such as concrete paving. That reduced the proportion of funds going to wages or to hire of horses. Paving increased roadbuilding’s costs, paid by federal aid matched with revenue states raised partly from fees on their numerous autos. Though bonds of counties and several states produced other matching funds for roads, paving’s costs sometimes required new taxes on farmland. Still, the expanding road work of varied kinds in the depression, by the federal-state program and by those of many local governments, created jobs for many men from the region’s urban and rural areas.

Development by 1920

With its available funds and recent experience, the Midwest was prepared to build many roads in 1920. It ranked higher than any other region in three elements determining states’ allotments of new federal road funds—population, area, and rural road mileage. Using a formula of those three elements, state highway officials in 1920 could estimate federal funds available for several years to each state. Thus, they could plan much work and adjust building efforts as local economic conditions changed. To match federal funds and begin spending them quickly, most midwestern states could rely on capacities developed in their earlier road work. Most states had formed highway revenue systems and agencies and had been leaders since the early 1900s in surfacing rural roads.

For decades, the region’s roads, most often unsurfaced, were managed in small districts. In 1876, voters in an Iowa county’s 20 townships elected road supervisors in 62 districts. Even by 1920, when state and county authority had grown, township trustees supervised Iowa’s secondary roads in some 5,500 districts. Building bridges often required a contractor’s skilled laborers, whose wages came from county taxes paid in cash. Yet repair of many roads in the 1800s and early 1900s was done using the statute-labor system, adopted from the East, where it began in colonial era. The system required several days’ unpaid labor of local men yearly on their small district’s roads, using their farm equipment. Thus, farmers needed little cash to pay road taxes and might do the work when farming allowed.

Demand for better roads had been frequent. An Iowa farm journal noted in 1893 “frequent discussion of the good roads problem in the various Farmers’ Alliances and Institutes during the last winter.” In response, the Homestead suggested a way to better roads in the region—use labor paid in cash. Dirt roads needed draining and smoothing most, it said, in spring, early summer, and fall, when farmers were busiest at more-profitable work in the fields. “It is a great hardship to ask the farmer to leave his corn field where his time is worth $5 per day and work on the roads, when another man, equally efficient, can be obtained with his team for $2. We do not, therefore, believe that road making
will be done as it should be done until the road tax is paid in money, supervisors' districts enlarged so that the man can give his whole time, during the season, and employ labor outside of the farm." Still, many defended statute labor in small districts as a self-regulating method. One man, asked at an 1892 roads meeting in Iowa if he ever had slept under a tree when he should have been performing road work, answered that if men "do sit under the tree it is their damage and nobody else's. We don't pay someone else money and hire someone else to sit under the tree." Those who would not work on roads endured bad ones in the 1800s, before autos let people travel far beyond their own small districts, encountering many roads built by others.\(^5\)

Notions of efficiency in road work were opposing those of independence and self-sufficiency. New road scraper machines interested some Iowans by 1889 as improvements over statute labor. "The old 'set on the fence and watch for the supervisor' mode of working the roads has been displaced by the large Victor road scraper which does more and better work," W. F. Clements of Agency City reported to the state agricultural society. Yet problems remained where traffic was heavy. A Des Moines man said parts of the state needed roads open all year to benefit dairymen, gardeners, and city consumers. At Dubuque, a resident, though six roads into town had costly macadam surfacing to aid farmers in getting produce to local buyers, wagons wore ruts in them. He suggested requiring wagon wheels 4 inches wide at the road.\(^6\)

Though road work increasingly relied on money, statute labor remained in use in the Midwest. Iowa expanded use of road labor as a cash equivalent by 1897, allowing townships to require road work at five cents an hour of those receiving poor relief. Also, men in the state continued paying taxes by such work. In Minnesota, a state road tax in cash, approved by voters in 1898, was enacted by the legislature in 1905; increases approved by voters in 1910 and 1912 soon took effect. In the early 1900s, Minnesota townships authorized some cash taxes for roads. Yet "most of the work done by townships was assessed as labor tax and was worked out by the land owners along with the poll tax," which itself required yearly road work of every man. In 1914, highway officials said under Minnesota's recent changes for townships "all road taxes are payable in cash and there is no labor assessed." In Michigan, assessments in labor stopped in 1907, though the option to pay in labor remained beyond the 1920s.\(^7\)

Rural residents also contributed cash for projects to benefit their areas. Some Michigan farmers had subscribed cash payments before 1910 for roads built under a plan of state matching of local funds. Such a project was Beadle Lake Road, leading southeast from Battle Creek beside a railroad instead of keeping its earlier route over high sand hills. Few farmers contributed cash at first; more said the old lane sufficed. Later, many of them traveled the new, level gravel road. For months after it opened in 1907, some farmers stopped at a store on Beadle Lake to leave $10 or $20 toward the road's cost.\(^8\)
Contributions of labor were urged by proclaiming a Good Roads day. Individuals and groups, often including men and women, worked on such days in a civic effort that particularly benefited commerce. Minnesota law set one day yearly, which the governor would announce, for maintaining roads. State highway officials praised efforts of the first such day, in June 1913. "Town and village organizations, commercial clubs and good roads associations in nearly all parts of the state participated in observance of the day, with the result that many miles of road were substantially improved."9

An alternative to statute labor and hired labor was the road work of convicts. In 1912, with funds increasingly available for roads, a county used convicts to build part of a main route across northern Iowa. Fayette County could use its share of auto-registration fees and the labor of prisoners, supervised by the sheriff, to reduce reliance on taxes on farmland to build roads. Newspaper editors at Cedar Rapids said, "We understand seventeen men doing time in the county jail were employed on the road and that they did it cheerfully, glad of an opportunity to be out of doors, usefully employed." The men worked on a section of North Iowa Pike, a Dubuque-Sioux City road being improved for auto travel. The county's project using unskilled labor showed improved engineering practices, the Cedar Rapids editors said. "The road was surveyed by real surveyors," and grading crews lowered hills and filled hollows "according to the stakes set by the surveyors and as railroads build." Indeed, with drainage complete and the surface graded to a crown, "we believe, they have the beginning of a nearly perfect dirt road."10

In 1913, a federal ruling allowed using convict labor in federally aided road work and removed an eight-hour limit on the daily work of its free laborers. In an experimental federal program of 1912 for matching funds and cooperating to build roads for mail delivery, Agriculture Department officials had required states and counties to abide by an eight-hour day and to employ no convicts, provisions that drew opposition from governments in various regions. Iowa and Minnesota also opposed the eight-hour provision. After a Minnesota official raised the issue with the Justice Department in 1913, the attorney general ruled that work in the program would be done by states and localities under federal supervision and approval without becoming "public work of the United States" requiring the eight-hour limit. He also ruled that laborers and mechanics in such work were not "employed by the Government of the United States," avoiding the ban on convict labor. New agreements were made in the experimental program, limiting the Agriculture Department’s authority in the road work to supervision and control of federal funds. Objections on working hours and convicts’ labor were among the issues in frequent contests in the 1912 program over federal authority in road matters earlier reserved to localities. Most states and counties were unwilling or unable to participate by matching the meager federal funds.11

To raise funds, a rural method of financing drainage for farm land appealed to some highway officials. Earlier in the Midwest, construction districts for drainage projects had been defined by
residents, and higher taxes, called special assessments, levied on benefited lands. In 1912, Iowa's state highway engineer, Thomas H. MacDonald, suggested such a district and tax for building roads. While road funds were scarce, the method would allow some construction, where residents were willing to pay higher taxes. The practice continued relying on a community to provide its own improvements, using cash taxes instead of statute labor. Soon, such local taxation would be surpassed by funds increasingly raised from the general population: auto ownership increased in the years around World War I, revenues grew from vehicle-registration fees, and they became available to state agencies. In 1920-22, when large federal and state revenues were ready for roadbuilding, such a special, local road tax, used often then in parts of the Midwest for paving, would stir opposition among some farmers in a depression (discussed in chapters 8 and 9). Still, in fall 1912, in the early months of an experimental federal program of roadbuilding and revenue matching, creating special districts offered a way to gather funds quickly for roads, using accepted rural forms of local initiative and administration. Urban practice was similar, creating districts for special taxing when residents requested street paving near them. Also in 1912, MacDonald proposed a revenue-matching plan whereby state aid would pay one-third of a district's roadbuilding costs if vehicle-registration fees were put into a state fund instead of being spent in Iowa by counties. In 1915, Michigan allowed residents to form special-assessment districts for helping to pay for road work they requested, and it permitted combining their funds with those from the state, counties, and townships.12

Yet by then, a related plan, adopted in 1911 by Minnesota, had both raised roadbuilding funds in some areas and stirred concerns in others about who should exercise local initiative. Useful in the state's northern counties, where population was low and much land undeveloped, the plan allowed as few as six landowners to petition their county to establish and build a road. To finance a fourth of costs, the county could issue bonds. The state paid half the rest, leaving a fourth that owners of benefited land paid in ten yearly installments. Objections arose from the plan's use in more-settled areas, where heavier traffic required repair of the road before bonds could be repaid. State highway officials noted the law gave counties unlimited powers to issue bonds and required no vote of constituents, only the "petition of a very small portion of those interested." Still, some counties got "satisfactory results" before the plan's repeal in 1915. Farmers had particularly developed the prairies across the central Midwest, forming many settlements and rural roads. In 1920, the nation's highest shares of area in improved farm land were for four states in a belt from Ohio to Iowa. Across the Midwest's northern areas, though, mining and logging had developed, reducing the area in farms for Michigan, Minnesota, and Wisconsin.13

The Midwest's location on transcontinental routes—developing in the 1800s on waterways and railroads—increasingly affected road work. By the early 1900s, roads had enough traffic to stir local and state road officials to carry out more road surfacing than those in other regions. The chance federal
funds might be used reduce costs for states and localities in roadbuilding was of interest early in the
1900s. Yet without relying on federal aid, seven midwestern states and their localities led in 1904-14 in
surfacing rural roads. Indiana ranked first in the nation then and Ohio second, each exceeding twice the
mileage of surfaced rural roads of any other states. Opinions of what constituted a good road changed; a
paved one-lane road 10 feet wide, though valued when built, seemed narrow to some officials for
postwar use. As auto highways began to link regions, midwestern drivers by 1920 shared roads with
traffic on direct routes across the nation. Local auto traffic grew, and it included many farmers.14

Dense settlement in much of the region created a base for auto ownership, taxes, and demand for
better roads. From development in agriculture, industry, and commerce, parts of the Midwest were
inhabited by many people, living in towns or cities or on farms. In the region's industrial centers and its
rural areas producing staples, a depression would rapidly affect many people. By mid-1920, midwestern
factories were cutting workforces to levels that would last into 1922. In that period, roadbuilding would
expand, offering jobs. By early 1922, before the depression's second construction season, an Iowa
newspaper would note that "road-building, once a reproach in this country, seems to be developing into
a leading occupation."15

Describing the Depression

The Midwest's combination of urban and rural production supported many people before and
during the depression. In the wartime economy of 1918, all eight Midwest states were among the top
third of the nation's states in net income, as reported by individuals for federal taxes. There they remained
in 1919-21 and in 1922, when the much of the nation's economy was improving. (Midwestern states'
totals for individuals' incomes 1919-22 are compared among totals for forty-eight states in figure 2,
page 12.)16

The depression of 1920-22 affected parts of the region differently, favoring states that had large,
diversified economies. During 1918-22, Illinois remained third in the nation in income, and Ohio and
Michigan ranked in the top ten. Least affected in 1921 were income totals of Illinois, Missouri, and
Wisconsin. The other midwestern states, though, experienced large declines in 1921, ranging between
25 percent and 27 percent except for Iowa, where incomes totaled half their 1920 boom level.17

Recovery in 1922 of the 1920 income levels was uneven. Illinois, least troubled in the depres­
sion's effect on the taxable incomes, surpassed its boom level of 1920. Missouri, Wisconsin, and
Michigan nearly regained in 1922 their 1920 totals. Still slowed, though, were the economies of
Minnesota, Indiana, Ohio, and Iowa.18

Amid the economic changes, people of a range of occupations and incomes added to public dis­
cussion of matters including road work. Merchants often favored road improvements for trade, and
workers expressed support for the jobs they created. Farmers, and farm groups representing people of varying income levels, would say in 1921 and 1922 that road work should be postponed to better times. Depressed farm-produce prices influenced them, together with beliefs about how to respond to such economic conditions. In 1920-22, when farmers still paid taxes related to many roadbuilding expenses, some farmers worked on roads. People in rural areas of specialized production easily noticed the period's economic changes. In the Midwest, rural residents' incomes would vary greatly with prices for corn, the most valuable crop in 1919 in the region's five lower states, second in value in its three upper states. Corn prices by early 1921 fell nearly to half their value of a year earlier.¹⁹

Still, the rural economy provided much of the region's unemployment relief. Some people returned to rural areas to subsist. Many worked as farm hands or as laborers growing and picking fruits and vegetables. Others followed the wheat harvest, which before the 1930s required thousands of people, most of them men, many traveling its course from Texas in mid-summer to Minnesota and the Dakotas in autumn. Men traveled by train from many states to early-1900s wheat harvests. In 1920, they included men recently laid off at the region's auto factories.²⁰

Early Months

Early signs of the depression appeared in the Midwest's cities. Auto plants, which drew people during and after the war to such cities as Detroit and Flint in Michigan and Akron and Toledo in Ohio, began layoffs in April 1920. Railroads soon carried many people out of cities to seek work at the Midwest's farms and mines. Some factory workers laid off by mid-1920 sought jobs in the grain harvest. Prices of many farm products fell in July, August, and September. In Detroit, at least 60,000 men were reported jobless by November 1920, when the mayor supported city projects to relieve unemployment. Tire plants in Akron were said by late 1920 to employ half their number of a year earlier. Cleveland's jobless were estimated at nearly 60,000. In Milwaukee, layoffs were still small though few employers by late 1920 were seeking labor, and men who returned after farm work had added to the city's unemployed. Nearby in Racine, thousands were jobless; many plants had closed. Peoria, Illinois, had jobless men estimated at 5,000. In many cities, a Chicago labor journal reported, "machinists of the comparatively unskilled type are being laid off."²¹

Some of the jobless went west to St. Louis, where unemployment grew by October 1920. Yet men in about the usual number were applying at its jobs bureau. The contrast, said the bureau's director, was because St. Louis wages were lower than those recently at automobile and tire plants in Detroit, Flint, and Akron, where many of the unemployed in St. Louis had come from, and they were not yet seeking lower-wage jobs. Many men were finding work as laborers on railroad crews until cold weather. Indeed, the jobless included many men laid off at General Motors' St. Louis plant. Many
Missourians were interested in road work. A state bond issue of $60 million for roads passed in November's elections, particularly among urban voters. Yet prices for farm produce already had fallen, and some farmers in Missouri, like some in Indiana, by late 1920 opposed such road work by state agencies.22

Besides benefiting travel, building roads meant, for many people, providing jobs in a postwar depression. In Minnesota, officials of the state labor federation endorsed a ballot item authorizing state spending for a large program of road work. Using familiar slogans of rural road advocates, they urged union members to “pull Minnesota out of the mud” by voting for “Good Roads Amendment No. 1” in November 1920, when issuing $75 million in state road bonds was a ballot question. Yet they also noted the expected jobs, both at road projects and in industries supplying roadbuilding. Supporting the amendment, they estimated in a Duluth labor newspaper that “out of every dollar spent on roads 65 cents goes for wages on the job and the workingmen in machine shops get more besides.” High shares of spending could go for labor, though, only in less-expensive kinds of postwar road work, such as some projects for graveling. When many people were unemployed in Duluth in late 1920, road work could be planned. For, the city was part of St. Louis County, whose voters in July 1919 had approved road bonds totaling $6.5 million, among the largest amounts for a county in the nation by then.23

Even before the depression, urban and rural interests in roadbuilding might seem compatible, as they did in Racine, Wisconsin, when many men were out of work during late-1919 strikes, including one about layoffs. A labor journal there urged readers to vote for local bonds, to match with state and federal funds for new roads. Farmers, it said, would gain better ways for hauling to town, bringing them nearer city residents and “helping to eliminate the middle man and the profiteers.” And city workers voting for the bonds “will thereby very materially assist in putting more men to work, which will lessen the danger of chaos during this economic crisis we are now passing through,” the newspaper said, reasoning as some in Congress had in early 1919 when it increased federal road funds during readjustment to a peacetime economy.24

Instead of declining, the economy in much of the nation boomed in 1919 and 1920. By late 1920, though, the boom’s shortage of labor—slowing summer road work that year in states including Michigan and Illinois—was no longer a problem. Some farmers in Minnesota and Iowa who had enlarged their farms in a 1919-1920 land boom, when they paid high prices with credit, had very large debts as the depression cut their produce prices. Mexican laborers, brought to the U.S. during wartime labor shortages, were laid off by late 1920 from many jobs by railroads, packing houses, and factories, as discussed further in chapter 10. Layoffs affecting many groups of people in the U.S. economy continued in 1921. Some labor and political leaders urged deporting the Mexican laborers to improve employment for American citizens. Many Mexicans lacked funds in Chicago, and some 3,500 others were laid off by a
sugar-beet company in Saginaw, Michigan. To make work for jobless men, married women were discharged from city jobs in Highland Park, Michigan, near Detroit. By early 1921, many men were seeking work. In Ohio, many “former farm employees now out of employment in industrial towns” contacted the state agriculture department, “asking for employment at once on farms,” Ohio Farmer reported. Yet Ohio prices for corn, the leading crop, had dropped by January to nearly half the level a year earlier. As many midwestern cities would, Toledo approved an emergency appropriation for local public works. With $25,000 it would “repair streets, alleys and public buildings. A number of the city’s former unemployed are already at work,” reported Engineering News-Record. Wisconsin’s governor told the legislature that $26 million in idle funds was available for roads to employ 70,000 jobless men, said the journal Good Roads. In winter, many black men went to Chicago from the South and Midwest, adding to the jobless and prompting the local Urban League to warn potential migrants to stay away, reported Chicago Defender, widely circulated in the South. Some of the men could stay in shelters, though many were sleeping in poolrooms, police stations, and “wherever permission can be obtained to sleep on floors and chairs.” The league’s Chicago office took applications for work through a local Citizens’ Relief Committee, though 7,134 people applied in February for 231 available jobs. Minneapolis officials declined a request by labor and veterans’ groups for $50,000 to aid the jobless, though they agreed to expedite public works to hire them and approved $615,000 for sewer construction. In the railroad shops in southern Minnesota at Austin, work schedules since January had been only for sixteen days monthly.

Road work was discussed frequently in spring 1921, often as a source of jobs, sometimes unfavorably. A growing program of systematic roadbuilding meant the Midwest would lose money and local independence, a farm journal’s editor argued in March. Federal aid for roads “smacks too much of shotgun methods of persuasion” to build roads, said Wisconsin Farmer editor Dante M. Pierce. For, it “is absolutely certain that the taxpayers of Iowa, Wisconsin, Kansas, Missouri, Illinois, Minnesota, Nebraska and every other prosperous grain belt state do not begin to get back what they are compelled to chip in to the pot” in federal taxes. Better to send taxes for roads to states, “to be used as we saw fit, without the federal government holding a club over our heads.” Federal officials might properly “assume supervision over transcontinental routes for military and perhaps other uses,” Pierce conceded, “but I do object most strenuously to a bureau down in Washington attempting to dictate how the taxpayers in any county in the grain belt shall use their road funds.” One of Pierce’s newspapers competed in Iowa with a farm journal whose former editor, now U.S. agriculture secretary, was directing the federal road program. Still, Pierce mentioned concerns many farmers voiced elsewhere. In April, many building-trades workers were unemployed in Chicago. Unions considered the season’s offer from the local contractors’ association though it cut the wage scale. Even with the cut,
laborers would make more in unions in the city than in federal-aid road work in rural areas. By May, some Illinois counties were beginning road work; others waited on material costs to fall. "Efforts to disclose and break up combinations of profiteers should be pushed energetically" among material providers, Chicago Tribune said, though "wherever there is an approach to fair conditions" road work should go on. "Work is needed by thousands of men. The railroads are lacking traffic and should be given the road material to carry now," a way also of "giving aid to industries now at a standstill." Perhaps speaking to readers downstate, the Tribune rejected a "new argument" against good roads, that they "would kill the small towns, and add to the prosperity of the big places." The argument was false, as it had been when made about parcel post, it said.28

High prices in construction were an issue for opponents of growing state authority in road work, according to Engineering News-Record. Actually, the opponents sought to establish "political control of road location and construction," it said of early-1921 contests in Illinois, Indiana, and Missouri. Besides issues of control and cost, potential effects on the rural economy concerned some residents. Farmers near Goshen, Indiana, asked county officials in late April to delay roadbuilding until the depression further reduced not only material prices but also wages. As weather warmed, wages for hiring farmhands in much of the Midwest might compete with those for rural road work.29

By late spring 1921 in northern Michigan, copper mines that usually employed some 100,000 men closed, rare in the previous fifty years. Mines in northern Minnesota closed, as did railroad shops and steel and cement plants at Duluth. Detroit newspapers told of labor needs expected on Canadian farms. In June, men from several regions began the wheat harvest in Texas. Some followed it north, working by mid-July in Missouri and Kansas, where a newspaper reported employment officials also had received "numerous inquiries from women who wish harvest work" as cooks or field workers. Many jobs opened in the region in summer producing corn and other grains, cattle and hogs, and fruits and vegetables. And roadbuilding expanded in the Midwest, forming patterns in 1921 that in many areas would recur in the building season of 1922.30

As construction conditions changed in Michigan, road work quickly expanded. In spring and summer, contractors asked less in money for building the projects, more men sought work on them, and scheduling were easier for obtaining rail shipment of materials. Partly because jobs were needed, Michigan's legislature in 1921 doubled the money available yearly (to $10 million) from a $50 million road-bond issue voters had approved in April 1919. Its 1921 road work used funds from the state bonds, automobile taxes, counties, and federal aid. By August, many men, laid off from copper mines near the Upper Peninsula town of Houghton, worked in road projects, said a Wisconsin man touring Michigan. Near Houghton was "much highway work," in which "men are worked in shifts, so as to give each
family an opportunity to earn something." For the return trip westward, he said, "we have to retrace our route again for some distance, for, although Michigan has good roads, there are very few of them."  

With labor costs declining and men needing work growing in number, interest in using new equipment to improve efficiency subsided. Some projects—in areas near Houghton and in Minnesota, Iowa, and elsewhere in the region—tried to spread work, sometimes continuing old methods. Interest in efficiency had been widespread amid wartime and postwar labor shortages, when roadbuilding journals often discussed new kinds of equipment. Motor trucks in hauling, for example, could cut the number of teams, wagons, and teamsters needed. In 1920, a road contractor near Belgium, Wisconsin, had used a truck to replace seven teams, saving himself $32 daily. Similarly, fifty-two trucks, arriving in January 1921 near Austin, Minnesota, for graveling a 23-mile federal-aid project, represented what a newspaper called "the largest amount of road equipment ever used on a job in the county."  

Much small and traditional equipment, though, was among that used in a flurry of road work in Langlade County in north-central Wisconsin by early June 1921. The projects were mostly for kinds of work (grading and graveling) that could use many horse teams and men, both often available nearby for hire. At fourteen points scattered among the county's townships, a total of twenty-six teams and teamsters, as well as two tractors and other large machines, were working on roads with state and federal aid. Laborers were counted by a newspaper at three of the locations, where they totaled forty men, which might suggest more than one hundred laborers in all fourteen projects. The county had bought a truck from the state to transport laborers to road construction sites. Nearby in Chippewa County, work was offered to "needy" people in fall 1921 on a federal-aid project, in which the county agricultural agent was using a mechanical stump-puller in clearing a roadway. With cooperation of several local authorities, the project was providing work for "over thirty people" from four towns. Roadbuilding may have employed many Wisconsin farmers in 1921, the depression's worst year. Local men, working as laborers or teamsters and hiring out their horses, could earn income in a depression from such nearby projects of grading and graveling, which were numerous throughout the Midwest.  

Other people left homes in rural or urban areas to seek work, sometimes finding it at big roadbuilding projects that housed workers in camps. A large road contractor based in Rock Island, Illinois, kept standard plans for construction camps, modifying them as needed for varying conditions of building locations. Men at one of the company's camps—beside a road it was to pave near Cedar Rapids, Iowa—slept in a building containing twenty-four bunks lined against opposite walls. The commissary in a building nearby served some 150 meals a day (35 cents each) and sold clothes, candy, soft drinks, and tobacco. In the camp's machine shop, four mechanics repaired trucks and other equipment. A woman who was contractor for 4.5 miles of road work near Superior, Wisconsin, supervised the work and cooked for the crew of fifty-seven men in 1921. She helped maintain her company's equipment and
tend twenty teams of horses. Two daughters worked at tasks including keeping the project’s account books. A contractor from Sioux City, Iowa, moved between paving jobs, pulling two railroad cars remade as kitchen and dining rooms for men, who slept in tents or frame buildings. Black men were among the company’s crews, for whom its camps had separate eating and sleeping quarters. Another large camp was working in winter 1921-22 in Worth County in northern Iowa, where its crew was pouring cement piers for a bridge. The camp contained about twenty-five men, thirty-five horses and mules, twelve buildings, and two horse tents; it had a blacksmith and a “barn man” to care for livestock. Lanterns and gasoline engines to power lights were common in road and bridge camps, a newspaper said, though this one got city electricity from a line running past the bridge site. Often road camps added consumers to a local market, an increase in trade particularly valued in small towns in a depression. The camps offered work such as that in feeding construction crews. A man of age 19 was a cook at a Minnesota camp in early summer 1922 until he died in a fire in “the cook shanty, in which he, and the other cook and choreboy, were sleeping.” In much of the midwestern countryside, road-construction camps were more numerous in 1920-22 than before.34

So also were large pieces of machinery, new for road work in many rural areas. Much road work there, especially routine upkeep, had been done by farmers with shovels, teams, and wagons until recently in much of the nation, including the Midwest. Yet after the war and particularly in 1920-22, machines even larger than the region’s farm implements were industrializing rural road work. Some items—among them trucks, construction tractors, and cranes—were war surplus, donated to states and counties for road work. Other large machines were brought to rural places by contractors, who were increasingly part of roadbuilding. For a paving project in 1921, a contractor’s four small locomotives ran on a track the company’s crews moved as needed. The processes and their new scale attracted notice from midwestern residents. Townspeople sometimes turned out to watch crews and their machinery. Farmers were impressed in varying ways by the new road work. Some gained income from it, and some soon would call it “extravagant,” perhaps partly for its size of machines and projects.35

Such sentiments may have grown also from large projects’ locations and from perceptions of their labor needs. Paving usually was done on main roads, with large machinery and costly equipment, materials, and shipping. The postwar Midwest needed paved main routes for several reasons—its location amid transcontinental travel, urban development, large population and traffic, and the shipping needs of industry, agriculture, and commerce. Yet many farmers said such paving projects on main routes took money they wanted spent instead on smaller roads they traveled often. Many of them may also have thought such large projects reduced chances a farmer’s labor, or that of his horses, would be hired, compared to a small project of graveling in a rural area near his home. Indeed, large projects offered smaller shares of funds to hiring anyone, reserving large proportions of their cost for equipment,
material, and shipping. Still, large projects often offered jobs longer than smaller projects such as graveling.  

To counter large projects' expense, including equipment costs, state highway officials in Illinois in 1921 completed some construction using crews they hired and directed themselves. Instead of relying on businesses through contracts, "two large day labor construction units were organized" within the state's division of highways. Working "chiefly to ascertain construction costs and to utilize some of the surplus war equipment" allotted to the state, they also saved money, Illinois officials said. "The day labor proved very satisfactory" in 1921, and other crews were planned for 1922. Yet most state-supervised road work in Illinois was by contract in 1921. Contractors, in work they did for the state division, including federal-aid projects, hired an estimated 7,500 men and 1,500 teams in 1921 in Illinois road and bridge construction and grading. Other men prepared road material and equipment.

Though many men got income in 1921 from roadbuilding in the Midwest, debate over such work in a depression continued. Factions in Missouri contended for months until, by August 1921, the legislature approved spending funds from the $60 million in bonds voters authorized in late 1920. The legislature specified that two-thirds of federal road funds would be used for graveling projects, leaving one-third for surfacing of more costly kinds. Such a provision might have pleased an Ohio farmer, who wrote a farm newspaper of his opposition to paving while wheat, corn, and oats brought low prices. The farmer, W. L. Leffler, objected to continuing "to extravagantly spend the public money" for paving, while "there are hundreds of farmers in Ohio living on side roads, who would be thankful to have their roads graveled." Yet the employment in public works of varied kinds was valued by many members of the American Federation of Labor. Its convention advised state federations and localities' central labor groups to urge state and local governments to begin projects they had under consideration. Road work, particularly paving, could raise landowners' taxes in a depression, under some 1920-22 tax systems of midwestern states. That often remained true even in projects assisted by federal aid, prompting discussion by landowners in many parts of region. Advocates of less paving until farm conditions improved spoke out often in fall and winter 1921, as a second year's harvest met depressed prices. Such opinions, considered further in chapter 8, were expressed in several regions.

Winter 1921-22

In fall 1921, when many men remained unemployed in midwestern cities, new road work offered jobs. Late in the 1921 building season, Minnesota officials were scheduling winter road work, which began once a ruling allowed borrowing against anticipated license fees to match federal aid. For their plan of 300 miles of graveling, bids were low, contractors expecting to cut costs by hauling gravel on frozen roads, often with sleds. Horse teams could be hired for less in winter. Paving bids also were low;
a Mankato paving contractor said the winter work would let him keep one-fourth of his regular crews. State and county governments, sometimes aided by federal funds, began work particularly for local men and their horses. In northwestern Minnesota, 388 farmers with teams worked in December for the state putting gravel on roads. Traverse County, on Minnesota's western edge, hired 367 men and teams to gravel state-aid roads. Projects were under way by early January for roads and bridges in Illinois and bridges in Missouri and Wisconsin. Others in the U.S. and Canada also hired the jobless in winter, said a committee formed at President Harding's autumn Conference on Unemployment.

The unemployed were growing in number also in many rural areas. In western Michigan, many people kept returning to towns and farms from cities, a trend under way in late 1920, according to a railroad's survey. In late 1921, the trend was noted in Ohio by state agriculture officials. In addition to supporting new residents, rural areas had other problems. Farm credit was made easier to get by late 1921 by a federal infusion of loan funds, an initiative combating the depression by methods besides road-building. Many farmers were holding produce in winter, waiting out low prices. And farmers expressed their sentiments (often for cutting public spending) through farm journals and organizations and platforms of candidates announcing for 1922 legislative elections.

In north-central Minnesota at Bagley, the newspaper carried ads for farm-foreclosure sales and news of winter road work. Many camps for road workers were almost ready nearby, it said, for projects among the first forty contracts of Minnesota highway department's "more work--better roads" winter program of grading and graveling. The program planned some work partly to hire farmers and their teams. Using horse teams brought protests from truck owners in Minneapolis and St. Paul. In southern Minnesota near Austin, a game warden said farmers seeking income had doubled the number of trappers there to about 250 and had set some 5,000 traps for animals, particularly the marketable mink and muskrat.

In cities and towns, people subsisted in winter in a depression in varied ways. In Ohio, homeless and jobless men in Columbus filled the space at shelters and the jail. Some people used autos to aid urban crime, as in Detroit, where a series of December robberies were part of "a year's carnival of crime" by holdup gangs, said a newspaper. At Duluth, men who were union members urged governments at all levels to increase employment by public works and by several other expedients. Their trades assembly urged recognition of the Soviet Union to promote trade, asked city government to dismiss non-citizens it employed and give their jobs to local married men, and, a newspaper reported, condemned businesses "who employ married women whose husbands are able and willing to work." Duluth planned some $1 million in paving for 1922, to employ more than 1,000 men. In Indianapolis, many women--married, single, black, or white--were among job-seekers in early 1922, usually seeking wages for a family's necessities, said an employment bureau official. Men in Indianapolis were seeking
work in numbers far exceeding jobs in city programs. In Ohio, at least seven cities were proceeding with public works. At Davenport, Iowa, where 224 men were working on projects funded by city bonds, aldermen protested that men were being laid off in an effort to cut costs by using machinery. In north-central Wisconsin at Antigo, the city’s plan of paving to counter the depression was called wise by a local newspaper, a way to save taxes and provide for wages and purchases until times improved for nearby farmers, lumbermen, and railroad workers. In some Minnesota towns, merchants were accepting corn for purchases.42

By early 1922, employment in northern Michigan’s lumber camps was higher than a year earlier, though wages still were lower. An auto plant increased hiring at Cleveland, yet the new mayor cut positions from the city payroll. A shelter at Columbus housed a diverse group. Men lodging there on one night ranged in age from 17 to 61 years; 33 were white and 36 black; and three men gave addresses that were local. In Chicago, jobless men were arriving at about 700 a day, said the police chief, and officials were considering putting beds at the eighteen public bathhouses and the old municipal lodging house. In Minneapolis, provisions for 800 men were made at a shelter by expanding to a second building. And late in January 1922, Indiana’s governor, urged by officials of Indianapolis Central Labor Union to find jobs for unskilled workers, wrote the state highway commission’s director, a newspaper reported, “suggesting that the commission start immediately whatever construction work is consistent with good judgement that the unemployment situation may be relieved.”43

Raising Local Funds

Though Midwesterners were widely accustomed to roadbuilding in the early 1900s, wartime experience and postwar plans, particularly in the new federal program, led to changes in how states raised revenue. Some states and counties issued bonds, and states collected more in fees from registering a growing number of motor vehicles. To these funds were added those from localities taxes’ on land, which their road programs had used for years. The revenues could be extended by using some of them to match federal funds. And issues about revenue often affected those about state or local control over roadbuilding.

Where voters had approved state bonds, they were sometimes of little use in 1921. County bonds produced road funds in many areas. In Illinois, none of the $60 million in bonds the state’s voters authorized in fall 1918 were marketed until late 1921, partly because projects could use other revenue to match large amounts allotted in federal aid. Missouri’s voters approved $60 million in bonds in fall 1920, yet the delay of legislative debate on a road plan in much of 1921 reduced construction. Minnesota voters approved $75 million in bonds in 1920. In Ohio, road work was delayed in 1920 by a court ruling against raising bonds’ interest rate to draw buyers in the boom. Michigan voters had
amended the state constitution to allow $50 million in state road bonds in 1919, yet legislation that year limited to $5 million the yearly amount of bonds for sale, raised in 1921 to $10 million. Earlier, several Michigan counties had won voter approval of bonds, to be repaid by special taxes on land near improved roads, though many of the bonds had remained unsold in the 1920 boom. Iowa first allowed counties to issue road bonds in 1919. In Wisconsin, the constitution barred state highway bonds, though county bond issues approved in 1919 and 1920 totaled some $36 million. In Minnesota by then, county bond issues totaled $5 million. Bonds’ interest cost would be saved, said the Minnesota editor of *Milica Times*, if the federal government would issue paper money to pay for public projects, as inventor Thomas Edison suggested in late 1921.44

Vehicle-registration fees were producing large amounts in the region in 1920, particularly in Iowa, Illinois, and Minnesota. Registrations were increasing in Indiana, attributed largely to creation of a state motor police. Such fees from registrations were taxes on road users that provided construction funds not relying on farmers’ payment of taxes on their land. Indeed, in Minnesota they helped pay off road debts of counties, relieving landowners of those.45

Such fee revenues were larger and were used under state control more than in the early 1900s. In 1912, when the fees produced more than $450,000 in Iowa, 85 percent of the amount was distributed among counties. The fee revenues, Iowa’s highway engineer argued then, should instead form a state fund and be spent on main roads. Challenging such centralizing proposals, an editor in Cedar Rapids, Iowa, had favored “returning the functions of government back to the people.” He endorsed a suggestion in 1914 that county officials collect the fees and spend them on local roads, “remitting, if necessary, a small per cent” to the state for a highway commission and its activities. In many parts of the nation, such contests over state or local authority for roads increasingly favored state functions, particularly after the war, though the issue remained in 1920-22 (discussed in chapters 8 and 9). By 1912, Minnesota and Wisconsin put revenue from fees into a state fund, available to counties by matching $2 for $1 in state money. By 1917, Wisconsin counties contributed one-third of a project’s cost to match state and federal funds; state funds came from vehicle fees. Though states might have raised road funds also by gasoline taxes, the fifteen states that adopted those taxes by 1922 were outside the Midwest.46

Revenue from vehicle fees could reduce the need to issue bonds. On main routes that Illinois had designated for work to be financed from state bonds, other funds sufficed for construction in 1921. State revenue from license fees and federal aid provided for the work on that system through late October 1921, when the first state bonds, for $5 million, were sold; $12 million were sold in 1922. Also on those roads, costs were reduced for concrete work from high levels of early 1921 by officials’ rejection of bids until later in the year. The Illinois highway agency pursued Gov. Len Small’s policy of spreading
work on the State Bond Issue road system to every county. Paving in Illinois improved three cross-state highways by mid-1922, mostly in projects matching federal aid.47

Preparing new funds for road work had started in Illinois during the war, partly in anticipation of postwar employment needs. In June 1917, the legislature set a referendum on issuing $60 million in road bonds, though voter support seemed doubtful in wartime. Gov. Frank O. Lowden announced that, though no bonds would be sold nor road work started in wartime, Illinois needed to prepare to employ returning soldiers and civilians who would be laid off when war industries closed. In late October 1918, the bond proposition’s endorsements included those of union groups from Chicago, Bloomington, and Quincy, several railroad brotherhood locals, and United Mine Workers of Illinois. Voters approved the bonds in fall 1918.48

While the federal-aid program expanded its work in 1920-22, large amounts were spent in the Midwest by many counties, both in their own road programs and in matching arrangements with other governments. In early 1922, such spending was opposed in Anderson, Indiana, where county commissioners by February decided against granting constituents’ petitions for road work for the rest of the year. Commissioners of the county, northeast of Indianapolis, had recently let some contracts for 1922, to cost $221,000, but now they were “taking heed of strong opposition to further road improvements, particularly the paving of highways,” a newspaper reported. The latest contracts had been followed by “remonstrances by taxpayers against bond issues” while taxes already were “higher because of the many road paving jobs last year.”49

Counties’ quick increases in spending could impede states’ financing systems. In Michigan, counties carried out “unprecedented programs of road building” in 1921 yet owed the state highway department $2.4 million for participating in its revenue-matching programs, a newspaper reported. The department ruled in January 1922 that counties would have to pay in advance their share of costs of building main roads in the department’s programs. That could prevent the predicament of late 1921 in which counties owed the department funds it needed to pay $2 million to contractors, who in turn had debts for materials and wages. A newspaper said many contractors (having to wait until the state received federal aid, state tax revenue, and county funds) “are in urgent need of the money that the state is not able to pay.” The department had obtained some temporary aid from the state’s auditor general for payment “on the more urgent contracts.” New provisions also required counties to obtain state approval before roadbuilding in which they intended to seek state aid, perhaps preventing, said the newspaper, “this over-expansion of local highway programs.” In federal-aid projects, Michigan counties paid from 5 percent to 25 percent of costs, depending on counties’ capacity to pay.50

The new roadbuilding let some counties recoup earlier costs. In Wisconsin, several counties had opposed the state-aid plan when it began in 1912, contending it made them help other counties build
roads after building their own unaided. Still, four counties among those early leaders in road work had issued bonds in 1921 for paving to handle increased traffic. Many costs of earlier construction were not wasted for counties, particularly as prices steadily rose, the state’s highway engineer said in February 1922. Some urban counties’ pre-war concrete roads, cracked since by traffic, are “worth more now as a base for any other kind of pavement we may wish to put on than they cost ten years ago” to build. 51

**Roadbuilding 1920-22**

New practices in roadbuilding during 1920-21 set a pattern for 1922. Some contracts made in 1921 remained to be completed; others being planned were still to start. Though prices of many farm products were better at the start of 1922, road taxes would be an issue in many places during political campaigns. Despite some changes in 1922, states in the Midwest, as many elsewhere, kept building roads in sizes, methods, and amounts more similar to work of 1920 and 1921 than to that earlier. Among the changes was one made by states including Iowa, which planned in 1922 to increase graveling to provide more jobs and respond to farmers’ tax protests and calls for work on smaller roads. Similarly, Minnesota’s highway department, cutting total spending, increased spending of federal funds and projects to surface with gravel. Indeed, Minnesota’s spending of federal aid in 1921 and 1922 nearly equaled its department’s 1919 spending from all sources. Further construction was planned in the region in 1922, for funds available for roads in the depression were large, even in comparison to those for states’ other functions. In Iowa, for example, by 1920 federal and state funds for the new program totaled $14.6 million, nearly twice what tax levies had produced in 1919 for the varied activities of state government. 52

Besides creating jobs, road work was opening a market for land, offering benefits for some farmers even while others objected to spending for roads in a depression. In Wisconsin, state officials were buying land to return roadways to earlier, more-direct routes, which farmers had altered often in the late 1800s to square their fields. The highway department was being “severely criticized” by some for the relocations, its chief engineer said in early 1922. Yet also, the department was paying for land in rerouting. Often “we have bought back from the farmer the old right-of-way on which the pioneers put the highway,” said A. R. Hirst. “What they took from the public for nothing, we are buying back and paying thousands for,” particularly on routes to be paved. 53

Because better roads consolidated traffic and promised increased commerce, merchants and officials often sought routing of highways through their towns. Highway agencies often held hearings on alternative routes. Yet leaving such decisions to a state agency was a policy still contested, even in a region accustomed to states’ growing authority over roads. Instead of relying on an agency, Missouri’s legislature itself debated in much of 1921 the kinds and locations of roads to be built with federal funds.
and state bonds. Officials of Shreve, Ohio, threatened an injunction against construction in early 1922 when state highway officials changed plans, removing the town from a main route from Cleveland to Columbus to Cincinnati. Highway officials said they had acted to shorten the route and avoid railroad crossings. Also, statewide groups were asked to investigate construction on the route. At issue was the highway department’s decision to build parts of the route itself, using a labor force it hired and war-surplus equipment, instead of awarding the work to a contractor. Ohio Auto Association, asked to help in the investigation, said the department’s work was fast and low-cost, and the department’s director said work would proceed on the new route.54

Though state highway officials could be adamant in routing main highways, they might accede to local requests on improving smaller roads. In Ohio, Champaign County’s commissioners and engineer, accompanied by their state senator, called on the state highway director to ask if the county, west of Columbus, might depart from state policy favoring hard-surfaced roads to try gravel surfacing. At the meeting in December 1921, they obtained consent to proceed with plans for graveling and were assured of state funds for part of the cost. The state official agreed to seek federal aid for the work.55

While such improvements proceeded, paving continued in several midwestern areas in 1922. Ohio kept working on its plan for a system of paved routes across the state. Part of a $25 million program of the highway department for the year, paving on the seven “heaviest-traveled” routes would be completed in 1922, said Ohio’s highway director. In Illinois, a plan to attain 1,000 miles of paving extended into 1922, after completion of 750 miles in 1920 and 1921. Six midwestern states were among eight boycotting cement briefly in early 1922. By April, though, in Illinois, Wisconsin, Indiana, and Michigan—states that in earlier years bought cement themselves to furnish to contractors at reduced costs—paving plans as large as before were proceeding. Delaying most paving to avoid putting special taxes on property near the road, Iowa was expanding graveling. In Michigan, paving would continue on some routes, and graveling would proceed on many others. Minnesota kept the 1921 proportion of work from its federal-aid projects, completing one mile of paving for every ten of graveling, while in 1922 completing more mileage of each kind.56

Such differing kinds of road work, together with the amount of funds spent, would affect how many jobs the federal-aid program produced. Thus, by mid-1922 midwestern officials had chosen often to build gravel roads with their states’ allotments of federal aid. That choice let them improve more miles of road per dollar of spending. It allowed many jobs for unskilled laborers and men with horse teams. It also extended materials. Regions with relatively small urban populations, the Plains and the South completed large mileages of gravel. Yet the Midwest, whose many urban or thickly settled rural areas had growing traffic, ranked second among the five U.S. regions in gravel mileage, completing 29 percent of the nation’s total using federal aid. Measured by mileage, gravel was the most extensive kind
of road work done so far in the Midwest using federal funds. Its mileage was large partly from its low
cost and from its use, even in winter construction, in Minnesota, whose 1,011 miles of such work was
70 percent of the region’s total and one-fifth of the national total.\(^57\)

Still, many other men worked at paving, for the region easily led all others in concrete
roadbuilding with federal aid. In this central part of the nation, where main routes from other regions
connected and added traffic, by mid-1922 the eight states had completed 47 percent of the nation’s
cement mileage built so far with federal funds, or nearly as much as all other regions combined.
Closest in completed concrete to the Midwest’s 1,285 miles was the North Atlantic region’s 702 miles.
Illinois led in the Midwest with 546 miles of federal-aid paving, 42 percent of the region’s total.
Concrete paving was second to graveling in the region’s completed mileage. Ranking third in the
Midwest were projects of road grading and draining, totaling 593 miles, 27 percent of the national total.
Also by mid-1922, Wisconsin had put sand-clay surfacing on 137 miles of roads. Such low-cost projects
proliferated in many states as some constituents called road work in a depression extravagant. In several
regions, officials sought to extend mileage of improvements by building low-cost projects--surfacing
with gravel or sand-clay compound or grading and draining roads. States’ use of federal aid for those
three kinds of low-cost road work is compared in figure 9, page 155.\(^58\)

In summer 1922 in the Midwest, men were working even more than before at graveling, for the
pattern of projects had changed slightly toward low-cost kinds of work. By mid-1922, the economy had
begun to improve for many farmers and some industrial workers. The political season included frequent
discussion of roads. And states’ road programs continued to depend on whether finances and engineer­
ing plans were ready for further work. Changes were occurring in the Midwest’s three kinds of road
work with greatest mileage--graveling, paving with concrete, and grading and improving drainage.
Though the increase in mileage was slight for gravel projects, paving mileage declined by one-third.
Three leading states in federal-aid concrete projects--Illinois, Wisconsin, and Ohio--greatly reduced
such work. By contrast, the Midwest’s grading and draining projects doubled in mileage, raised
particularly by changes in Iowa and Minnesota. Grading had supporters including mail carriers in Iowa,
and similar projects in Minnesota were improving travel and offering jobs. Near the north-central
Minnesota town of Bagley in May 1922, grading projects on several roads employed about 200 men,
some likely hired from Minneapolis. They were working in a rural area unaccustomed to the stirring of
highway contractors’ horses, steam shovels, narrow-gauge railroad engines, construction tractors, and
wagons.\(^59\)

The region’s emphasis on concrete projects did prepare for heavy traffic yet reduced 1920-22
mileage for federal-aid work. In totals both for work completed by July 1922 and for work under way
then, the Midwest’s work, in improvements of all kinds, totaled 7,976 miles, ranking after the Plains and
the South. Of 32,230 miles of federal-aid work in the nation, a quarter was in the Midwest. The region’s federal-aid work was mostly in gravel surfacing or concrete paving. Other projects, for grading and drainage, prepared roads for surfacing later.60

In spending of federal funds, the Midwest by mid-1922 led every other region. The federal funds paid to the eight midwestern states for projects completed by July 1922, the period when the depression was worst, totaled $32.5 million, or 32 percent of the national total. (Midwestern states’ totals for spending federal aid for roads are compared in maps of the forty-eight states in figure 6, page 123.) By far the region’s largest amount was paid to Illinois—$10.7 million, 10 percent of the national total. Large amounts were paid also to Ohio, Minnesota, Wisconsin, and Iowa. Early work in the federal program had been smaller in the remaining midwestern states, limiting funds they received. Yet the program’s effect on midwestern economies was multiplied by its requirement that federal funds be matched by at least equal amounts from within states. In Illinois, for example, the combined federal and matching funds paid for projects completed by July 1922 that cost $23.4 million.61

The amounts of federal aid paid by July 1922 allow estimates of how many men worked in the projects in much of the depression. Statements in early 1922 by the federal program’s chief indicate that each $390.48 in federal funds spent would create a job at the project site for a year’s 200-day roadbuilding season. Applying the ratio to totals for federal funds paid to states by mid-1922, for completed and approved road work, yields estimated job numbers. In Illinois, federal funds paid by July 1922 created an estimated 27,374 jobs, one-third of the region’s total. Federal-aid projects completed in that period created an estimated 14,479 jobs in Ohio, and more than 8,500 each in Minnesota, Wisconsin, and Iowa. At lower levels were states where the federal-aid program was smaller in work completed before July 1922 than in work under way then. Of course, men from a state might have worked in federal-aid projects in another state or region. The eight midwestern states created an estimated 83,263 jobs in their federal-aid road projects completed by July 1922.62

Besides the estimated jobs in completed projects, others were available in projects under way in July 1922. Many of them were available in new locations. The balance of activity shifted: states that had spent less in work completed by July 1922 enlarged efforts, and those that had spent more cut back. States could expand roadbuilding in the program because further preparations had been completed, federal allotments still were available to spend, some new allotments in 1921 had to be spent soon, and many constituents supported more projects, particularly of low-cost kinds. Missouri and Michigan each expanded their federal-aid work by more than 200 percent. Meanwhile, jobs from federal aid declined in Illinois, Ohio, and Wisconsin. After leading the nation in federal-aid work completed by July 1922, Illinois cut such work by 92 percent.63
Despite declines in using federal funds, some roadbuilding continued by relying more on other kinds of revenue. Federal aid had helped expand roadbuilding and conserve state funds. In Illinois in 1922, employment could continue in road work though federal-aid spending declined, for large amounts were available from vehicle fees and state bonds. That was more likely in an urbanizing state whose large economy fared comparatively well in the depression and had supported many auto purchases, creating funds and needs for better roads. During 1920-22, Illinois steadily paved with concrete, a policy its governor supported. It tried raising paving production, attaining 347 miles in 1920 and 405 miles in 1921, when some contractors worked two shifts daily. By late 1921, Illinois officials planned to reach 1,000 miles of postwar paving in letting spring contracts for 1922. Work surpassed the goal, officials noted. Paving in projects under the state agency in 1922 totaled 741 miles, “a record exceeding that of any previous year in Illinois and the world’s record for pavement constructed in a given year by any state highway department.” Though large machinery sped paving, the Illinois state agency’s 1922 road and bridge work employed directly what state officials estimated as 10,000 men in Illinois and 2,500 horse teams.64

The depression began to ease in the first half of 1922. Auto factories, at lowest employment levels in January 1921, began raising production in the first two months of 1922, though employment grew more slowly. Hog and corn prices improved. Many farmers in Iowa made credit settlements by March 1 with less difficulty, aiding commerce of nearby towns. A steel mill in Duluth, Minnesota, announced plans in May to return to full operation by June, employing 4,000 men, an increase of 2,500. Ohio farmers were reported trading in towns more in summer amid better prices for hogs, sheep, cattle, and dairy products. In Wisconsin, dairying was more prosperous in 1922, particularly in later months; prices increased for hogs and for many crops. For midwestern wheat growers, prices remained low in 1922. Yet employment was improving in many areas. Even before the wheat harvest expanded hiring, fewer men sought road work in north-central Minnesota; a labor shortage by July raised wages for laborers in grading projects.65

Road work had expanded quickly in the depression in the Midwest. Most of the states were able to plan and administer large programs of road work using federal aid, stimulating their economies and providing road laborers with wages. Reflecting 1920 settlement and economic patterns, road work was largely of surfacing with gravel or concrete, serving the region’s populous rural and urban communities. Improving main routes also served transcontinental travel.

Exceptions to the expansion of federal-aid roadbuilding were Indiana and Missouri. Each was slowed in beginning road projects in the postwar depression, influenced by political division over whether a state should have road authority that had been held locally. Indiana, the nation’s leader in
surfacing roads from 1904-14, had not formed a state highway agency until 1917, when required for the federal program. Though Missouri had funds including bonds ready by late 1920, defining road priorities was a task of the legislature, not of a specialized agency, extending debate through summer 1921. In both states, further political adjustments produced large construction later in the 1920s in the federal-aid program, though delays in 1920-22 slowed work in a brief depression. Though such opposition to state authority existed in the region’s other states, road work proceeded there amid compromise and debate. Areas similar in settlement and economic development in the region were affected in their capacity to begin public works by political conditions within states.

The federal program’s public works in a depression aided the region’s economies. True, local taxation for roads increased, partly for the 1920-22 work yet largely to arrange for roadbuilding expected to last through at least the 1920s. Paving put special taxes on land near a road project in some states’ financing systems, including Iowa’s. Vehicle-registration and license fees increased, as did registration enforcement, bonds deferred tax payments to later years, and Wisconsin adopted the region’s first gasoline tax, to begin in 1923. With the Midwest’s many autos, the fees could produce revenues that states elsewhere with fewer autos were seeking by adopting gasoline taxes. Because of the federal-aid road program and its incentives for state and local governments, spending in the region increased, providing wages and purchases. The road spending, larger and more widespread than before, eased the period’s economic effects on many people without reaching levels sufficient to end the depression.

Different in size and composition, states’ economies varied in relation to federal-aid roadbuilding. The region’s largest spending of federal aid occurred in its largest and least-depressed economy, that of Illinois, whose total for individual incomes in tax returns for 1922 surpassed the boom levels of 1920. Despite spending different amounts for roads, both Minnesota and Indiana had 1922 totals for individual incomes 23 percent below their 1920 levels. Though Missouri spent less federal aid than six other states in the region in projects completed or under way by mid-1922, its total for residents’ 1922 incomes came closer to recovering 1920 levels than totals in six other states, ranking after only Illinois. And despite spending in Iowa that exceeded the regional median level, personal incomes there fared worst in the region in 1922 in regaining their 1920 total.

Most midwestern states quickly started extensive rural public works, guided by plans for new kinds of roads, more funds than before, and public support for roads and jobs. In that, they developed new revenue systems, often easing reliance on taxes on land. And they increasingly cooperated with federal and county governments in a matter still of importance to localities. They prepared for years of roadbuilding that would add wages for many in rural areas during the 1920s and later. An alternative to
public works, the rural economy throughout the Midwest provided many jobs in the depression, as it had in better periods.

Large amounts in the federal-aid program were spent for wages or hiring horses, particularly where roads were graveled, graded, and drained—low-cost kinds of road work chosen often where traffic was light. Also, many men worked in paving projects, which spent more for equipment and materials yet often provided work that lasted longer than that in projects for graveling. Paving nearly as much as the other regions combined, the Midwest frequently built for heavy traffic, linking many of its urban areas and improving sections of transcontinental routes.

The new road program hardly was unnoticed in its early activities, partly because they occurred in a depression. An earlier custom of retrenchment in public spending during depressions was urged often in 1920-22. Farmers, accustomed in much of the Midwest to paying some road taxes in cash and participating in local politics, often asked for retrenchment in road work, to cut their taxes in hard times. Yet needs of motorists, now including large segments of the population, especially in the Midwest, provided a reason for roadbuilding in a depression. So, too, did the chance to stimulate buying and hire many of the unemployed, a custom developing among American urban governments since the mid-1800s. Further, federal funds were available in each state, and labor and materials were noticeably cheaper in a depression than in the preceding period of wartime and postwar boom. Many men who had gone to midwestern cities during and after the war spent parts of the depression working in rural areas, sometimes with farmers, miners, or lumbermen seeking to add income by building roads. Near the work, scattered over much of the Midwest, wages from road projects helped support spending in towns and cities.
CHAPTER 5

THE PLAINS

Roadbuilding had less to support it in a region of small population, large arid areas, and few farms and autos to be served by highways. In the non-farm economy, wage earners were much fewer than in areas to the east. Yet the Plains cut across paths of east-west transcontinental traffic, and new highways were required to allow such travel by auto. For residents, better roads could reduce isolation, improving connections to local markets and communities. In a depression, urban residents as well as farmers and farm laborers would seek income from roadbuilding.

Implementing road work of the federal-aid program would be difficult. State functions and rural and urban settlement were still developing in a region of large states, some newly formed. The large region includes ten states, from Montana and North Dakota to New Mexico and Texas (shown in figure 1, page 11). In much of the region, centralized effort at roadbuilding was new. State highway agencies, required by law in 1916 for participating in the federal-aid program, were created in 1917 by Texas, Kansas, and Wyoming. Localities often would need to provide funds to match federal aid for roads. The extensive postwar roadbuilding would add to tax concerns among farmers, including many whose wheat declined in value before 1920, when it fell further. Yet the depression cut construction costs, aiding roadbuilding where revenues were available.

Matching federal road funds would be difficult in states sparsely populated. The region’s population per square mile was less than one-fourth that for the rest of the nation. Population rose above 15 people per square mile only for states in the southern Plains—Nebraska, Kansas, Oklahoma, and Texas—areas of much early settlement and of extensive prairie as well as plains conditions. In many wheat areas, scattered throughout the region, rural population would decline in 1920-22, leaving more farmhouses empty and fewer families to pay taxes and use roads. In arid areas of each of the Plains region’s states, population was particularly sparse. The areas were contiguous, forming the Great Plains belt of low rainfall and difficult farming. Though less-developed areas were part of the other regions, in the Plains such areas stretched for miles across transcontinental routes for railroads and potential ones for roads.
Development by 1920

In several large states with few autos, vehicle fees could raise little in road revenue. New Mexico’s residents registered only 18,082 autos in 1919, Wyoming’s a few more. Auto ownership was larger, though, elsewhere in the region. Six Plains states had at least 100,000 autos. Texas had 331,310, ranking seventh in the nation. Though large proportions of Plains residents owned autos, many states’ populations were small. Ratios of autos to people were for most Plains states near or above the national average. The exception was New Mexico, where many people lacked enough income to buy autos.3

Sparse population complicated keeping up roads by traditional methods of statute or convict labor. In areas with few farms, statute labor’s capacity to affect road conditions was small. In more heavily settled rural areas, though, statute labor remained the basis of road work. Texas, for example, still required men aged 18 to 45 to work on roads ten days yearly, though they could hire substitutes for their work or pay the government cash for an exemption. Many states in the nation had required road work of men to pay a poll tax, yet the postwar period’s increased provision for women’s voting would move that tax further to a cash basis, its form in urban areas increasingly since the late 1800s.4

Convict labor also was a small resource. Too few men were in prisons to build or repair much of the road mileage needed in Plains states, though they could improve roads when working in the smaller space of counties. In 1910, Texas ended leasing of convicts to private employers, making them available for public projects including road work. In the boom conditions of 1919, Oklahoma used convict labor on roads while free labor was scarce, as did Wyoming, Nebraska, and states in other regions. In Montana, convicts completed some road improvements before 1919, and postwar roadbuilding in the boom’s labor shortage extended their use. Even so, the number of convict laborers was inadequate to road demands in a large region.5

Labor often was available, though, for wages. In the large region, free labor had adjusted to traveling often to meet changing needs of scattered industry and farming. The yearly wheat harvest put thousands of men to work, though only briefly in any location; its jobs moved from Texas through summer to the Dakotas. The region’s labor pool included Hispanic Americans, who were residents of the region’s urban and rural areas, and Mexican nationals, who had been recruited by U.S. employers particularly in wartime. Blacks and whites labored in oil production and agriculture in the central and southern Plains. Laborers moved to work throughout the region on railroads.5

The depression created many more unemployed men, and from some job seekers came varied requests for preference in hiring. Indeed, one preference, for ex-soldiers, had been set by Congress in 1919 for postwar road work using federal funds. Other systems of preference, familiar in programs of relief, also would be sought and used—those based on ethnic group, marital status, or residence in the
nation or the community. Efforts to obtain such preferences in road work and in other jobs would produce disturbances in the Plains, resembling the nation's other postwar conflicts over ethnic status. The Plains, like the West, was particularly susceptible to the conflicts, having developed a mobile, multi-ethnic labor force and lacking establishment of social preference as strong as that of the era in the South. Conflicts over hiring amid the depression's scarcity of jobs in the Plains and elsewhere are discussed further in chapter 10.

The vast Plains, more than one-third of the nation's area, had more miles of roads than any other region, though the mileage often stretched thinly over great distances. Roads and railroad tracks in the Plains had few branches leading to farms and communities. And the region's roads had yet to be linked to form transcontinental routes. Conditions often had slowed improvements in the early 1900s. Before federal aid was available and when most overland travel was by horse or train, the region's governments had surfaced some roads. Yet by 1914, the Plains had not reached the 1904 national average for miles of surfaced road per state. Among Plains states, moreover, mileage of surfaced roads varied greatly.7

Farms occupied little of the Plains. In some states, only a small share of area needed roads to provide access for farmers. Connecting distant areas of settlement might require crossing wide spaces with few residents to pay taxes. Highest proportions of state area in improved farmland were for the Dakotas, Oklahoma, Nebraska, and Kansas. Such proportions were reduced in parts of the region by acreage still held in federal lands. Many men helped grow staple crops, particularly wheat and corn, and others worked for livestock operations. In its scattered mines and other industries, the region usually employed comparatively few non-farm wage earners. Most Plains wage earners were in states at the eastern fringe—Texas, Kansas, and Nebraska. Yet the chance of work on Plains road projects in the depression could draw jobless workers from throughout the region and from elsewhere.8

Describing the Depression

Economies of Plains states varied in size. In statewide totals for residents' taxable incomes in 1920, only Texas ranked among the nation's top sixteen states. Still, four Plains states' totals ranked them in the middle third of states, near the national median. The five others—New Mexico, Wyoming, the Dakotas, and Montana—were in the low third of states. (Plains states' totals for individuals' incomes 1919-22 are compared among totals for forty-eight states in figure 2, page 12.) The rankings fail to indicate Plains residents' incomes below $1,000, which did not require filing federal tax returns. Also, they fail to measure influences of sparse settlement, which helped keep many Plains states' income totals low. To indicate the economy more completely, the state totals for amounts in 1920 individual tax returns may be divided by 1920 state population, yielding taxable personal income per capita.9
Comparing totals for per-capita taxable income indicates states' 1920 wealth, which they would need to expand public works in a program requiring matching funds. From the Plains, only Wyoming was among the top third of the nation's states. Five states of the central and northern Plains ranked in the middle third, and the low third included North Dakota, Oklahoma, Texas, and New Mexico. The Plains' southern areas were part of a belt of less-mechanized agriculture using much low-wage labor, stretching eastward into North Carolina and westward into California. The Plains' low levels of wealth in 1920 would limit financing for road projects, particularly in New Mexico and North Dakota, each with per-capita taxable income of $102, which ranked them above only eight other states, all in the South.  

Plains states were among the first affected by the slowing U.S. economy after World War I. Indeed, in 1919, while many factories and farms elsewhere experienced a boom, many incomes declined among residents of four Plains states. Nebraska, the Dakotas, and New Mexico were among five states in the nation that had smaller statewide totals for individuals' net incomes on federal tax returns in 1919 than the year before. Though returns reported only individual incomes of at least $1,000, they indicate trends for people with incomes below that level. For 1920, when many industries in the nation slowed by mid-year and prices dropped for farm produce in autumn, net incomes fell in Montana and again in the Dakotas. Elsewhere in the region, increases were slight, ranking Nebraska, Texas, Colorado, and Kansas among the lowest twenty states in percentage increases for 1920.  

In 1921, incomes fell further. Totals declined from 1920 for each state in the nation. South Dakotans reported incomes on their 1921 tax returns that amounted to a decline of 55 percent from 1920, the nation's largest by percentage. That followed South Dakota's declines in 1920 and in 1919. Other large declines in the Plains in 1921 were those for Nebraska, Oklahoma and North Dakota.  

In 1922, as some farm prices rose and many factories resumed production, some incomes increased. Residents of seven Plains states reported incomes that raised the state total above that for 1921. Yet taxable incomes fell again in 1922 in the totals for Wyoming, Kansas, and Nebraska, though by less than 5 percent in each state. Income totals of half the Plains states in 1922 were among the nation's lowest. And for each of the ten Plains states, income totals failed in 1922 to recover their levels of 1920. Farthest from recovery were South Dakotans, still 53 percent below the 1920 level, and Nebraskans, below by 42 percent.  

Early Months  

While the economy was declining in much of the nation in 1920, the scarcity of laborers of the wartime and postwar years was slow to change in many areas. In Montana, work on many federal-aid projects was delayed by "the insufficiency of labor and the relatively high wage scale" during most of
1920. Some road labor had for years been provided by Montana convicts, who in 1920 worked on an eight-mile federal-aid project "of difficult mountainside construction" near urban Missoula County. The market for hired labor, though, seemed about to improve. With layoffs in other industries increasing by late 1920, Montana highway officials said that "it is confidently believed that the labor situation will adjust itself before another construction season is upon us."14

Changing economic conditions affected industry, agriculture, and road work by early 1921, an important time for expanding the new federal road program. Wage earners and farmers were seeking work in parts of the Plains. In Montana, at least four copper mines near Butte had closed by December, sending many workmen and their families away from the area. Cement plants and oil refineries near Pueblo, Colorado, slowed production for winter. Some farmers were losing land. In Bottineau County, in north-central North Dakota, ads for local foreclosures on farm mortgages would appear regularly in the newspaper for the next year and a half.15

Some road work for the jobless began early in the depression. The 1920 labor scarcity in Montana during summer roadbuilding months eased late that year. Winter conditions reduced employment in agriculture, and in 1920 it did so in industry. By December, many copper miners were jobless, and farmers had teams of horses available to hire. Road work in Montana's winter weather was planned on some gravel-surfacing projects, by agreement with federal road officials. That would advance the projects, state highway officials reported, "and, what is really of more importance, it should mean productive and remunerative employment for many men and teams otherwise idle during the winter period." In earlier years, winter work had been performed in Montana on non-federal-aid road projects by men and horses working for "many contractors and counties."16

Several road projects started in winter in Tarrant County, Texas, at Fort Worth. Such urban parts of the Plains region had enough traffic to need roads and enough population to support public works with taxes and bonds. The county's commissioners listed projects to begin soon in their districts, each to hire laborers or teamsters and their horses. As the commissioners met in December 1920, one of them announced that "many unemployed farmers and farmers helpers will be given work in the building of roads in my district." Some men were working on roads in the county, and the new projects were to "furnish work for about 600 men" more. Of those, some 350 men were to be employed in construction for which $145,000 in federal aid had been approved; bids for the "fourteen miles of permanent road" were to be sought soon. Most county funds for the work were from a $3.5 million bond issue voters authorized in July 1919. Asked by a union-labor group in January 1921 for assurances local men would be hired, county officials said their road contracts specified preference be given residents of the area.17

Winter work might come from building a scenic road, said a Denver labor journal. Construction of the route to Grand Junction, Colorado, would add jobs and benefit local commerce, it argued. "If this
great highway were built, every autoist in the country hearing of it would want to travel over it, and thousands would use it.” Besides, “here is useful work for many workers!” Denver Labor Bulletin also had urged public works earlier in 1920, supporting a November ballot question to authorize Colorado to issue bonds to build three railroad tunnels in the Rockies.18

As the number of unemployed grew in Denver, larger programs of road work seemed needed. Some 150 men were reported seeking lodging at Denver’s jail in February. When a group of jobless men that month asked the city to begin public works, officials said they lacked funds. As an alternative, suggested Denver Labor Bulletin, counties should start road work and the federal government “should pour its millions of dollars into this work all over the land.” The response of city officials, and of those of many counties, the journal said, puzzled men who had traveled often for work in a large economy. “To the officeholder, who thinks in terms of assembly districts and counties, and whose imagination can hardly cross a state line, it is an offense on the part of a native of one state to become hungry in another. But the Illinois man who was working for the Union Pacific in Wyoming, until he was sent by the Union Pacific to work in Colorado, and in a few weeks laid off in Denver cannot see why he should be blamed. Industry knows no state lines.”19

Transient men had better chances of employment as public works expanded. Cities in many regions had provided public works for men in earlier times of unemployment. Yet in such jobs, created from local taxes and contributions, they often gave preference to city residents and, among them, heads of households. Transient men could work at chores set as requirements for relief; many towns and cities in winters had yards where jobless men broke rocks or chopped wood. Plains cities, such as Lincoln, Nebraska, were home in winter for many men who regularly worked in summer in vegetable fields, including those in nearby states of the Midwest. The Plains’ laborers included many Mexican nationals, who had been recruited particularly in wartime labor shortages. Thousands of them, when the depression slowed a cotton boom in Arizona, returned home; others moved to work in cotton fields of southern New Mexico’s Mesilla Valley.20

Some North Dakota farmers sought government aid. At Mohall in Renville County by February 1921, farmers by then had “organized to petition for federal aid in financing spring operations, and have wired North Dakota’s senators and congressmen,” the Bottineau newspaper noted. Bottineau Commercial Club soon endorsed a proposal to have the federal government appropriate $5 million to aid farmers in spring planting. Farmers in the two counties got farm loans from the state; their loans ranked the counties second and third in North Dakota by late 1921 in farm loan funds obtained through the Nonpartisan League’s state administration.21

Plains farmers experienced effects of high rail rates for shipping, dry weather, and lower crop prices. Distant from eastern markets where they sold much produce, Plains farmers, like those in the
Midwest, had to factor large shipping costs into their budgets. And freight rates were being granted under the 1920 Transportation Act, which guaranteed railroads a profit. In 1920, half the Texas cabbage crop was reported not moved because freight rates cut out profits. Wheat prices were low, partly from wartime overexpansion of acreage. Even amid wartime’s high crop prices, wheat failed in many areas from weather. Wheat producers’ problems were worst in semiarid areas from western Kansas and eastern Colorado to Canada.22

In some wheat areas, farmer-taxpayers were declining in numbers. In north-central North Dakota’s Bottineau County, several farmers were facing mortgage foreclosures by January 1921. Their number increased by mid-1921 and would remain high in early 1922. Counties could issue bonds to generate revenue during a depression, as four counties did in North Dakota in 1921 to provide feed and seed while drought affected much of the state. Yet in much of 1921 in North Dakota, retrenchment was a frequent issue, advocated by the Independent Voters Association in its campaign against the Nonpartisan League’s administration of state government, which had used bond funds to build homes and grain elevators and make rural loans. By summer, the state’s Republican and Democratic parties joined IVA in opposing state bonds. In autumn, IVA would win its campaign for recall of the governor and two other NPL state officials.23

In spring, the depression’s effect eased in some areas, though roadbuilding for jobs was urged in others. In coal camps near Pueblo, Colorado, many miners returned to work by May 1921. From towns nearby they rode to mining camps over roads in “auto stages.” Cement plants and oil refineries there had increased production. Yet in Kansas, the state Federation of Labor urged the president and Congress to start programs of roadbuilding and other improvements to relieve unemployment. Kansas highway officials, trying quickly to expand construction, began withdrawing federal-aid allotments from counties where projects had been delayed, distributing the funds to other counties.24

Summer’s seasonal increase in activity offered jobs for some. Many laborers arrived in the northern Plains’ to harvest the wheat crop, which in North Dakota was reduced by rust and hot weather. Other men were working for livestock raisers at Magdelena, New Mexico, who said nearby range was in good condition in late summer. And several copper mines were expected to reopen in New Mexico by late 1921, said an official of three companies. Yet preparations began for the seasonal slowdown of winter, worsened by the depression. New Mexico’s highway department was seeking “to relieve the unemployment situation as much as possible” in fall, letting contracts quickly to allow winter work. Oklahoma’s state Federation of Labor adopted a resolution urging political units in the state to begin public work to relieve unemployment. The city engineer of Fargo, North Dakota, favored building water mains and sewers in winter, which would create work for some forty men. In Texas, winter road work
was planned to provide several thousand jobs and extend construction in the federal-aid program. The year's wheat crop in Kansas was worth less than half that of 1920.25

Even while farmers formed many anti-tax groups in South Dakota, some road work began, offering winter wages. "In county after county farmers have appointed committees to study into taxes and find out just where the big burden lies," said Sioux Falls Argus-Leader in early 1922. Usually they were finding most taxes resulted from "the cost of the schools and the local government." Still, some people in Sioux Falls were advocating cuts in state expenses, said Iroquois Chief, which attributed their actions to "selfish and political reasons." The Chief and Alexandria Herald held that little in taxes went to the state, compared to those going for county, school district, and municipal expenses. Some people were adding income in winter by road work. A January graveling project, employing "about 50 men and working at a time when weather conditions are not most favorable," covered seven miles of a main road near Sioux Falls in two weeks.26

Urban centers were where many unemployed men gathered in winters. Road builders were among employers hiring at a Topeka, Kansas, employment office. Of 100 men seeking work on a January day, seventeen were sent to jobs. A road contractor working nearby at Meriden hired a man as camp cook. A contractor for a Topeka street project chose a man to mix mortar. And a company working on a county road employed a married man and woman to run and cook at its construction camp. Demand for laborers contrasted that of summer's harvest, for which Topeka's office estimated it sent 5,000 men to wheat fields. A Topeka labor-union leader urged the city to start public works to avert costs of relief. Partly to reduce unemployment, Kansas highway commission approved $1.4 million in federal aid in January for counties agreeing to use it immediately. In the northern Plains, near oil fields continuing production in the depression, some 1,000 men were unemployed at Casper, Wyoming.27

In areas around urban centers, road work could extend, using several counties' resources. At San Antonio, Texas, traffic, available labor, interest in better commerce, and a tax base in developed rural and urban areas supported efforts to improve interconnecting roads. Counties' projects could stimulate work by nearby local governments, similar in effect to the federal program. Such work was easier amid the depression's lower construction costs. By January 1922, San Antonio and surrounding Bexar County had some 1,000 miles of paved roads, after adding more than 100 miles in 1921. Further, "nearly every adjoining county has provided funds from bond issues or other sources for the extension, improvement or connection with some of the highways centering to San Antonio during the year" ahead, said San Antonio Express. Similarly, in the Dallas-Fort Worth area, nine counties using bonds authorized after the war had improved many roads.28

In spring 1922, officials were preparing the season's road work, and some farmers were marketing crops. At Omaha, Nebraska, the city's paving program had drawn bids in February from seventeen
contractors, for prices a newspaper said would likely be lower than those of the 1920 boom or of 1921. By March, road projects with work for more than 500 men were ready to begin in the city and county once weather improved. Sale of farm goods, partly to pay debt, aided some local economies. At Wessington Springs in southeastern South Dakota in February, farmers “thronged the roads leading into town, the streets of the city, the stores, elevators, stock yard, and other marts.” The week, “the most active in many months,” yielded produce shipped out by thirty-three railcars. Many in the town benefited as “merchants who have been carrying farmers’ paper for months received their cash.”

Amid efforts to reduce taxes and maintain incomes, better roads sometimes seemed a way to employ jobless or underemployed men while still serving interests of farmers and merchants. In north-central Montana, farmers increased their incomes by working on a federal-aid road project (figure 4). The farmers used large machinery at the project in Hill County to crush field stones, which they applied as road surfacing. In Sargent County in southeastern North Dakota in March 1922, roadbuilding seemed to many an important public function in the depression. "While economy is being practiced along every possible line" in local government, a newspaper reported, the county’s "business men and farmers are

Figure 4. Farmers in north-central Montana working on a federal-aid project in Hill County. The men crushed field stones and put them on the road. Crushing plant and piles of stones are in the background. (Montana State Highway Commission, Third Biennial Report, 28.)
endeavoring to have carried through a complete road program, at least.” A farmer in north-central North Dakota was using the roads in marketing eggs to consumers’ houses. His ad offered fifteen eggs for $1.25, delivered by parcel post.30

**Raising Local Funds**

Opposition to granting large sums to state agencies was evident in several Plains states in appropriations for roads. Much of such sentiment, at least in Montana, resulted from rapid change in road-building standards after World War I, according to state highway officials. “Montana has just emerged from the frontier stage, during which period highway improvement, as generally considered, consisted of graded earth roads, with an occasional sprinkling of gravel,” Montana’s highway commission stated in late 1922. Particularly in farming counties, $300 per mile was “a fair average” for road work’s cost in Montana before 1919. Yet after then, the “abrupt raising of the standard of road location, design and construction, and as a consequence thereof the increased cost necessary to meet state and federal standards, met with serious objection in some quarters.” Such change often seemed ill-timed. For during the new roadbuilding, “Montana has been far from prosperous and has been beset by economic conditions and difficulties which constitute the greatest obstacle to the prosecution of public improvements of any character.”31

The depression in Montana increased problems of working in the federal-aid program because state funds for roadbuilding remained scarce. Voters had rejected state road bonds in November 1920 in Montana, as in New Mexico. Counties matched the federal aid available for Montana, using local resources, which a depression reduced. To raise their matching funds for federal-aid road work, many Montana counties in 1920-22 issued bonds. The method provided some funds, though it meant projects were built where county officials were willing and able to make appropriations instead of where a state agency might plan. Progress was unsteady, for county budgets could be more easily affected by the depression than a state fund might have been. Several counties requested federal-aid projects—leading the state agency to spend from its meager funds for surveys and plans—only to be faced with conditions that caused county officials to postpone or abandon efforts. “Many counties have been unable to finance their share of federal aid projects.” Other counties, “regardless of the availability of local funds,” the commission said, took “the position that federal aid improvements are too costly” and decided against them. Lacking state funds for matching federal allotments, Montana’s highway commission, it said, “has acted merely as a go-between between the counties and the federal government,” unable to control “the details and location of projects of state-wide importance.”32
In Montana and elsewhere in the Plains, production costs became a frequent concern among farmers. Often they expressed their concerns as opposition to road work that might raise taxes or obstruct a tax cut (discussed further in chapter 8). Still, the federal-aid program presented incentives to continue spending. In Nebraska, though low wheat prices had reduced rural incomes, farm lands were taxed for purposes including matching federal funds for roads. The federal funds would be lost if not spent, argued Nebraska’s highway administrator, G. E. Johnson. In 1921, after Nebraska legislators cut funds for matching and “passed a resolution against the continuance of federal aid as the property tax was too high,” Congress appropriated new funds for states to spend. “This means that other states will have federal aid if Nebraska does not,” Johnson noted. In 1922, he recommended raising matching funds from motor-vehicle fees instead of property taxes.33

Raising road funds was particularly difficult in three states with large areas of public lands. Such lands in Wyoming were 29 percent of state area, in New Mexico 23 percent, and in Montana 6 percent. Those lands usually produced no revenues for roadbuilding, a problem hard to offset because the lands were extensive in states of the Plains and the West with sparse population. To ease effects for roadbuilding, the Federal Highway Act of November 1921 set a scale for matching federal road funds according to a state’s share of public lands. Ten states of the Plains and the West would pay less in matching federal road funds, while the nation’s other, more-settled states continued paying 50 percent of federal-aid work.34

In North Dakota in 1921, roadbuilding stirred little of the objection voiced about other efforts of the state’s Nonpartisan League administration. Building roads seemed an acceptable use of state authority, unlike, for many NPL opponents, homebuilding or operating a grain mill or bank. And considerable control of federal-aid road projects rested with county officials, reducing state officials’ influence. Counties provided “the bulk of the funds necessary to meet federal aid,” said the state highway commission in 1922. Under that method, it said, federal funds were going to counties most able to build their own roads, while “poorer and sparsely settled counties are unable to furnish the necessary funds” for matching to begin projects. Building a statewide system of improved roads, it said, would be delayed until poorer counties could afford their share of the work. Indeed, 40 percent of federal aid spent in the state between mid-1920 and mid-1922 was in one project in two urbanized counties, for a bridge over the Missouri River.35

The Plains region’s sparse settlement and large area required state, not local, programs to build roads, North Dakota’s highway commission argued. If Plains communities had been solely responsible for their transportation “we would not now have transcontinental railroads,” for “such a policy would not have permitted these railroads to have crossed the deserts and poorer portions of the country.” In late 1922, the commission recommended levying state taxes on “gasoline, automobiles or other property in
the state" to create a state fund for matching federal allotments. Replying to objections that costs of administration and engineering were high in federal-aid projects, the commission said the costs were 12 percent of its work through 1921, reduced to less than 10 percent by federal payments toward those costs for the Missouri River bridge, the state's largest federal-aid project.36

Several Plains states were among the first to tax motorists' use of gasoline for roadbuilding revenue. Gasoline taxes were adopted between 1919 and fall 1921 by at least eleven states in the nation, including Colorado, South Dakota, and New Mexico. When gasoline taxes were challenged, the U.S. Supreme Court, ruling in 1920 and 1921 in cases from New Mexico, upheld the right of a state to levy such taxes when not prohibited by its constitution. Under the decisions, shipments in tank cars were interstate commerce and thus beyond states' taxing power, though sale of gasoline in retail quantities was taxable.37

Larger revenues than those from a gasoline tax could come quickly from bonds, particularly in sparsely settled states where autos were few. In South Dakota, from bonds the state highway commission received $2.1 million from mid-1921 to mid-1922. The state's gasoline tax produced $167,687 for the commission then. Still, though funds were available, the new kind of road construction seemed too costly to some state residents, the commission noted. "Complaints and criticisms are frequently heard as to the number of engineers employed and the amount expended for such engineers." Such complaints, it reported, took no account of the need for extensive surveying and design whether the project was for graveling or for concrete paving. Those preparations seemed costly, it said, if considered as a percentage of the total cost of comparatively inexpensive road projects, such as those for graveling.38

At scattered locations, Plains lands were producing wealth in oil and natural gas. In the southern Plains, oil and gas industries were growing, drawing settlers, and generating a tax base. Wells were producing in areas of the Texas panhandle stretching into Oklahoma by 1917; others opened during and soon after the war. By 1920, in Seward County, Kansas, a group had started work on three wells that produced oil and gas. Higher oil prices during and after the war had supported increases in leasing tracts and employing men, though lower prices by mid-1921 reduced revenues, including those to counties.39

To provide the matching funds for federal aid, some Oklahoma counties could rely on oil resources or bonds. Taxing oil yielded revenues for the state and for about thirty-three counties with producing wells. And counties and townships made some sixty road bond issues in 1920-22 for funds whose uses included matching federal aid. As in Montana, though, in Oklahoma some federal-aid projects were canceled or delayed because counties lacked their share of funds. State bonds of $50 million for roads had been rejected in a 1919 referendum, and the state lacked authority to build or maintain roads in 1920-22. Where resources included revenue from oil, paving might require little in property taxes. In Kay County in 1922, for example, revenues from local oil production provided $164,000 for
roads, $20,000 was donated by a Ponca City oilman, $210,000 was federal aid, and the remaining $65,000 came from the county's property taxes.  

Oil in parts of Wyoming, leased by the federal government to private concerns, produced royalties yielding state revenue for roads. Of royalties on Wyoming oil paid into the federal treasury, the state received 37 percent. Wyoming had determined to spend half the revenue for schools, leaving 10 percent for the state university and 40 percent for highways. Oil use in the last half of 1921 was estimated to bring the state $570,000, with similar revenue expected for the rest of the fiscal year. That would produce some $450,000 yearly for roads.

Besides state funds for roads in Wyoming, county funds and citizens' contributions provided matching in federal-aid projects. When local funds from bonds were depleted, residents at Worland, stirred by boosters of the town and neighboring Tensleep, contributed money for road work. Their funds and Washakie County revenue totaled $23,000 to match amounts from state and federal governments. The project would extend work on a link between the towns on a line surveyed through "very difficult country," state highway officials said. The local funds, they noted, were raised while the depression affected the county's main industry, raising livestock.

County revenues were part of federal-aid projects in Kansas, together with funds from special taxes on roadside land. That worried farmers such as those near Topeka who asked about their costs for a paving project planned in 1922. County officials told them federal and state funds would pay about $20,000 a mile, leaving to local funds $6,000 a mile. Of the local share, the county would pay three-fourths; property owners would pay one-fourth, or $1,500 a mile, payable over twenty years at interest, with payment to begin in three years. By then, said a Topeka newspaper, farms might again be making a profit. Besides taxes, an occasional resource was contributions, sometimes resembling statute labor. Near Cottonwood Falls in Chase County in east-central Kansas, teamsters of the town and farmers, in a slack time for field tasks, donated work to grade, drain, and gravel a road. "Without cost to the town, township, county or state," a newspaper reported, they furnished their teams, wagons, and labor. The county provided its engineer's services and its road equipment.

In Texas also, counties were agencies providing funds for and decisions on federal-aid road work. Improvements often were made using county bond funds for part of the cost. Voters in Texas counties and local road districts approved bonds totaling $8.5 million in 1921 and $8.32 million in 1922. Though amounts approved both years were similar, opponents prevailed against a much larger total for bonds in 1922. Defeated local road-bond proposals totaled $1.8 million in 1921, $9.8 million in 1922. Earlier, though, voters had approved bond issues in large amounts in counties including nine near the urban center of Dallas, where a plan to build a perimeter road, using federal aid and $6.5 million in Dallas County bonds, was adopted in mid-1919.
Counties were not financial agencies of the new road work, however, in Indian reservations. Under legislation Congress approved in November 1921, seeking as it had in 1919 to increase employment by expanding road work, projects in reservations could be funded 100 percent by federal aid, exceeding the usual project limit of 50 percent. Though reservations in Montana contained some 350 miles of main highways, the planning and approval of federal-aid projects there required all the 1922 building season, delaying construction until 1923. If the funding practice removed financial control from those counties, it also helped in building a statewide system through areas often unable to pay large amounts in taxes.45

By varied methods, officials and voters of the Plains produced increasing amounts of revenue to build roads. Meanwhile, the cashless tax system of statute labor had further fallen from practical use. In Kansas, the poll tax of $3 or its equivalent in work on roads, was “only partially enforced throughout the state,” said highway officials. They recommended making it more enforceable “if it is to be of any general benefit in road building.” The recent increase of funds spent in road work had left the old standard of value for statute labor outdated. “It is ridiculous to expect a man to work his team under present prices for $3 a day or to perform labor on the highway two days for $3,” the officials argued in 1921. “If it is intended that the man should work out his poll tax, the allowance for this work should be proportionate to the price of a day’s wages with man and team under existing conditions.” Other social changes also were affecting the statute-labor system in the Plains and elsewhere. Growing urban populations, women’s postwar attainment of voting rights, and states’ interest in raising funds would further move the poll tax toward a cash basis. Rulings changed the tax in the depression in states including Montana, North Dakota, and Texas. And businesses using large machines were increasingly performing rural road work, further raising standards of efficiency beyond those of statute labor.46

Corporations in Rural Road Work

A new agency in road work in many rural areas was the business corporation. Already, country bridges had been built increasingly by companies, hired for particular skills. Yet through the early 1900s in the Plains and the rest of the nation, much rural road work had remained a task for statute labor—male residents of small districts organizing as temporary road crews to pay taxes by work on nearby roads. Using a different method, the post-World War I federal program and agencies of states built roads by contracts to hire labor. True, some Plains counties and townships remained in road work in 1920-22 and even expanded their activities, bidding for and winning contracts for federal-aid work, which they performed with workforces they hired and supervised.47

Most federal-aid contracts, though, were made with businesses. Unlike many local governments, businesses could buy large, specialized equipment, hire skilled operators, and employ them in locations
throughout states or regions. The postwar offering of federal-aid contracts, and others in programs of states and counties, quickly expanded a market for road contractors, who were scarce in 1920 in many places, including much of the Plains. Highway officials of Kansas attributed much of a 1920 delay of roadbuilding to a "shortage of contractors properly equipped and trained in this work." Weather also slowed work. Yet "many of our contractors have had no experience in country highway construction, and although experts at city work, have been unfamiliar with the difficulties that they have encountered in the highway program." Also, they said, financing a business had been difficult in late 1920.48

Use of large equipment greatly increased, speeded by federal aid in the form of war-surplus trucks, caterpillar-tread tractors, cranes, and other items. They were distributed in large numbers to all states and, in turn, to counties and sometimes, by rental, to contractors. North Dakota received more than 300 trucks and some thirty tractors and distributed most of them to counties. The trucks aided county road maintenance and graveling. The tractors, "offered to practically all of the counties in the western part of the state where conditions were worst on account of repeated crop failures," were used to grade county roads. To raise funds for obtaining, storing, and maintaining the equipment, state highway officials kept some tractors, which they rented to contractors.49

Pre-war experience of county officials in road work sometimes was insufficient for construction in 1920-22, with its large projects and equipment, new standards of design and construction, and high and changing costs. Officials of Foster County in North Dakota planned to provide $200,000 for its highways over several years if federal aid could match its funds. Planning to start in spring 1922 by graveling east of Carrington and perhaps building a road to Melville, county officials applied for eight war-surplus trucks. A newspaper reported the county was ready "to try out the plan of doing the road work itself, believing it can save money thereby." Later, the Kansas highway commission increased its supervision of counties building federal-aid projects. Of its efforts in that it said that "the preliminary work and supervision of construction on a small job in a county undertaking its first federal-aid work entails more work than a large job undertaken by a county that is well organized and experienced." In Montana, many counties lost money in taking contracts to build federal-aid projects, and so the state highway commission decided in late 1922 to stop the practice in favor of one more competitive. "Economy of construction is generally best assured," it stated, "by contracting improvements to those persons or corporations engaged in the construction business."50

A Texas county would act as contractor, taking on functions of corporations, including their method of working with cash instead of with statute labor. The county's completing its own road work was explained in terms of local self-sufficiency. Hunt County, said a newspaper, "lays just claim to the distinction of being able to construct its new highways independent of nonresident contractor and at a saving to the taxpayers." First underbidding contractors amid boom conditions of May 1920 and
awarding itself the contract for 23 miles of work, the county quickly increased its construction capacity. It paid for new machinery and materials from the contract, bought an interest in a quarry, and on 28 more miles of work took its own contract again. Yet “thereafter, when bids were invited for the next section of the work, contractors failed to respond,” and so the county needed to “complete the entire system without outside aid” from builders. Funds also were mostly local for its 100 miles of work—$1.6 million from county bonds, $300,000 in federal aid, and $25,000 from the state. And “while economizing we are paying better wages than any contractor in the state,” the county engineer said in early 1921, while serving as top construction executive for the work. “Our machine-men get $6 a day and our laborers get 50 and 60 cents an hour.” Completion was expected by mid-1921.51

Federal officials acknowledged that many parts of the nation had lacked road contractors “properly organized and equipped to take contracts,” particularly at the start of the new program, and that economic conditions during and after the war had been difficult for construction. As a result, some states throughout the nation had used their own hired labor forces or convicts to build federal-aid projects. By summer 1921, though, conditions had improved, said the federal program’s chief, Thomas H. MacDonald. Competition among contractors, he maintained, would offer the best prices for construction. Thus, “as a general rule, all federal aid projects should be offered to contractors at properly advertised lettings,” he told the staffs at the program’s regional offices throughout the nation. Use of work forces or of convicts, supervised by states or counties, might continue where they had proven effective, MacDonald said. Working with the war-surplus equipment distributed to states, such crews might “take over work on which fair prices cannot be obtained from contractors.”52

In early 1922, low wages road contractors could pay raised doubts about the advantage of convict labor. In Nebraska, state engineer G. E. Johnson said such wages would let contractors build roads more cheaply than convict labor. Continuing convict labor was defended by state warden W. T. Fenton not only as economical but also as good for inmates’ morale. It offered work outside the prison, gave cash payments, and reduced sentences. Work of the road gangs’ fifty-five men in 1921 had little impact on the construction market, Fenton said. Nebraska’s highway department used war-surplus materials to make forty-eight portable bunkhouses for laborers. The wooden structures, each with beds for four men and built on a wagon, housed some convicts at their camps and wage laborers at other sites.53

Road work offered jobs in the depression on federal-aid projects being built by contractors or by state or county work crews, all of which hired labor. Other jobs could be found on highway projects of states and counties, built solely with state or local tax revenues, though often in coordination with improvements being made with federal funds. The expanding road construction could draw its labor from communities near the projects or from areas far away that were accessible by travel on railroads.
The roadbuilding capacity developing in the nation since the war would be needed for years and would remain available to stimulate the economy, said MacDonald, the federal program’s chief. The program, approved by 1916 yet delayed by wartime priorities, had been a frequent topic in postwar discussions of hiring as the economy converted to peacetime uses, indeed had been given that role by Congress in 1919 only to be slowed through mid-1920 by a boom. In late 1921, after federal-aid road work had begun to expand, MacDonald told highway officials of the forty-eight states, meeting at Omaha, Nebraska, that the $350 million already appropriated for the program “is not all you are going to get for this kind of work.” Speaking soon after public works had been discussed at the fall 1921 President’s Conference on Unemployment, MacDonald told the state highway officials’ group that “I want you members to go back to your states and tell the people that this is a permanent scheme of construction. There may be times when only the minimum amount of work will be done, but there will always be road improvement.” MacDonald said it was the Agriculture Department’s intention “to use this scheme of work to furnish employment during financial depressions” and to build roads also when the economy was flourishing.54

Plains Roadbuilding

Comparing mileage of various kinds of federally aided work can show choices state and local officials made to adapt a program to their wishes and resources. Comparing spending can indicate how well Plains residents were able to use the new program. To help in the brief depression, the program would need funds and labor enough to expand quickly from a small base of earlier work. Such resources for road work had been scarce in much of the large region.

In the Plains, the new program of widespread public works expanded quickly in the depression. Despite its large areas of sparse population, the region began federal-aid projects on many miles of roads. Two factors increased mileage of road work in the Plains. Such work was easier in the ten states’ sections that had non-Plains conditions, where rural and urban settlement and wealth were higher than in the rest of the region. Also, the Plains region’s size helped it attain a large mileage of road work, after increasing its funds under the federal allotment formula. Both factors affected road work’s total for the region’s leader, Texas—large in area and closely settled in much of the area of its eastern, non-Plains counties.

First efforts to begin road projects met problems in much of the Plains. Several states had only small mileages of completed projects by mid-1922, a period including some of the worst of the depression. Five of the states each completed less than 200 miles in federally aided road work by then. All the region’s states, though, had made numerous preparations for larger road work since 1920 and had begun
projects still working toward completion by mid-1922. Areas of the extreme northern and southern Plains got much of the early work.\(^{55}\)

Still, with more time to arrange projects and with the wheat economy continuing depressed through 1922, road work with federal funds kept expanding. By mid-1922, Plains states completed projects totaling 3,174 miles. Their projects then under way, though, had twice that mileage. True, the 800-mile rise for Texas was part of the region's increase. Yet seven other states increased mileage by large percentages. Mileage declined in two states that had led in work completed—in North Dakota by only 2 percent, though in Montana by 43 percent.\(^ {56}\)

By late June 1922, the Plains led the other regions in mileage of federal-aid road projects under way. Those projects were approved to cover 7,053 miles, or 39 percent of the nationwide total of ongoing projects for 18,274 miles. Nearest the Plains in mileage was the South, whose projects under way totaled 4,738 miles. In both regions, low-cost kinds of work such as graveling helped stretch improvements over large mileage of roads. States' use of federal aid for three kinds of low-cost road work is compared in figure 9, page 155.

Yet the region's federal-aid road work, if measured by mileage, was concentrated in three states. Combining mileage of projects either completed or under way, the ten states were building improvements covering 10,832 miles. Of the region's total, the Texas mileage was 30 percent, and combined totals of Nebraska and North Dakota were a quarter. The seven other states combined were building in 1920-22 less than half the region's mileage in the road projects.\(^ {57}\)

Most men working at Plains federal-aid projects were part of crews putting gravel on a road as a surface. Many others were widening, draining, or leveling a road by digging and hauling dirt from some area to add to another. State and local officials tended to try to cover roads through large areas with surfacing and to build for some of them an improved roadbed. Unlike the Midwest or North Atlantic regions, where paving to provide for heavy traffic often could be put on earlier surfaces, the Plains had many miles of roads needing a cheaper surface of gravel, adequate for lighter traffic. In much of the Plains, roads first needed building into a shape set by modern engineering standards that sought to avoid narrow lanes, tight curves, frequent rail crossings, or steep rises and falls. Low cost aided in the region's completion of 1,514 miles of graveling and 937 miles of grading and drainage work. Such projects also could offer much work for unskilled laborers and for farmers with horses to hire than could projects of concrete paving, done with large machinery and costly materials.\(^ {58}\)

Projects applying road surfacing did provide some jobs. States of the region used federal aid to add 250 miles of concrete paving, most of it in five states. And some men worked at applying, smoothing, and packing a low-cost surface of sand and clay. Like graveling, sand-clay surfacing used materials available widely in the Plains, and such projects often could use skills, labor, horses, and wagons found
in nearby communities. Nearly all the region's 199 miles of completed sand-clay projects by mid-1922 were in Wyoming, Colorado, and Texas.

Apart from those completed projects, the others, started by late June 1922, retained graveling and road grading-draining as the main Plains efforts, only in larger scale. Gravel projects working past mid-summer 1922 totaled 3,354 miles in the Plains, more than twice the amount yet completed. Projects under way for grading and draining totaled 2,443 miles, an increase of 160 percent over mileage completed. Concrete paving continued in third rank in the region's totals; projects under way were for 497 miles, twice the mileage completed.

In completing projects in the new program by mid-1922, states brought federal aid to their economies during the depression in payments totaling $15.8 million. Of that amount, six of the region's states received at least $1 million each, paid as projects were completed in 1920, 1921, and early 1922. In addition, the federal aid required spending at least equal amounts from sources within the state, more than doubling the program's capacity to create jobs and increase purchases in the slowed economy. Plains states' totals for spending federal aid for roads are shown in maps of the forty-eight states in figure 6, page 123. Nearly a third of the region's federal aid paid for completed projects was in the total for Texas, $4.7 million, twice the amount paid any of nine other Plains states. Other large amounts obtained for completing projects by mid-1922 were those for Montana, Kansas, Colorado. The funds were paid to states in the worst of the depression, reimbursing part of costs of an expansion of public works states or counties had financed.

By then, the federal-aid program in the Plains had supported many jobs, whose numbers the spending totals help estimate. By early 1922, federal officials considered 40 percent to 50 percent of roadbuilding funds to go for labor at the project site and 25 percent more for labor off-site producing and shipping equipment and materials. Further, the program's chief said some $82 million in federal funds, being spent yearly, at the rate then of matching by state and local governments yielded about 210,000 jobs, each for a building season of 200 days. Thus, $390.48 in federal funds created a job at a project site for a building season. Applying the nationwide ratio to totals for federal payments to states by mid-1922 estimates job numbers.

In Texas, an estimated 12,108 jobs were created in federal-aid road projects by mid-1922. In each of six states, projects provided employment estimated at between 7,000 and 2,500 jobs. The six were Montana, Kansas Colorado, Wyoming, Oklahoma, and New Mexico. At lower levels were three states where the federal-aid program was smaller in work completed before July 1922 than in work under way then. In the Dakotas and Nebraska, the completed federal-aid projects had created work in each state estimated at between 1,800 and 1,200 jobs. The ten Plains states created an estimated 40,552 jobs in
their federal-aid road projects completed by July 1922. More jobs than estimated were likely in projects such as grading and graveling, in which equipment and material cost less than in paving.  

Besides the estimated jobs in completed projects, more were available in July 1922 in federal-aid projects still under way. Many of them were in new locations: Montana, which had spent much, cut back, and work expanded in several states on the region’s eastern side. States could expand roadbuilding in the program because further preparations had been completed, federal allotments still were available to spend, and many constituents supported more projects, particularly of low-cost kinds. Totals for the two periods summarize how quickly work could begin by mid-1922. They also indicate events in a more-continuous process of forming, designing, approving, building, and inspecting projects that led to federal reimbursements. Roadbuilding was growing particularly in the Plains, raising the region’s project costs from 15 percent of the national total in projects completed to 30 percent in projects under way.  

Plains states used the program through 1922 to add large amounts of federal funds to their economies, which had stimulated extensive spending from state and local revenues. In that, the region’s leading states were in the southern Plains—Texas, Kansas, and Oklahoma. Also, their populations per square mile were the region’s highest, indicating the importance of rural and urban development for quickly beginning public works in the new program in 1920-22. Their projects represented 60 percent of the region’s total for approved cost of federal-aid projects, completed or under way by mid-1922, including their local, state, and federal funds. And in every other Plains state, those costs totaled at least $6 million.  

Spending in such amounts was still too little to hire a large share of the people unemployed in the region. True, other jobs were added for workers in industries supplying the federal-aid projects and for farmers driving their teams of horses in the roadbuilding. Other work was available for men in road projects of states and counties that used no federal funds. And some men from the Plains traveled to work in neighboring regions’ federal-aid projects, as Plains projects hired some men from elsewhere. Agriculture of the Plains continued to hire many workers, even while low crop prices stirred opposition to road taxes. By late 1922, though much of the nation’s economy had improved, in the Plains’ large wheat areas the depression continued.  

State lines identify varying political and revenue systems that influenced what mileage and what kind of roads were built and what amount of federal aid was matched and spent. Areas of urban and rural settlement also were significant in affecting road work. And environmental conditions were important in the Plains, influencing settlement patterns and road work (indicated in chapter 7 by comparing road work inside and outside the Great Plains belt of aridity). In a period of expanding road
construction and declining constituent incomes, some Plains states and counties could use revenues from oil production to match federal funds. Difficulties of raising road revenues in states where large tracts were still public land produced changes by Congress that eased matching requirements in parts of the Plains and the West. Rulings on revenues from the region established states' authority to tax gasoline and further weakened the statute-labor system by changing the poll tax. Businesses increased their activities in rural areas as larger funds and more projects became available for construction. State agencies grew in capacity to begin road work in the sparsely populated region, yet states lacking revenues relied on resources of counties for funds to match federal aid.

In many locations, work had begun quickly. In all the Plains, projects completed or under way by mid-1922 totaled $134 million in their approved costs, to be paid by federal and matching funds. In their cost, Plains federal-aid projects ranked second among those of five regions and were 24 percent of the nationwide total. Despite low population, marginal resources, and depressed economies in much of the large region, extensive public works began in the federal-aid program in each of its states. Besides sharing a postwar interest in improving auto travel and preparing for future economic development, many states and counties began projects to provide work or to save on construction costs while the economy was slow.
CHAPTER 6

THE WEST

Seven states, from Idaho to Utah to Arizona and westward, showed many similarities yet built roads under greatly varying conditions. Such resources as population and tax base were substantial in a few states, meager in others. Development often had concentrated in small parts of states, a problem for raising revenue for statewide roadbuilding. Where settlement was sparse, officials sought to provide for tourist traffic in improving highways over great distances. Elsewhere in the region, urban populations had produced local traffic requiring better roads. The West’s contrasts include those in local needs for jobs during the depression, influencing uses of roadbuilding.

Aridity reduced farming and settlement in much of the West, particularly in inland areas such as those in Utah, Nevada, and Arizona. Farming had developed, though, in the Pacific Coast states, which also had port cities that grew during the war. Northern areas of the West supported lumber operations, and scattered across the region were mines. In the region’s inland sections, most rural population lived near irrigation projects, whose construction had preceded roadbuilding in bringing federal funds westward. (The West’s states are shown in figure 1, page 11.)

By 1920, before the depression, locations in the West varied greatly in prosperity, measured by incomes people reported on federal tax forms. For a few parts of the region, the depression barely slowed postwar growth. For others, though, incomes declined quickly; for still others income had been so low that a depression showed fewer effects. Thus, some western states could build roads in a depression much more easily than others. Fortunately for some, locations with more funds usually had more wage earners and so more men who would be seeking work in a depression.

Development by 1920

Coastal states, particularly California, were unlike the rest of the region. The three coastal states had more resources for forming road programs. They had more traffic, requiring more improved roads, and they would receive more in federal aid, allocated by a formula of three elements. For the region’s
less-developed states, only large area would raise their amounts in the federal allotment formula; they lacked much of the other two elements (population and rural road mileage). In its sparse settlement, the region was more consistent. In population per square mile, California and Washington ranked after half the nation’s states; the five other western states were among the nation’s lowest. Several states ranked high in how much of population lived in urban areas, indicating that much road work would be in counties near such areas or connecting them. Large cities were near the coast. Los Angeles and the San Francisco-Sacramento area were rivals for the region’s largest population, followed by Portland and Seattle.²

Most surfaced roads were in coastal states. By 1904, more than half the region’s surfaced mileage was in California; other leaders were Washington and Oregon. Those proportions remained in surveys of graveling and other surfacing in 1909 and 1914. An interest in better roads led Oregon to join a 1912 experimental program of federal cooperation for roadbuilding. Coastal urban centers particularly supported pre-war roadbuilding. By 1907, when voters in the Los Angeles area approved $3.5 million in county road bonds, city taxes had paid to pave nearly one-fourth of the urban street mileage. More auto use had raised demand for better roads, and “the more good roads were built the greater the demand for automobiles,” a newspaper argued. Other counties issued road bonds, especially where industrial, commercial, or agricultural development provided a tax base, as in Southern California’s seven counties. In 1915, those counties planned $7 million in roadbuilding.³

Most postwar auto traffic was in states at the coast. California’s 1919 total for motor-vehicle registrations was the nation’s fifth largest. Washington and Oregon ranked near the national median level. The four other western states, though, ranked among the nation’s lowest ten. In the postwar boom, auto use increased particularly in Oregon, Idaho, and Washington, whose 1919 registration totals each increased more than 25 percent from 1918. The region’s smallest increases were in Nevada and Utah.⁴

In settled areas, many farmers used autos. The share of farms with autos ranged in most of the region from 53 percent in California to 41 percent in Idaho, omitting the 32 percent in Utah. The percentages were raised in much of the West by relatively small numbers of farms. Keeping livestock accounted for large acreages of hay and forage, the leading crop category in 1919 value for western states except Washington, where it was exceeded by wheat, and Arizona, by cotton. Other crops among the top three in value included wheat in six western states and, particularly in California and Washington, commercial fruits and vegetables. In values for all crops, California produced half the region’s total, surpassing Washington, Oregon, and Idaho; at less than half their values were those for Utah, Arizona, and Nevada.⁵

Unsettled areas were immense, often mountainous, dry, cut over, or still in timber. Washington had more of its area in improved farmland than any other western state, followed by California, Idaho,
and Oregon, though even they remained below the proportion for the nation. Such farmland was rare in central and southern sections of the inland West—less than 4 percent of area in Utah, Arizona, and Nevada. Of five regions for comparing federal-aid road work, the West had the smallest share of area in improved farmland. It had the largest share of federal lands, still unclaimed for homesteads. Rarely were rural residents numerous enough to provide much traffic or taxes. States were larger than in most regions, and roads fewer. Because of terrain, Idaho lacked a road or railroad to connect panhandle counties to its more-settled southern areas.\(^6\)

To prepare for building roads, states formed agencies in the early 1900s. Led by Washington in 1905 and Utah in 1909, six western states formed state highway agencies by World War I. While a territory in 1909, Arizona gave some authority for roads to centralized offices. Nevada formed its agency in 1917, when that was required to participate in the new federal program. California aided roadbuilding with state revenues by 1895, a change the other states made by the war.\(^7\)

Transportation through much of the West was by rail. From areas near the coast, people and freight traveled on transcontinental railroads through the West’s sparsely populated inland states. Elaborated systems of railroad tracks had developed in much of California and Washington, yet the five other western states’ track mileages ranked among the nation’s lowest sixteen. Trucks hauled freight in some parts of the West, unable, though, to ship over its greatest distances until states could build and connect highway systems.\(^8\)

That would require labor much of the region had lacked in good economic periods, particularly during the war. States throughout the nation then had increasingly considered building roads using prison labor. Much of the West, though, had too few prisoners to complete much work. Lacking men in mid-1916, Arizona highway officials prepared to close one of their two prison camps. Arizona’s prison then held 330 men, of whom “about 120 are available for road work.” The men could be worked on roads for about $1.60 daily in cost to the state, well below free labor’s wages, ranging from $2 in Arizona’s farming counties to $3.50 in its mining counties.\(^9\)

When available in larger supply, free labor could be used instead of convicts in state road work, as it was in Arizona in a 1914 depression to relieve unemployment among miners. Thus, a convict camp the state opened for work on the Bisbee-Tombstone highway in late 1913 was closed in August 1914. “Owing to labor conditions resulting from a decided decline in the price of copper, the prisoners were returned to the prison and paid labor employed in their places” until December 1914. Well before the federal road program, a practice of using work on streets or roads to relieve unemployment in depressions had grown in the nation—in many cities in the late 1800s and in some states as their road projects multiplied in the early 1900s. Thus, jobless men obtained work, taxpayers obtained public improvements at reduced costs for labor and material, and localities had less to pay in charity relief.\(^10\)
Manufacturing had developed by 1919 in the coastal states, particularly in the war. California was among the nation's leaders, ranking 8th in 1919 value of manufactures. Washington ranked 18th, and Oregon 33rd. Yet the West's inland states ranked among the nation's lowest ten. Scattered in a similar pattern were the West's wage earners, who with farmers would be affected by the depression by 1920 and often would seek to work at building roads.\textsuperscript{11}

**Describing the Depression**

Economies of many states of the West were growing during 1918-22, though the depression slowed them at times. In other states, a depression is difficult to measure, for their totals for residents' net income continued to rank low nationally. Within the West, rank changed little. For the five years 1918-22, California remained in first place, Washington second, and Oregon third; Idaho and Utah were fourth or fifth; Arizona remained sixth, and Nevada seventh. California residents made a growing share of the region's incomes in 1918-22, and rose in their national ranking to 4th in 1922. (Western states' totals for individuals' incomes 1919-22 are compared among totals for forty-eight states in figure 2, page 12.\textsuperscript{12})

The totals, of amounts from individuals' federal tax returns in each state, show relationships only for incomes of $1,000 and higher. Many people usually made less. Though they need not have filed tax returns, they were affected no less by economic trends. Incomes not reflected in the totals include most in road work, where laborers' wages were too low to be so recorded. Thus, direct effects of roadbuilding on states' economies in the depression would elude the totals on individual incomes. Yet the totals of income, with those of pre-1920 development, suggest the varying levels of resources states could use for building roads.\textsuperscript{13}

Some indication of the number of people making lower incomes results from dividing states' totals by their 1920 population. California leads the region by far and ranks second nationally in 1920 when population is figured in income totals to yield a state's per-capita taxable income. Nevada appears wealthy, ranking 5th in the nation, yet only because of small population that would make paying costs of postwar roadbuilding difficult. Next in the region were Washington, ranking 11th nationally, and Oregon, ranking 15th. Ranking lowest in the West were Arizona, Utah, and Idaho.\textsuperscript{14}

Apart from such population considerations, California's total for its residents' net income grew yearly in 1918-22 except in 1921, when it declined. Particularly slowed by the depression were the economies of Washington and Idaho. Only for those two states did net income totals in the West fall in 1921 below levels of 1918. In the region's other states, the depression cut 1921 income totals below those a year earlier.\textsuperscript{15}
The depression was noticeable in the West, even among people whose incomes reached taxable levels. In 1921, the total declined from 1920 for each of the seven states, particularly in Washington, Arizona, and Idaho. The West’s smallest percentage declines in 1921 were where state totals for incomes were largest (California) and smallest (Nevada). Despite a small decline, building roads in a depression would be difficult in Nevada, ranked last in the nation yearly in 1918-22 in net income. To match federal road funds to reduce unemployment, Nevada would have to raise large amounts from within the state.\(^{16}\)

Recovery from the depression occurred in one western state in 1922. California residents’ total for incomes in 1922 exceeded that of 1920. The increase (2 percent) was one of five among the nation’s forty-eight states. For the other western states, though, income totals remained in 1922 below levels of 1920. Totals were at least 12 percent below 1920 for Nevada, Oregon, and Utah. Farther from recovery, totals were at least 20 percent below 1920 in Washington, Idaho, and Arizona. The totals partly reflect farm-produce prices, many of which improved by late 1922. Prices remained low past 1922 for wheat, Washington’s leading crop in 1919 value and among the leading three crops in every western state except California.\(^{17}\)

**Early Months**

Though capacity to participate quickly in federal-aid roadbuilding varied among the West’s states, from differences in development and wealth, the slowing economy had early affects throughout the region. Among logging camps closing in late 1920 were those near Vancouver, British Columbia, leaving some 4,000 men jobless. Prices for many crops by late 1920 were well below those a year earlier. By spring 1921 in the Pacific northwest, lumber mills were at half their usual production, and prices were low for canneries’ fruit or fish products. By March, some 2,000 farm workers at Spokane were jobless, and many copper mining operations in Utah and Arizona had slowed or stopped. In estimates by various officials reported in an Idaho newspaper in May 1921, about 30,000 men were unemployed in California, 20,000 in Washington, and 10,000 in Oregon. Nevada’s copper mines had laid off 2,000 men. Railroads had reduced their forces 30 percent in Nevada and idled 1,500 men in Utah. Idaho’s jobless were estimated to total at least 12,000 men, particularly from lumbering and mining.\(^{18}\)

Still, California had areas remaining busy. For years, much western development had concentrated in irrigated farming areas. By early 1921, Imperial County in southeast California was shipping vegetables and paving roads. Jobs in winter were in projects for 30 miles of paving begun in fall 1920. Though Imperial Valley roads were good enough for the traffic usually, a newspaper reported, “the heavy strains of the cantaloupe shipping season and the watermelon and lettuce shipping season, have caused certain roads to disintegrate.” Other routes also had heavy traffic, which county and state
officials noted. Thus, fall 1920’s first paving had been on the “El Centro-Calexico highway, which will connect the two largest cities in the county, as well as furnish a paved route north for the vast tonnage from below the line in Mexico.” Spending for roads, to total $1.5 million that year for the county, added to that authorized for irrigation, for which the local district’s bonds totaled $8.5 million. In early 1921, growers were shipping carloads of lettuce by rail, to be first on eastern cities’ markets. Cotton growers had lost as prices declined in fall 1920, though many got credit from banks in the valley and in Los Angeles and San Diego for hiring harvest labor.¹⁹

Work was available for some in late 1920 in Los Angeles, where a newspaper predicted many shipbuilding crews “will be kept busy during the remainder of the winter” on contracts for five large new vessels. In 1920, local construction and the port had flourished. Building permits rose 92 percent from 1919, exports grew 77 percent, and imports tripled. Yet as the depression affected farms and factories in much of the nation by winter, Los Angeles officials were preparing in January 1921 a plan for vagrants to be put to work at the municipal farm.²⁰

Similar growth had occurred in 1920 in counties nearby. Orange County added many houses and expanded oil production. Santa Barbara County’s oil fields grew: demand for houses and farms raised land values. “Rancho subdivision and road construction,” a newspaper reported, were “notably developing farming interests.” In Riverside County’s cities, new settlers in 1920 had “made the housing situation acute.” San Bernardino County, part of a citrus belt and on two transcontinental rail lines, also in fall 1920 began receiving many new residents. “Hundreds of automobiles bearing entire families from Eastern States have been rolling in over the National Old Trails Highway,” said a newspaper. Some of them bought city houses. Many, though, intended to farm, even on unirrigated land, “and are preparing to wrest their living from the thousands of acres of virgin lands included in the broad expanse which is popularly known as ‘the desert’ but which blooms with wild flowers and needs but the introduction of water.” Roadbuilding was under way in nearby areas, with funds from county bond issues such as those voted recently in San Luis Obispo and Fresno counties. The Fresno voters also had approved an irrigation district with plans for a $6 million dam.²¹

Reports of good times were discounted, though, by some southern California trade unions, whose members feared an influx of workers from the East that would lower wages. They thought that was the goal of ads in the East by western manufacturers’ groups, said the Chicago labor journal Auto Worker in August 1920, when layoffs from eastern plants already were numerous. “Auto workers will do well to stay away from the coast this winter,” the journal advised. Los Angeles often had been a destination of many jobless men, though “most of these workers land on the coast broke, and work for anything the boss offers.” By mid-January 1921, Los Angeles officials named a committee to find the extent of unemployment and, if needed, suggest ways of “providing work for meeting the situation.” In late 1920
and in 1921, growing unemployment would increase the number of laborers available for California's harvests and road projects.\(^{22}\)

Roads and autos, besides serving to justify new public works, also gave some itinerant people a place to stay and a chance at harvest jobs. Many western communities, interested in tourism, provided roadside camps by 1920. Traveling in autos, people seeking work found many camps ready. They used methods similar to those John Ramon Martinez attributes to many Mexican laborers in California's pre-depression harvests. Farmers there in earlier years “did not like to hire Americans because housing and boarding facilities had to be provided them while the Mexicans boarded themselves and camped out under the fruit trees.” In 1921, though, “American labor moved about the state in automobiles and like the Mexicans agreed to ‘camp out.’” As the supply of labor grew, fewer Mexicans worked. Near Fresno, Valley Fruit Growers Association asked members to hire only white men for farm work. In Arizona, thousands of Mexicans who had been laborers in Salt River Valley’s cotton fields were without work in the depression.\(^{23}\)

Preferences in hiring occurred not only in southern parts of the West. Jobs in federally aided road work anywhere in the nation were to go first to veterans, as Congress had specified soon after the war. Sometimes veterans' groups urged a broader preference, one for American citizens. That was sought of Oregon’s highway department in a 1921 resolution by the American Legion post in Eugene, Oregon. “The resolution is founded,” a newspaper reported, “on the contention of the legionnaires that foreigners are being employed on the road in this vicinity.” Many Mexicans had worked in central and northern states of the nation, particularly in wartime. Some still worked on western railroads' maintenance crews in winter 1920, when a former Idaho governor, now U.S. immigration inspector for the West’s northern states, planned to investigate. The Mexicans, said a Boise newspaper after interviewing the inspector, “are standing in the way of employment for Americans during the winter months.”\(^{24}\)

Adopting hiring preferences was an act local governments might take for some constituents. In April 1921, the mayor of Roseburg, Oregon, received from the American Legion’s state office a model ordinance similar to one before Portland’s city council, to bar hiring of aliens in city public works “unless American labor is unavailable.” Legion officials said they had no “desire to cause aliens to suffer,” though they felt that in winter many ex-service men and other Americans were jobless because a “preference being shown to aliens” had let them remain employed then.\(^{25}\)

Some Idaho men tried to preserve road work against outsiders, including Americans. Men traveling in search of work seemed to some town residents to be adding to competition for nearby jobs. In Idaho Falls, the needs of jobless men’s families were cited in a statement left at a newspaper protesting transients’ work. Employing itinerant men for road work would “let us taxpayers lose our homes and starve our families for want of the work that is ours,” they contended. The statement’s signature, “Home
Builders,” may indicate unemployment had affected homeowners and that some of them wanted a preference over residents of lower economic classes. Use of hiring preferences in the depression is discussed further in chapter 10.²⁶

In many areas, work in the depression was available mostly for men. Portland’s municipal employment bureau, for example, found work in May 1921 for 1,401 men and 206 women. Yet a man’s wage often represented income for a family, as it did in Roseburg, Oregon, located on the Pacific Highway between Eugene and California. When railroad shops there cut men’s work hours in fall 1920, merchants’ trade slowed, and “a great hardship was worked on many families,” a newspaper reported. “The cuts came at a time when work was hard to secure and many men thrown out of work were unable to find steady employment and suffered a great deal during the winter. At times large families were hard pressed.” The men returned to full-time schedules in mid-April 1921, as the West’s economy expanded seasonally. By March 1921 in the region’s coastal states, work had opened in lumbering and farming, reducing the winter’s numbers of jobless men in their cities.²⁷

Road work and other construction was urged in Utah in April 1921 to employ the jobless, including copper miners and smelter workers. “So far as road work is concerned,” Utah’s governor said, “the state has no money with which to undertake construction.” Still, he said, “We must take care of the unemployed in some way.” The comments were in reply to a delegation of about one hundred from Magna and Garfield appearing at the capitol to seek work for men in the towns. Also that day, the governor called representatives from around Utah to a employment conference, which later in April gave counties the task of reducing unemployment. Two men told the conference the highway commission had been slow to begin federal-aid road work. A sheep farmer at the meeting said he had to continue operation, unlike a copper company that hired 5,500 at normal capacity and laid off all but 200 in the depression, shifting relief costs to farmers and others. While in Salt Lake City for the conference, Boxelder County officials agreed with Utah’s highway commission to share half the cost of a paving project if federal funds could be obtained. Work in some Utah counties had continued in winter 1920-21 in federal-aid road projects. Crews worked through winter building bridges and culverts on a 7-mile project near Ogden, where paving was to begin in April.²⁸

Old roads built by farmers were becoming tourist routes, as in California on a road to Lake Tahoe. Near Ukiah in late June, steam shovels began excavating a section of the project that would use federal aid. “The present road, much of which was built by donation work of farmers,” a Sacramento newspaper said, “is winding and narrow and has unnecessary grades, some of them running as high as 12 per cent.” The planned 180-mile route, across the Sacramento Valley and into the Sierra Nevada Mountains to Lake Tahoe, was estimated to cost $3 million. It would be built in sections of 13 miles,
for convenience in using construction camps. For the eighty men working, two camps had been set up, one of them at an old school building. Others would be started as crews grew to 200.29

After a summer of roadbuilding in 1921 in much of the region, together with seasonal work including that in agriculture, unemployment remained in fall. Many families continued looking for jobs while staying in autos at tourist camps, many moving through Oregon toward California before winter. In September, the president of Washington’s State Federation of Labor advised members that “there should be a demand for the development of every kind of public improvement that would provide employment of any kind.” In fall, state highway officials were planning to begin winter projects to reduce unemployment in Washington’s eastern counties. In November, the Washington labor federation sent a Seattle union leader to ask state highway officials and others to reschedule to winter some public works planned for later. Unions at Spokane and Tacoma were seeking food and clothing for striking miners and their families. In December 1921, Washington’s governor called a conference on unemployment at Seattle, which recommended construction of roads, state buildings, schools, and city and county projects.30
Raising Local Funds

Creating jobs in road work required raising funds. In many parts of the West, though, autos were too few for registration fees to produce large revenues. In western many states, aridity limited farming, and large areas were still federal property, precluding raising much revenue from taxes on land. Bonds, though, might raise funds quickly and defer repayment to years that might be unaffected by a depression. States would issue bonds for roadbuilding funds to match federal-aid to pay for part of many road projects. Another share of the projects' cost would come from local funds, frequently raised by issuing county bonds.

In early 1921, road bonds seemed a way to increase jobs for local men near Roseburg, Oregon. From March 1921 until an election in June, they debated whether issuing county bonds for roads would be wise in the depression. Even in early April, when the local economy was still slow, Roseburg officials expected warm weather's road work to bring jobs and better trade. Many welcomed the state highway department's approval in April of plans for work nearby. "The resumption of road work in the county is hailed with delight," a newspaper declared. Road work would give "plenty of labor for all, with a large monthly payroll in the county," and "business will feel the effect at once." And with work nearing completion on the Pacific highway's sections in the county, it seemed that "soon it will be possible to travel from Roseburg to Portland over a completely paved road."31

County funds were required in Oregon to match state and federal aid for projects on the state road system, an issue citizens around Roseburg had considered in late March. At the call of a committee named by county government, delegates from the county's sections had met to discuss expanding road work. An official of the local taxpayers' league was moderator, and the district attorney spoke for the committee, urging more roadbuilding. Mountainous terrain and large road mileage were parts of why the county lagged in highway improvements, officials told the delegates. Issuing bonds now would allow the county to share 50-50 with the state the cost of work on state roads other than the Pacific Highway, the attorney said. Otherwise, "later we will probably have to do our improvement at our own expense." The county had continued to develop, he said, since it earlier issued road bonds, for $555,000, and the larger tax valuation raised the county's bond limit. With "two or three" dissenting votes, the meeting endorsed a plan to issue $1.1 million in bonds and directed that petitions be circulated to put the issue on the June ballot.32

Benefits for farmers from the bonds were the topic that day as the taxpayers' league met separately. Many opposed new bonds until earlier ones were paid off. Yet location divided members, in the "old fight between the highway and the rural road." Bond proponents argued that working on main roads with a bond issue would leave more of regular revenues for shorter roads with less traffic.
Members said crops had been bad, the market worse. In reply, "another member stated that the amount of road work the farmer would be able to get with his team if he desired would more than make up his amount of tax and at the same time the road work would solve the unemployment question and create a better market and better times." Narrowly the group supported bonds, voting 19 to 17. By contrast, some farmers of nearby Lane County in spring supported road work by becoming bond purchasers. Similarly, near Roseburg road work began where communities bought bonds their county had issued earlier. 33

Yet in May, other farmers around Roseburg continued to oppose a new bond issue, and bond supporters tried countering their complaints. Roseburg's newspaper said a study showed farmers would pay just over one-third of the cost of new bonds. Nearly half would be paid by timber owners and city residents and businesses and about 20 percent by the railroad and utilities. Though farmers had little money, it said, no payment on bonds would be made for the first five years, by when markets likely would be better and farmers could move crops by a road to the coast. Good roads, the newspaper said, would raise property values by bringing in settlers, who traveled less by railroad now that the auto "is the colonizer of the day." In late May, the district attorney and a member of the county and state Grange debated the bond plan before farmers and businessmen nearby at Melrose. After the debate, "prominent farmers in the Melrose district stated that in their opinion the bonds would be defeated in the rural districts." In an appeal at a Grange-sponsored meeting, a speaker held that bonds would improve roads and give more jobs in "the coming year or two when the county will not be able to take care of its unemployed otherwise." Another bond plan, ready for the ballot in Wasco County, also brought complaints over taxation in the depression, together with objections to the proposed route of a large road project. 34

In summer 1921, many people in several parts of Oregon chose issuing local bonds in a depression to increase road work. Voters in June approved road bonds in nine of the ten counties where they were on the ballot. Of the $3.7 million total authorized, the largest amount, $1.1 million, was in Douglas County, including Roseburg. There the residents, choosing from six ballot issues, gave favorable votes in the largest number to a soldier-bonus bill, in second largest to the county road bonds. Proponents of bonds included by election day many farmers. The margin for bonds was enough in just the rural districts that the "the issue would have passed aside from the big majority polled in Roseburg." 35

Still, using local bonds to expand road work and jobs in a depression, a goal of many in the Roseburg area, would be difficult, particularly in 1921. The period between voters' approval in summer 1921 and the start of much more road work would be considerable. Indeed, some bonds approved earlier, before 1921, remained unsold because the depression had reduced their market. Jobs were available, though, on projects using other funds. In late June, Roseburg residents watched a paving
company's convoy of twenty large trucks move through town. Four of them carried equipment to be put at a 60-man camp to house workers on a paving project.\(^{36}\)

A depression had influenced people in approving an expansion of road work in several counties of Oregon, as elsewhere in the West. Though the depression continued to affect the market in June 1921 near Roseburg, the area in western Oregon, near the Willamette Valley, had developed in earlier years. The growth in its tax base before the depression allowed issuing new bonds. Though funds from the bonds would help little in early 1921, their approval prepared for a better economy in 1922.

Counties in Arizona also had issued bonds to raise much of the funds for matching federal aid, limiting state authority in directing road work. Arizona's laws on using county funds with federal aid remained vague and left them under direct supervision of county governments, said the state engineer. In mid-1922, he recommended the laws be changed, conforming to recent rulings of the federal Bureau of Public Roads that, before agreement to start a federal-aid project, county funds for it be deposited with the state. The recent practice of "dual control of state funds" for roads by county governments and the state engineer had worked well enough while roads were needed in the wealthier counties, the engineer said. Though "as the roads through wealthy counties are now largely constructed," restrictions were no longer needed on state authority for building main routes, which would serve traffic from many localities. Of the $15 million in bonds approved by Arizona counties by early 1921, much of the total amount, 57 percent, was by the Phoenix area's Maricopa County, home to about 20 percent of the state's population. The urban county also had much rural development on irrigated lands of the Salt River Valley. Arizona could issue state road bonds if voters were to approve a ballot question, expected in the 1924 fall election, the engineer said in 1922.\(^{37}\)

State bonds were a source of large revenues in California throughout the depression. In a postwar economy more prosperous than others in the region, a large bond issue by the state won approval in fall 1920. Also in the boom period, many California counties had increased their funds for building roads by issuing bonds. By January 1921, a Los Angeles newspaper noted that state bonds for roads had been authorized totaling $70 million and that "every county in the state possessing financial resources of any consequence has passed local good roads bond issues."\(^{38}\)

Utah raised road funds from state and county bonds. By early 1921, Utah's highway commission had administered spending of $6 million received from state road bonds in the previous four years as well as an estimated $3 million more from state and county taxes. In the locality of Nephi, in north-central Utah, conditions by April 1921 seemed good enough for scheduling a referendum on county bonds for roads, a county commissioner told a meeting of the Commercial Club. Another speaker, from Salt Lake, outlined how "Utah and Sanpete counties had proceeded to put over bond elections" for road funds, a newspaper reported. Members at the meeting asked county commissioners to call an election to
authorize $200,000 in bonds, to be used to finish a dirt road, improve a road, and match “a similar amount” of federal aid to improve another.\(^\text{39}\)

In Nevada, resources for road work permitted by late 1920 a small bond issue, of $1 million, similar in amount to the $2 million approved then by Idaho voters. Nevada’s counties provided most funds to match federal aid. Even in the boom year 1920, Nevada’s state revenues for the year totaled $4.3 million, including a small amount from motor-vehicle fees. By comparison to those funds for all activities of state government, spending for roads was large. Nevada’s highway spending in 1920 included $1.7 million from the state, $428,709 from counties, and $515,700 from the new program of federal aid.\(^\text{40}\)

Problems of financing main roads in areas with small population and much public land stirred contributions from outside the West. By 1920, the Lincoln Highway Association raised $115,000 for Nevada, including $100,000 from an auto company. The 1920 boom’s labor shortage slowed work with those funds, yet Nevada completed grading, graveling, and paving then on several stretches of the road. In Utah, contributions in 1919 from a tire company helped improve the transcontinental route.\(^\text{41}\)

Though some of the West’s counties could issue bonds, economic development by 1920 in much of the region had been meager. Less-developed areas lacked enough population, farmland, industry, or vehicles to raise much revenue in taxes or repay bonds. Aridity or mountainous terrain could identify many of those areas, often still owned by the federal government. Local roads and travelers had been few in many such areas, yet the federal-aid program was building main routes for a growing non-local traffic of autos. Those highways, some planned as parts of transcontinental routes, often would have to pass through less-developed areas where the few residents had been unable to afford much work even on local roads. Main routes for autos were more costly to build than local roads had been, a problem for the nation’s rural areas that federal aid was intended to ease. Yet the problem was especially difficult in parts of the West and the Plains, where much land was arid and remained unsettled.

**Untaxable Land**

In many parts of the nation, making and keeping up roads had been considered a chore of the farm. In the early 1900s as earlier, many roads were something rural men made, paying some taxes with work, some with cash. Yet in the West after World War I, states planned to put roads through expanses still unsettled. Providing the funds and labor that localities customarily had been asked to supply would be a large task, particularly in western areas of low population.

Large tracts of western land were still publicly held, producing no revenue that states or counties could use to match and obtain federal aid for roads. Each of the West’s seven states except Washington had at least 5 percent of area still in public land. In several, public land was between one-fourth and
one-sixth of state area. Much higher proportions, though, remained unsettled in two states, removing large potential sources of tax revenues in farmland and vehicles. The nation’s two largest ratios of public land were those of Utah, at 49.7 percent of area, and Nevada, at 74.4 percent. The problem gained urgency as westerners sought to expand road work in a depression. In early 1921, a western senator tried to reduce states’ matching requirements for federal aid. His bill to ease matching where public lands were more than 5 percent of state area won Senate approval in May before going to the House. The usual practice of matching federal aid with equal amounts from within a state, said a newspaper in Boise, Idaho, had worked “equitably in the older states, where the lands are practically all in private ownership and subject to taxation,” though less so in road programs in western states.

In Nevada, despite small funds for matching and few people and autos, road work in spring again became of interest in 1921. In the capital, Carson City, at Nevada’s western border, newspaper readers learned of projects set to begin in the state and, on connecting routes, in California. In the past two years, jobs for veterans had been provided in road work of Nevada’s highway department, even while postwar construction costs had been high, and the governor in early 1921 called for new sources of revenue. Instead, the legislature approved tax relief by cutting revenue for the state highway fund 40 percent. Carson City’s newspaper suggested developing irrigation to add farms and taxpayers to the area. A proposed gasoline tax, debated briefly by legislators, stirred objections it would ward off visitors. As weather cleared in April, instead of discussions of using roads to increase work, a more-frequent concern was reopening routes for the season to obtain the commerce of travelers to or through public lands.

In early April, some road work was done as donation, not for hire by government program. Boosters from Carson City on an outing reopened a mountain road to Lake Tahoe and points in California. The group of about thirty—many married couples, some children, some single women and men—used shovels and six motor vehicles, including a truck from Greater Carson Club. They were fed as they reached resorts and cottages along the route and left the road passable from Carson City by “any good automobile, without chains.” Earlier, clearing mountain roads had begun with work by some forty Carson City residents, including boys from the Indian school and elsewhere in the city.

Also continuing a tradition of local people keeping up the roads, farmers of Nevada’s Mason Valley agreed “to devote a day” to road work in May, using their teams and help from other people near Yerington. On their Good Roads Day, some 180 men repaired roads. Their effort resembled that of residents near Rupert, Idaho, where business groups called for “people of the whole county” to help clear rocks from a main road in May. More than in the past, roads could bring localities business in the traffic of outsiders. Like many towns in every region after the war, Yerington in spring 1921 designated land
for a tourist camp. In southern Nevada, travelers through the town of Las Vegas, near where construction was planned for Boulder Canyon dam, were estimated by state highway officials to average 100 cars a day, “and the community realizes the importance of improved roads to promote further increases in this traffic.”

Tourism seemed particularly important while other employment declined in early 1921. In mining, Nevada’s largest job sector, layoffs continued in spring. At Ely, a copper company, citing lack of European demand, stopped mining and began closing refining plants. Mining camps’ closings were cited as part of why auto-license sales were lower in early 1921. Also, said a state official, many farmers were keeping old autos while crop prices were low. Box plants and saw mills had closed in the Sierras, creating a summer shortage of wood fuel at locations including Reno. Tramps, who usually kept to main rail lines, were reported seen often by spring in western Nevada along highways. Cattlemen were more often driving stock to market, taking a loss in cattle weight to avoid railroads’ increased freight rates.

By reducing state revenues, “the slacking up of other industries in Nevada affects road building,” Gov. E. D. Boyle warned in May. For more road funds, Boyle sought legislative action in Washington, on the bill to increase federal participation in states with large amounts of government land. Nevada and Utah, leaders in amount of public lands, “if they are to continue building highways for the pleasure of the rest of America, must have the assistance that is promised” in the bill, he said. Another supporter, Nevada Sen. Key Pittman, said his state taxed only 7 percent of its land area. In June, state and federal road officials agreed on beginning projects in Nevada involving $1.87 million in federal aid. That was about $50,000 over the amount required by then to avoid loss of any of the state’s federal allotment by default. Of Nevada’s $3.52 million allotment total since 1916, some $2.5 million by mid-1921 remained unspent.

The bill in Congress would provide funds on federal-aid projects in Nevada for about seven-eighths of costs, instead of the present one-half. It might make the change retroactive on incomplete projects, an advantage for Nevada, among whose federal-aid projects only four were complete. Without the bill’s passage, Nevada highway officials said in June, “we can do very little new construction work this year.” Rules then in practice left Nevada “probably no better able to finance hard-surface highways now than it was in the 80’s,” they said in noting a local celebration of pioneer days. Funds often had to be gathered from many sources, as in a project being planned in fall 1921. Of its costs, federal aid would pay 50 percent, Churchill County 30 percent, Lincoln Highway Association 12 percent, and the state 8 percent. Usually the state and a county each provided 25 percent to match federal funds.

The bill became law in November 1921, affecting roadbuilding in much of the West. It brought Nevada less than expected because it was retroactive only to June 1921. And the law’s approval date would allow greater federal participation in the eleven states of extensive public lands beginning in
1922, not when needed in 1921. Still, the change brought Nevada and other such states nearer being able to expand road work quickly. Under the new scale, based on proportion of state area in public lands, federal aid could pay as much as 87 percent of construction costs on projects in Nevada. The scale allowed federal aid to pay as much as 75 percent of costs in Utah, 61 percent in Oregon and Arizona, 59 percent in California, and 58 percent in Idaho. Though Nevada’s state highway funds were small again in 1922, the state, reflecting the increase in federal participation, reduced to 20 percent the matching share it required of counties. Even with the changes, by mid-1922, when the depression was easing in much of the nation, Nevada would have more of its federal aid for roads still unspent, and unobligated to road projects by agreements, than四十-one other states.\textsuperscript{50}

**Roadbuilding, 1920-22**

Many of the jobs created by the federal-aid program, particularly in early months of the depression, were on roads in northern parts of the West. Though employment is not specified, it may be indicated generally by mileage of the work. Jobs for many men were created in putting gravel on roads, particularly in Oregon, which by mid-1922 had completed gravel projects totaling 259 miles. Similarly, many found work in extensive graveling work in Idaho, completing 244 miles, and Washington, completing 208. Others worked in projects to grade, excavate and drain the earth to improve travel and prepare for later stages of roadbuilding. In those, Idaho led in the West by mid-1922 with 106 miles completed, followed by Oregon with 97 miles. In paving projects, Washington led the region with 121 miles completed, followed by California with 74 and Arizona with 52.\textsuperscript{51}

In later months of the depression, however, jobs became numerous in federal-aid projects in the West’s central and southern states. Those jobs show in totals for projects under way but not completed by mid-1922. California, Arizona, Nevada, and Utah led in mileage of those projects that were for graveling. Similarly, the region’s leaders in grading and drainage projects under way were California, Utah, Nevada, and Arizona. And in paving work under way then, the West’s leaders were California with 184 miles and Utah with 53; no other western state had more than 25 miles of paving projects under way. States’ use of federal aid for three kinds of low-cost road work--graveling, sand-clay surfacing, and grading and draining--as alternatives to paving is compared in figure 9, page 155.\textsuperscript{52}

The lead in early work by northern states of the West is consistent with the location of many men seeking road work early in the depression. Northern states in the West may have begun some road projects particularly to reduce unemployment in the depression’s first year and earlier. The economies of Washington and Idaho were the only two in the West where state totals for individuals’ net incomes fell in 1921 below levels of 1918. For much of the period since the war, mining and logging in the Northwest had absorbed less of their usual labor than had farming in the Midwest, according to the federal
road program’s director. “In our road work over the last two or three years we began to get the labor
from the mines and lumber camps in the Northwest long before we get from the agricultural districts in
the Middle West,” Thomas H. MacDonald, chief of the Bureau of Public Roads, told a congressional
committee in late 1921. “That is, we had a surplus of labor in the Northwest long before we did as it
came this way.”  

The start of road work in the West’s northern sections first also was generally consistent with
locations of population, road systems, and higher incomes. Except for California, which led the region,
western states with greatest 1920 population density were in the north, including Washington, which
ranked second, followed by Oregon, Utah, and then Idaho. Also, those areas were where most roads had
been built already, in response to pre-depression traffic and settlement. In mileage of rural roads in
1920, before the depression, California led the region, followed by Washington, Oregon, and Idaho. Net
incomes of individuals were highest in the period in California, followed by Washington and Oregon,
areas that thus would have had adequate tax bases for roadbuilding.

The amounts of road work also resulted often from officials’ responses to the changing economy.
In Oregon, many road projects that provided jobs in 1921 had been started in 1920, when the depression
had begun to bring more men seeking work, lower wages, and smaller costs for materials and equip­
ment, and had made more rail cars available for shipping. Many such projects, planned and started ear­
erlier, were completed then, along with many begun in 1921, providing the state’s roadbuilding program
with its best year yet. In 1922, though, Oregon’s economy was less favorable for road work, state offi­
cials said, for “the previous surplus of labor became a shortage, particularly during the harvest season,
and wages were generally higher.” Also in 1922, a rail strike brought a shortage of cars, and the large
amount of construction a shortage of cement, so that many projects were carried over to 1923. Expan­
sion of work was supported by rising state funds for roads in Oregon in a depression. In 1921, the legis­
lature authorized $7 million in road bonds; an additional 1-cent tax on gasoline began to give other
revenues. In 1922, higher vehicle registration fees took effect, and registrations increased in number. By
late 1922, most of Oregon’s stretches of the Pacific highway were paved from the Columbia River south
to the California line.  

In California also, road work expanded under conditions of the depression. Building costs
dropped, and contractors competed more eagerly for road projects, said state highway officials. “Unem­
ployment was prevalent, and the fact that highway work employed a large volume of unskilled labor
and was distributed over the entire state made it particularly desirable to undertake a large amount of
highway construction.” Even so, a shortage of free labor in 1920 led to increased use of convict labor to
build roads, particularly in remote areas. During 1920-22, “in only one instance has there been evidence
that convict labor was depriving free labor of employment that it desired,” said state officials, and there
"a free labor camp was immediately organized." Despite the highway commission's preference for awarding contracts, many roads were built with such state forces.\textsuperscript{55}

Though capacity to participate quickly in federal-aid roadbuilding varied among the West's states, the economy by early 1921 was affecting all the region's sections, increasing unemployment in every state. In contrast to the coastal and northwestern areas' resources of greater urban and rural development by 1920, states of the inland West needed roads in many areas where few people lived. Public-land holdings, much greater outside the region's northwestern areas, increasingly seemed an obstacle to road work. When political activity, largely from the West, succeeded in changing the federal program by late 1921, did states of the region respond soon? Several were interested and prepared enough to begin large amounts of road work, partly to provide work for unemployed men.

In Arizona, unemployment was widespread and wage levels were low in 1922. In a special session then, the legislature repealed a $60,000 appropriation for roadbuilding using convict labor. Legislators were responding to the economy and to constituent wishes, the state highway engineer indicated. "This action was no doubt caused by the fact that a great mass of free labor was unemployed, and also by the knowledge that free labor had proven more economical on highway construction than prison labor." Thus, Arizona's state road work changed in 1922 to use more free labor and less convict labor, as it had in a depression in 1914, before the federal program.\textsuperscript{56}

Many Arizona projects in 1920-22 were built by men hired as construction laborers by the state highway department. Thus, a state that lacked enough convicts to build many roads soon developed a free-labor state work 'force of large capacity. That added to the economies from the depression's lower prices those of removing what a private contractor would have received as profit. The state could have achieved economies of scale in purchasing, for the work force built projects supported by $1 million from counties and cities, in addition to state and federal aid. "During the past two years approximately half of all the roads built in Arizona have been constructed by the Arizona Highway Department's own forces," the state engineer reported in mid-1922. The department also supervised work of contracting companies, in projects using more than $1 million in other funds from counties.\textsuperscript{57}

By mid-1922, Arizona's highway department had quickly become a well-equipped builder and the state's largest agency. The department was "supervising the work of more employees than any individual or company in this state," said the state engineer. It was Arizona's largest employer of engineers and had its largest depot of material and supplies, most of it donated as war surplus. "Our equipment is eight times as large as any single contractor in the state." For the past two years "from fifteen to twenty state camps have been engaged in road construction," while "twenty-five to thirty" private contractors also were working on roads and bridges. The department "contracts for more supplies for our various camps" than were in the state's purchases for all its other institutions. Indeed, the highway department
was "handling more funds and employing more men and women than all the other state departments combined." 

Though it gained most from the federal program's 1921 changes, Nevada still had to deal with the largest effects of public lands on supporting roadbuilding. While the 1921 legislation gave no state additional appropriations, it reduced the amount they had to provide as matching to obtain their federal allotments. For Nevada, the changes improved chances for road work. Now, together with its counties, it would have to provide only 13 percent of project costs in the program, using federal funds to pay up to 87 percent of costs. That was the greatest reduction in matching requirements among the states; it was based on how much of state area was still public land. Though Nevada reduced in 1922 the share that counties had to pay in such projects, county and state funds for matching were scarce in early 1922. Increasing construction depended also on having road projects ready--surveyed, designed, and approved in a process set by state and federal agencies. Amid difficulties of small population and limited tax base, Nevada began road work more than some other states in the nation. Still, by mid-1922, as the depression was easing in many parts of the nation, Nevada had larger proportion of its federal allotment unspent and unobligated by plans and agency agreements than forty-one other states. Nevada had much of its allotment left to spend at the better rate of matching if at higher construction prices.

Construction adjusted to seasonal weather variation. Amid favorable construction conditions in Nevada in late 1922, much state highway work was to start in southern counties when snow began in northern ones. Work would "return northward as spring opens up." That alternation had been delayed for years by uncompleted surveys in southern counties and routes conflicting with plans for Boulder Canyon dam. Construction was easier in the mild winters than in the hot summers. Contractors in northern counties in winter could move "their outfits southward, thus keeping busy the year round." Some of the work, though, would be done by day-labor forces, hired and supervised by the state instead of by a contractor.

Some western states were relying more on federal money for roads by mid-1922 than they had in their completed work in the new program. Legislative changes in late 1921 increased the federal share permissible in projects in eleven public-land states, including every western state except Washington. Yet also, many states in every region were using more of their allotted federal aid in eligible projects as the depression continued. The federal share of funds in the program's road projects did increase from their earlier levels in Nevada 14 percent, in Oregon 11 percent, in Utah 6 percent, and in California 4 percent. In three other western states, though, the federal funds paid a smaller share of projects than before; state and local funds were paying larger proportions of the projects costs than earlier. Thus, Washington's share of federal funds used in the program's projects declined by 6 percent in those still under way in late June 1922; Idaho's declined by 5 percent, and Arizona's by 1 percent.
Those changes were scattered over a pattern of expansion of road work: some states were using larger amounts of federal aid while building less, and some were while building more. In mid-1922, construction with federal aid was slowing particularly in Oregon, Washington, and in Idaho. By contrast, California, while using federal funds for a share of project costs 4 percent larger than it had before, was expanding construction greatly. Still larger was the expansion in project costs in Utah. Using the federal-aid program changed much less in Nevada and Arizona.\(^61\)

The states' spending changes also reflect other conditions. In all states, an extended process of planning and approval preceded by months any federal-aid project's construction. Work completed by mid-1922 indicates early planning and approval of projects and preparation of funds for matching federal allotments. Such achievements could depend on the depression's influences and on pre-1920 development of resources, including roadbuilding and tax systems. In some states, planning and preparation took longer, so that their projects began later. In others, more prepared to begin, spending for completed projects approached revenue limits early. Thus, Oregon, Washington, and Idaho by mid-1922 had smaller unspent balances in their allotted federal aid than any other western states. California, though, was able to outspend any other western state in federal aid (combined for projects completed and those under way by mid-1922) even while it lagged in getting other work started. Thus, California was left with more than double the amount of unspent federal aid of any other state in the West. California had gotten much more in federal aid by the national allotment formula, because of its large area, population, and road system.\(^62\)

California's participation contrasted that of the region. The West's capacity for public works in the new program was limited by federal funds, particularly in 1920 and 1921. The region had been allocated less than others under the federal calculations based on area, population, and road systems. Thus, it spent less (whether for projects completed or those under way by mid-1922) and had less left then for beginning other work. Further, matching federal funds was especially difficult where public lands were still extensive. Though states' allotments of federal funds remained the same, late-1921 changes in the program did reduce matching requirements for most western states. Western states' totals for spending federal aid for roads are shown in maps of the forty-eight states in figure 6, page 123.

Early activities in the new program were extensive, still. The seven states spent $15 million in federal aid in projects that, with their state and local funds, cost $32.5 million, in work completed by mid-1922, a period that included much of the worst of the depression. In that early work, leaders were in the Pacific Northwest. There, completed projects brought reimbursement in federal aid totaling $3 million each to Oregon, Washington, and Idaho. Minimal early participation had occurred in Nevada and Utah--two states with the nation's largest amounts of land still in the public domain.\(^63\)
Amounts states received by mid-1922 for completed projects are a basis for estimating jobs created in the program by then in the West. Using national averages of federal-aid work by early 1922, the federal funds paid to states indicate how many jobs were created, each for a building season of 200 days. In the national ratio, $390.48 in federal funds paid to a state created a job at a project site for a building season. In these early projects, completed by mid-1922, 71 percent of jobs estimated for the region were in three Pacific Northwest states. Of the West's estimated 38,789 jobs by then in federal-aid projects, 10,328 had been in projects in Oregon, 9,689 in Washington, and 7,756 in Idaho. In the four remaining states, representing large areas of the West, an expansion of federal-aid roadbuilding to reduce unemployment occurred slowly. The late-1921 change easing matching requirements for public-land states helped expand work that was not completed by mid-1922 but still under way.64

Besides the estimated jobs in completed projects, other jobs were available in July 1922 in federal-aid projects still under way. Many of them were in new locations: three states in the Pacific Northwest that had spent much cut back, and several that had spent less in work completed by July 1922 enlarged their efforts. The projects under way by would provide jobs and spending in the rest of 1922, when the economy improved for some if not for residents of wheat-producing areas. States could expand roadbuilding in the program because further preparations had been completed, federal allotments still were available to spend, more-favorable matching rates made participation for public-lands states less costly, and some new allotments in 1921 had to be spent soon. The totals for two periods summarize how quickly work could begin by mid-1922. They also indicate events of a more-continuous process of forming, designing, approving, building, and inspecting projects that led to federal reimbursements.65

In totals for spending in those two periods, California, the three Pacific Northwest states, and Arizona led the West. Indeed, of the cost of federal-aid projects in those periods, more than one-fourth the region’s total was from work in California. Utah and Nevada remained at the region’s lower rankings in spending. Yet even they were able to begin public works for large amounts once they were allowed to provide less to match federal funds.66

Such results were greatly influenced by the federal formula for allotting aid to states for roadbuilding. The formula had three elements—area, population, and rural road mileage—to determine each of the forty-eight states’ allotment of aid. Apart from their influence on federal funds, those were three elements of state development that would indicate capacity to build roads, particularly in a brief, early period that was part of a depression. In the West as in the Plains, population was a better guide to roadbuilding than was size of area. Though western states got large federal allotments because of their size, low population in some reduced chances of raising funds to match and obtain much of the aid allotted.
for them. The West’s centers of urban and rural development were where population was large enough to have auto traffic needing better roads, a tax base to support construction, and wage earners who in a depression would become roadbuilding laborers.

If values for the federal formula’s three elements are combined for each state, California ranks eighth nationally, Washington 29th, Oregon 34th, and the four other western states rank among the nation’s ten lowest. Those rankings indicate the new road program in the West would hire more men and build more roads in Pacific Coast states. That is consistent with results in the program through 1922, indeed with earlier road surfacing as measured by three surveys during 1904-14. Yet with federal aid, and changes in late 1921 to reduce states’ matching requirements for it, public works spread also into less-developed parts of the region. Also aiding roadbuilding’s quick expansion in much of the West was a concern for reducing unemployment, stated by people including officials of labor unions and road agencies. Still, each state by mid-1922 left unspent some of its allotment of federal aid (which chapter 7 discusses further). And each kept planning projects to use federal aid as part of their road programs after 1922.67

Despite the spending for roads, many people in the West subsisted on lower incomes in 1922 than in 1920. The large, diverse economy of California, which had supported the region’s greatest spending for roads, fared best. Its 1922 total for individual incomes reported on federal tax forms increased 2 percent above its 1920 level. In the six other western states, though spending for roads—paid for in taxes, bonds, and federal funds—had provided wages and some economic activity, totals for individual incomes remained below 1920 levels, particularly in Washington, Idaho, and Arizona.

For two years, officials of western states and counties and federal agencies had practiced new ways of working with each other. The disinterest in cooperation that most states and counties in the nation showed in 1912 when offered an experimental federal program’s small allotments had changed by 1920-22 to greater participation, even though it required much larger amounts of their own funds. Those funds were raised most easily in the developed rural and urban economies of the region’s coastal states. The large areas and small populations elsewhere the in West had limited but not stopped roadbuilding, which gained support from a promise of tourism. A method had been found for financing modern highways for autos even through public lands, where the old method, taxing nearby farms and town lots, was impossible. Highway departments in the West had grown in size and capacity of work. Driving conditions rapidly improved, partly because state and county officials in much of the region responded to a depression’s unemployment by expanding public works.
CHAPTER 7

COMPARING WITHOUT REGIONS

Choosing ways to measure activities in the new road program affects results. Defining regions and comparing states' totals to others within their region, as in the earlier chapters, can show many changes. Comparing states in a group of forty-eight of them, though, can show others, helping describe whether the program expanded quickly enough in the nation to be of use for varied purposes in a brief depression. Further, by comparing at a small scale, that of counties, differences may appear that occurred in parts of regions or states, such as those in the Plains' arid areas.

Comparing states' spending on a national scale puts attainments of regional leaders in a larger context and shows effects that occur over parts of several regions. In the West, for example, Oregon, Washington, and Idaho were early leaders, later surpassed in spending by other states in the region in projects under way by mid-1922. Yet when spending in the two periods is combined (for projects complete by mid-1922 and those under way then) and compared nationally, only California from the West was among the leading one-third of the forty-eight states. Also, stretching into several regions is a contiguous area of large spending in the road program. It extends from states with Atlantic ports to those near the Great Lakes and into the Plains, reflecting efforts to develop highway shipping and travel. And it occurs where much of urban and rural settlement in 1920 were greatest.

Such settlement in other areas was sparse, creating barriers to working in the new program, evident in totals for counties. Many states in 1920, though they had areas still lightly settled, left to counties the task of raising funds to match federal allotments for roads. In the South, for example, wealthier, populous counties, with auto traffic and tax bases, participated often in the program in this early era. Less-developed counties with small populations sometimes lacked local funds to match the federal aid. Similarly, spending for roads was less in largely forested or mountainous counties, such as some in northern parts of the North Atlantic and Midwest regions. Counties at the Great Plains belt of aridity offer comparisons of spending that show settlement was a base for 1920-22 roadbuilding, even though funds in large amounts were available in federal allotments to states.
Spending of 48 States

Summarizing use of the new program in a depression is possible by comparing how much more federal money a state spent than other states in the nation. Quick participation in the new program could be extensive even in a small state. Work could be planned and approved and funds arranged to begin many projects soon enough to provide work during the brief depression. States that were prepared could easily put up funds of their own, or of their counties, to match and obtain federal allotments. True, a small state's federal allotment would be much smaller than that of a large state, according to the federal formula. Yet ranking spending among the forty-eight states--each of them different in the funding formula's elements of population, area, and post-road mileage--identifies where the program built roads, provided jobs, and stimulated economies most in the period. Such ranking shows some large states were slower than others at starting public works in the new program.

Measuring spending in the federal program by June 30, 1922, accounts for much of the period when the depression was worst. Factory layoffs increased by mid-1920 and were numerous into early 1922. Farmers received lower prices for their goods in fall 1920, with some improvement by early 1922 in most major items except wheat, which continued at low prices past 1922. Also as of June 1922, totals for all states were consolidated by Washington officials at the close of the federal fiscal year, which began July 1.

Much of the spending by mid-1922 had occurred since mid-1920, when the depression had freed for roadbuilding much of the capital, labor, materials, and shipping that had been used in the war effort and the postwar boom. Thus, in totals for the federal-aid program for fiscal years 1918-22, most activity occurred in 1921 and 1922 (table 1). Of projects completed and paid for in the program, 93 percent of mileage and 96 percent of federal aid paid were from those two years. Indeed, much construction lasted into 1922, when federal aid for projects completed and paid for quadrupled, rising to $79.8 million from the 1921 total of $18.4 million. The totals indicate that wartime and postwar constraints on construction eased, support for road work increased amid a depression, and planning and financing quickly became sufficient for increased amounts of public works. Over the period 1918-22, in projects completed and paid for in the program, 78 percent of federal funds paid was from fiscal 1922.1

From the $102.3 million paid in federal aid (table 1), estimates are possible of the number of jobs in projects completed by mid-1922. The work was scattered throughout much of the nation yet concentrated in a few states. Amounts of federal aid paid indicate the Midwest employed 82,263 men, 32 percent of the program's national total. Other regions' shares were smaller, yet even the West, sparsely settled in many areas, had 15 percent of the 262,085 jobs estimated in the national total. Quick growth of public works occurred most in a few states. A third of the states, the sixteen with largest spending,
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<th>Fiscal Year</th>
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<td>1918</td>
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provided 67 percent of the estimated national total. Indeed, the five states with largest spending provided 34 percent of the jobs in the national total.  

Besides the completed work, further construction is represented in totals for work that, at the fiscal year’s close on June 30, remained under way. In earlier chapters, those totals for projects under way are combined with totals for projects completed to compare how much states spent in the new program from 1920 through most of 1922. Populous states often spent most, for they received much in federal funds according to the allotment formula, in which population was one of three factors.  

Each state’s value for spending federal aid is shown in maps ranking them in three equal-size groups (figure 6). Sixteen states with highest values (most shading) spent most in federal funds. A mid-level group of sixteen (medium shading) ranked near the national median. The sixteen other states (unshaded) spent least. Three maps in figure 6 show rankings for spending in two periods. In early projects, complete by July 1922 (upper left), leading states were often among those at the nation’s edges. In projects under way then (upper right), leaders included more states in the nation’s interior. In combined amounts for those two periods (lower left), leaders include many states that led in the early spending. A fourth map ranks states by totals for a planning ratio, showing how much of a state’s unspent funds in its allotment had been obligated to specific projects by July 1922 through efforts in the state-federal cooperative process for developing and approving construction plans.  

In projects complete by mid-1922, sixteen states (many scattered about the nation’s edges) spent large amounts and so received, as reimbursement for part of their costs, the highest payments of federal aid. Many of them were leaders in income in their region, often leaders in agricultural or industrial production. Highway shipping and tourism were of interest in these states, which included several
Figure 6. When and how much states used their federal aid varied, shown by ranking them in three 16-state groups. Data from Agriculture Department, *Report, 1922*, 473-83.
where bonds had been approved, preparing financing to match large allotments. Thus, early projects included many for surfacing main routes from North Atlantic ports through the Midwest, near the Great Lakes, in the West, and along the southern East Coast. Those leading states also improved many roads for local urban and rural traffic.

Many leading states in that early period ranked only at mid-level for spending in projects that in mid-1922 were still under way. Some lacked further state and local funds for matching; some could not raise funds in a slowed bond market. They also encountered greater competition in ranking, for many states at mid-level in the early period increased spending in the later period, for projects under way. The group increasing spending included many of the nation's central states, from the Atlantic into the West. Florida, a destination in road programs of East Coast states, had increased its own participation, spending more in projects under way by mid-1922. Likewise, low participation in the early period changed to above-average spending in two Plains states, and it improved to near average in four others there. In the total for the forty-eight states, participation exceeded levels of earlier work. The national average for spending federal aid rose from $2.1 million per state for projects completed by mid-1922 to $2.9 per state for projects under way then.

A more-inclusive image of the program's use in the depression results when spending for the two periods is combined, covering federal funds paid for completed projects or due for projects under way. Thus, large amounts were involved in projects surfacing east-west main routes. Eleven of the sixteen leading spenders were in a contiguous area including Atlantic ports and those on the Great Lakes—in states where population and auto use were extensive and highway freight traffic had grown in the war. Urban and rural development provided a tax base from which to match large amounts of federal funds in those states and in the others in the area, extending west of the Mississippi River. In many of their projects in 1920-22, those leading states sought to connect improved sections of highway to form trans-continental routes.

Similarly, leaders in federal spending in the South, besides improving local travel, shared in efforts to make main routes, such as a highway along the Atlantic coast or an east-west route in central Tennessee. Texas and California had resources to match large federal allotments, used to build main routes and provide for traffic of their developed urban and rural areas. The opposite was true of other parts of the West and of the Plains, where, despite late-1921 reductions in public-land states' share of matching, five states' spending ranked among the nation's lowest sixteen. Most others spending at low levels were the North Atlantic region's smaller states. At mid-levels of spending—of using federal funds to improve roads and offset the depression—were states scattered through the South, the Plains, and the upper West.
Besides their building, states participated in the program by planning new projects. Thus, each state's allotment balance (federal funds not yet paid for completed projects or due for those under way) could be obligated to other projects once their plans, developed in states, were approved by state and federal agencies. The process required months. States obligating large proportions of allotment balances by mid-1922 were preparing for greater use of federal funds. Reasons for low participation might include small capacity to match federal funds, lack of political approval, or lack of enough planning to proceed to construction. Also, they include having comparatively large allotments, so that even with near-median spending of federal funds, as in Alabama, much remained unspent. Alabama, relying on some counties' ability to provide matching funds amid delays into 1922 in using state bonds, ranked in the low third of states in spending its allotment by mid-1922, yet in the top third in planning that obligated its allotment balance to specific projects. Similarly, much of West Virginia's allotment remained unspent, yet it led the other forty-seven states in obligating the balance to specific projects. Pennsylvania was among leaders both in spending and planning that obligated balances to new projects.  

Most states had obligated much of their balances by mid-1922. Thus, Illinois was in the low one-third of states, having 30 percent of its balance, or $1.4 million, still unobligated to specific projects. Even though Illinois ranked third among states in federal spending for projects completed or under way, its large allotment provided funds still unused. Among the forty-eight states, the median value was planning that had obligated to specific projects 82 percent of a state's allotment.  

Farmers, earlier the chief taxpayers where rural roads were made, had few other choices than the new program by 1920. They could try to pay by taxes on their land for improving local roads for their own traffic. And they could try to hold off costly improvements nearby that might raise local taxes, even while they paid fees on motor vehicles and perhaps new taxes on land for states' road programs. Farmers supported much of the new road work, though many objected in 1920-22 if it seemed it might raise their taxes in a depression. Farmland sometimes provided taxes for matching federal aid, though many states and counties in 1920-22 began using bonds or motor-vehicle revenue for those funds. An alternative many farmers advocated was to obtain more of states' motor-vehicle revenues for use on smaller roads and under county authority.  

In 1920, farming in numerous areas supported rural residents, many of whom had prospered before, during, and after the war, raising their interest in better travel. Also, much of the nation's rural and urban development had occurred relatively near each other. Farming often developed in areas of the nation where many people lived in towns and cities, where settlement was more established than in areas that were arid, forested, or mountainous. In comparisons at the level of state totals, the extent of rural settlement and roadbuilding in 1920-22 often appear related. Though political decisions and
financial preparations also effected results, sparse settlement indicated large problems for quickly expanding the new road program.

For, of the nation's lowest sixteen states when ranked by how much of their area was in improved land in farms, nine were among the lowest sixteen in amounts of federal spending for road work completed or under way by mid-1922. Two did rank in the top third in spending, though partly from their size—Texas and California, both of which built many of their road projects in areas developed for farming. In a contrasting group—the nation's sixteen states where percentage of area in farmland was highest—ten ranked in the top sixteen in spending federal aid. 5

Areas within States

In any method of comparing totals for spending in the program, an influence on results is that of the federal formula for allotting aid, which made available large amounts to some states, smaller amounts to others. Similarly, within some states, the task of raising much of the funds needed to match and obtain federal aid was left to counties. Thus, wealthier counties—those of greater urban and rural settlement—often could participate in the new program more easily than others. Settled areas both brought states larger allotments—based partly on population and existing road mileage—and offered large tax bases to make matching allotments easier. By contrast, sparsely settled areas both reduced states' allotments under the federal formula and made matching the allotted funds difficult. Such areas included, in all regions, those with mountains and forests and, in the Plains region, those within the Great Plains belt of low rainfall.

An element the federal allotment formula lacked was aridity. The 1916 formula's use of population and road mileage to help allot funds would reduce aid to arid areas, an effect the late-1921 changes in federal law sought to offset, easing matching requirements for states with large public lands. Still, roadbuilding was difficult often in the Plains and West in 1920-22 because aridity so encouraged much of a state's population to live in some counties, leaving others inhabited sparsely. The Plains offers an example of large areas of low population, showing settlement's influence in supporting road work, particularly in being able to expand it quickly in a depression. Also in parts of the Plains, roadbuilding in the new program is comparable at county level, showing influences there of factors that may be missed when a state total, such as that for population, blends contrasts of its counties.

Though a general pattern may become evident in a map comparing all the states, much that occurred in roadbuilding is lost when activity is summarized in statewide totals. State totals represented varying levels of spending in counties. Usually only some counties were able to begin public works quickly; often they were those where rural and urban settlement gave them auto traffic and a tax base. Using state totals to describe road work presents problems particularly in the Plains because a belt of
aridity there runs through parts of the states. In some of the states, though, published reports on work in the federal program make totals available also at county level. Thus, in Wyoming, Montana, Texas, and North Dakota, comparisons may show effects on settlement and roadbuilding of the aridity that characterized counties in a belt described in 1937 as the Great Plains (figure 7).

In Wyoming, counties of the Great Plains belt spent federal aid for roads in amounts similar to but sometimes less than the state's other counties. Aridity affected rural population and roadbuilding, though in combination with other factors, which in Wyoming included urban settlement and industrial traffic. The 1937 border of the Great Plains, crossing through central Wyoming, put eleven eastern counties in the belt and ten counties out of it (figure 7). By late 1922 in Wyoming, counties in the Great Plains belt had been paid, or through their road work had obligated, federal aid totaling $1.733 million; for counties outside the Great Plains the total was $1.725 million. The county totals also show similar patterns within the two groups (figure 7). Thus, large amounts were for work in two counties of each group—Natrona and Sheridan among Great Plains counties, and Hot Springs and Lincoln outside the Great Plains. Both groups included six counties whose totals were less than $114,000, though at those lower levels the Great Plains counties had done less work. Thus, the Great Plains group included three eastern counties whose totals were less than $54,000 each; every county outside the Great Plains had a total of at least $77,000.

In the Great Plains group, urban and industrial development were influential in Natrona and Sheridan counties' large spending of federal aid. From Casper in Natrona County (a square county near the state's center) north to the urban area of Sheridan (near the Montana line) a road carried "a tremendous truck traffic," which had required road work even during wartime, said a state highway report. "Various improvements have been made to take care of this traffic since the Highway department was organized in 1917." Federal-aid work including paving began on the road in July 1918 on a stretch from Casper north to Teapot Dome, site of oil reserves. Other revenue sources developed. "In 1920 further funds being made available through an agreement with the Midwest Refining Co. relative to the purchase of state oils, further improvements were begun as Federal Aid Project No. 19A." In other parts of Wyoming, aiding tourism and connecting road sections to form transcontinental routes were reasons for roadbuilding in the depression. In several counties, projects completed or planned included some on sections of the Lincoln or Yellowstone highways. Also, Wyoming used federal funds that required no matching to improve roads in the state's ten national forests.

In Montana, the Great Plains counties are a larger share of the total number, and those counties did more than half the federal-aid road work in the state in 1921 and 1922. In a state where counties provided the matching to secure federal aid, such projects were completed by eighteen Great Plains
Great Plains Counties' Federal-Aid Spending

Figure 7. Though state lines form useful units for comparing roadbuilding, in the Plains region an area of low rainfall, the Great Plains belt, includes some counties of each state, in a map from Great Plains Committee, *Future of the Great Plains*, 25. The belt's aridity was among factors affecting roadbuilding in Wyoming. Data from Wyoming State Highway Commission, *Third Biennial Report*, 32-86.
counties and fifteen other counties (figure 8). Though federal-aid projects began in half the state’s thirty-six Great Plains counties, the proportion was 79 percent among its nineteen non-Great Plains counties. Location of roads was greatly influenced by terrain; routes between populous counties often were in less-mountainous areas. Federal aid in completed work in Montana totaled $1,793 million in Great Plains counties and $1,371 million in counties elsewhere (figure 8). Counties were contractors for many projects, and convict labor was used for a few, though most of Montana’s federal-aid projects were built by contracting companies.

In Texas, few Great Plains counties completed road projects with federal aid. Eleven of the state’s sixty-nine Great Plains counties completed such work in 1921 and 1922. The eleven counties did add a total of $935,107 in federal funds to local economies during the depression. Yet more than one-third of the total was in projects in urban Wichita County. And nearly another one-third was in Potter and Randall counties, which include Amarillo. The remaining eight Great Plains counties participating in Texas completed projects for federal aid totaling $301,353 (figure 8). Amounts of federal aid in the Great Plains remained small in the more-rural counties in and near the Texas panhandle.  

Other Texas counties generally fared better. The eleven Great Plains counties’ federal funds were about one-tenth the total received by all eighty-eight Texas counties that completed such projects then. Federal-aid road work expanded quickly in parts of Texas, yielding projects completed in 1921 and 1922 in more than one-third of the state’s 254 counties (figure 8). Change was slower in the state’s Great Plains belt, where one-sixth of counties completed projects.

In North Dakota, almost completely in the Great Plains belt, federal-aid road work expanded by June 1922 to about 70 percent of counties. All the state’s fifty-three counties were within the 1937 border of the Great Plains except three in the state’s southeast corner. Counties used federal aid particularly in areas near the Missouri River in south-central counties (figure 8), where the river was an obstacle to auto traffic. By far the largest federal-aid project in North Dakota was a bridge over the Missouri between Bismarck and Mandan, the only highway bridge then over the river north of Yankton, South Dakota. The project’s cost indicates it provided jobs for many men. Federal aid paid for that project from mid-1920 to mid-1922 exceeded $575,000, more than 40 percent of federal-aid paid or obligated for work in all North Dakota counties. Taxpayers of urbanized Burleigh and Morton counties contributed to the bridge’s construction (figure 8). The three southeastern counties outside the Great Plains spent federal aid at levels exceeding at least the fourteen Great Plains counties that were unable to provide matching funds for any spending. Counties not participating were numerous in the state’s western sections, particularly affected by low wheat prices and persistent bad weather.
Figure 8. In varying relation to the Great Plains belt's boundary, counties spent federal aid at three levels. Counties unshaded spent none. Data from Montana State Highway Commission, Third Biennial Report, 54-57; Texas State Highway Department, Third Biennial Report, 21-24; North Dakota State Highway Commission, Report, July 1, 1920, to June 30, 1922, 2290-92.
Each state in the Plains region had counties of low rainfall, where producing revenues to match federal allotments was difficult. Still, Texas, with Great Plains areas in its panhandle, and Kansas, where the areas occupied its western half, were among the nation's top sixteen states in spending federal aid. Urban and rural settlement elsewhere in Plains states offset the sparse population of arid counties in state totals. Scattered participation occurred in states of each region.

Thus, patterns in nationwide maps of states are general, incomplete when compared to those in maps showing counties. The federal program operated in forty-eight states by 1921, yet, within states, participation was scattered among a fraction of counties. In other counties in every region, public works available in the program had not begun quickly enough to offset effects of a brief depression. Such counties were numerous amid forests, mountains, aridity, or public land. Most states by 1922 had developed revenue systems with capacity to support public works in only some counties, even when county and federal governments helped pay costs. No state spent all its allotted federal funds in the depression; in many counties the federal program spent none.

Still, participation by 1922 contrasted that ten years earlier, when an experimental federal program had drawn few states or counties to its roadbuilding yet had prompted many objections to sharing funds and authority. Notions of improving roads and providing jobs in a depression, stated by Populists and developed in the Progressive era, had been adopted by 1922 in much of the nation, particularly near cities, where they had been implemented in the late-1800s in improving streets. Such changes had been aided by influences in the early 1900s that increased in wartime—rural and urban prosperity, more autos, and efforts at nationwide mobilization for varied purposes. By 1916, auto use helped support passage of a highway program of federal cooperation with larger funds as incentive. Amid postwar prosperity, widespread sentiment favoring road improvements supported expansion of construction in the independent highway programs of many states and counties. By 1920, officials of many counties and states considered participating in an effort with federal agencies an acceptable way of further expanding their activities, even if that required them to spend more from their own revenues in a depression.
PART TWO

SENTIMENT ON ROADS IN A DEPRESSION

Sentiment on roads has been noted in many regions in the chapters above. People often indicated what they wanted from roads and road work in the depression. Some talked about roads in ways that reflected interests of an occupation or economic status. Labor unions in some regions, for example, considered road work sometimes in a context of preserving their members' local skilled jobs, sometimes as a way to create jobs generally throughout a state. Merchants often wanted road work that aided commerce in their town.

Sentiment about roads is important in itself. Changes in road work in 1920-22 were considered interesting or significant in many locations. Studying sentiment can show how people accepted or opposed new ways such as road work in a depression. And it shows other elements of peoples' experience of the depression.

Yet also, sentiment about roads shows in part how a new practice could occur quickly throughout much of the nation. True, the new road program expanded quickly also for other reasons, such as prior experience in road work for governments in all locations and widespread development of road agencies by 1920 that had methods ready for spending new funds on large projects in many areas. Yet officials in states and counties often responded not only to road conditions as determined by their agencies but also to public sentiment favoring or opposing road work.

Farmers were a group that expressed sentiments on road work in many states. Many farmers responded to the depression by advocating methods tried earlier—cutting local taxes and public spending. Roads were of concern to farmers because land had been the tax base for most road work until 1920
and because roads improvements had seemed items that could wait until good economic conditions. They remained fearful of road taxes in a depression when some burdens for raising road funds remained on local property.

Work building roads was valued by men who were unemployed or felt they soon might be. Some such men sought to gain road jobs by using various preferences, though the only preference Congress had authorized when approving road funds in 1919 was for ex-service men. Other preferences suggested in the depression resembled those used often in earlier such periods. Groups of men in 1920-22 called for preferences for local men, for local men with dependents, or for white men. Often affected by attempts to add preferences were men who were Mexican nationals, widely employed in the U.S., particularly in the wartime economy, and numerous by 1920 in labor forces of the Midwest, Plains, and West.

Using roadbuilding for jobs, economic stimulation, and better travel were goals that attained support among many constituents and officials in 1920-22 and later. The prosperity of the 1920s occurred during increasing spending for roads, particularly by states and localities. In the 1930s Depression, roadbuilding agencies had plans and methods ready when increased spending on public works and other government activities was approved. Conditions seemed similar to those of 1919 to many federal officials in 1944 when planning for a postwar demobilization, and again an expansion of roadbuilding was among their choices for providing employment and stimulating the economy. Those purposes also would be important in approval in 1956 of a large federal program to build an interstate system of superhighways.
CHAPTER 8

FARMERS OPPOSE ROADBUILDING

Many farmers worked on projects of the new road program in 1920-22, adding income while crop prices were low. Some hired out their horses for roadbuilding, sold grain for the horses' feed, or sold land for highway right of ways. To others, though, reducing unemployment with road work, a Populist proposal in the 1890s depression, was wrong. For, employing men on roads might compete with hiring for farm work, and construction might raise local government's spending, which by custom would be cut in depressions to permit tax relief. Farmers, whose travel needs had been cited for a generation by advocates of good roads, often opposed building highways in the 1920-22 depression, when expanded construction began.

The new road program's officials intended to avoid the custom of retrenchment, of responding to depressions by cutting spending to allow tax cuts while incomes were low. The road program had federal funds that were saved during the war and increased soon afterward, when Congress gave it purposes including hiring the unemployed in a depression, considered possible as the economy readjusted to peacetime. The new federal program's funds were matched by those from within states, often from revenue from auto fees or bonds.

Still, many farmers sensed problems as the new program's projects began near them. Landowners often debated whether such construction would raise their taxes. Under greatly varying provisions of states and counties for raising funds to match the program's federal allotments, taxes on land in some places would rise and in others would not. Though federal budget deficits lacked political support in peacetime, many states and counties, to raise funds yet delay taxation, issued bonds, extending an earlier pattern of many cities. Road bonds were repayable in installments, often from motor-vehicle fees though in some instances from property taxes. Bonds in many states reduced the need to raise highway revenues by taxing land. Yet farmers often opposed bonds, partly from their experience of counties issuing them for road improvements that did not outlast repayments. Some farmers considered bonds to be taxes with extra payments for interest, and few acknowledged what city residents had often accepted.
that a depression's lower construction costs benefited taxpayers. Many farmers, unconvinced their area
needed costly public works, sought in a depression to defer construction in favor of immediate tax re-
lied. For, though rural men often continued an older practice, working on township roads to pay taxes,
many paid assessments in cash to build county roads and bridges. Some of them joined efforts to obtain
for counties part of the new revenue from auto fees, a way to cut local taxes further. American govern-
ment's early efforts to counter depressions in many states at once occurred in 1920-22 in rural areas and
relied on farmers and their representatives to keep the efforts from raising local taxes where incomes
were low.¹

Though postwar roadbuilding grew in older, independent programs of many states and counties,
the incentive of federal aid in the new program supported increased construction in a depression. Farm-
ers often protested expanded roadbuilding while farm prices were low, paving where cheaper graveling
might suffice, or activities of state agencies with new funds where, before, local authorities had ruled.
The new construction might involve a community in a cooperative project with outside agencies and so
in taxation influenced from beyond, a risk unwanted in a depression. To some, the new roads seemed
better than local people needed, improved at great cost to serve travelers from elsewhere. Rural men
with concerns about roads and taxes contacted officials of their community or state or farm group. They
also were part of campaigns by the officials on those concerns, heightened by late-1921 changes in fed-
eral highway law that increased state agencies' authority. And they spoke about roads at meetings in
their county or wrote to farm journals. The new roadbuilding presented rural men an issue with which
they felt familiar and by which they perceived themselves affected. In many areas where farmers were
accustomed to participating in local government, the depression's road spending was an occasion for
some rural men to try to influence a federal program.²

The postwar opposition by many rural groups was part of an early-1900s contest with urban
influences in roadbuilding, considered a factor shaping the modern state. The contest involved many
people in 1920-22 as modern roadbuilding expanded into rural areas during a depression, using money
newly available through state and federal agencies. For farmers, the new road program offered challeg-
ges of at least three kinds. It might raise their taxes or spend more on other people's roads than on those
nearer home. It heightened the early-1900s dispute over road authority between state and local highway
officials (affecting communities' patronage and political systems). And it might block retrenchment, the
customary response to depressions, particularly in rural communities. Thus, farmers frequently opposed
the new roadbuilding in 1920-22, wary it might raise their taxes to aid motorists elsewhere, eager to win
local control of roadbuilding and its growing revenues, and steadfast in pursuing cuts in public spending
as a way to battle a depression that had cut farm-produce prices.³
Though the new road program offered rural communities useful public works at reduced cost, states' varying provisions often left large costs to localities. Participation in the program and its expenses was in many areas at local initiative. County governments might decide to begin a project in the program, approving funds and taxes to help pay for it. Voters might determine whether their county would issue bonds for roads. Such local initiative was effective where rural or urban settlement had created taxable property values in land, structures, or autos. And such initiative was most subject to influence by farmers where they formed much of the electorate and where sizable proportions of them voted. Those areas often were where farming had been profitable, particularly in wartime expansion relying on credit, which in a depression increased the weight of debt among some landowners accustomed to success. They also were where farmers' organizations had attracted many members in the early 1900s, particularly in the war, and where such groups sometimes were rivals.4

Other rural communities lacked such initiative. If a community lacked wealth as a tax base or lacked auto traffic, its chance of supporting one of program's road projects was small. For communities in or near an urban county, initiative in roads might rest with city voters. And where rural wealth was concentrated, most initiative in roads could be exercised by a county's few large landholders.

By early 1922, opposition to road work seemed to a federal highway official particularly frequent in central states. An important cause appeared to be local governments' resistance to losing some authority over roads. Asked if state officials had objected to the federal program's spending because it required them to raise matching funds in the depression, the program's chief, Thomas H. MacDonald, said they had not. Every state's highway department favored continuing the work, he said, though "there have been complaints or protests made by county boards," the local governments. Many of the protests were in "states where highway departments have been rather recently established," and MacDonald said he believed many were less about the federal program than part of "that conflict between local authority and state authority which has been waged in many states since the establishment of the state highway departments." Much of such conflict had ceased, he said, in the Northeast, where states had formed highway departments early. "But in the Mississippi Valley states we find many county boards oppose the state highway department." As a contrast, he noted recent "cooperation in the South between the boards and the state authorities that we always get farther north."5

The regional patterns of county officials' protests were consistent with those of wealth and settlement. In much of the Mississippi Valley, many farmers prospered enough during and after the war to buy autos or expand operations using credit, adding to their problems once the depression cut incomes. Farmers there frequently were owners or cash renters of land, holders of much credit, and numerous among communities' voters. Their opinions were influential in many counties with tax bases that would allow participation in the federal-aid program if local voters should exercise that initiative. In the South,
though, tax bases adequate to raise matching funds in the depression were in widely scattered counties, and fewer of the rural men or women by the early 1920s voted, indicating they influenced local government less, particularly in communities where a few men owned large acreages. Though farmers talked of the new roads in the South, their opinions in many counties mattered less than the lack of local wealth, which precluded much construction. Similarly, resources to help pay roadbuilding costs were scattered widely among counties in much of the Plains and West, reducing the need for rural people to state sentiments on such construction in a depression. And roadbuilding of some kinds might win general support in areas at margins of development, where building roads in the depression could strengthen the tax base by making new land accessible. Thus, roadbuilding in 1920-22 speeded land development in Florida. It opened new areas in such states as West Virginia, Michigan, and Minnesota. And it raised acreage values in the lower South.

Further, many farmers in the nation’s central areas differed from those in the East in road use. In the wheat, cattle, corn, and hog belts of central areas, producers often sold to distant buyers, marketing by road infrequently and only as far as a rail loading point, a short distance in many midwestern areas. In the East, more farmers could market perishable goods to nearby urban areas, using roads often and maintaining income. That raised potential benefits for them from road construction, even in a depression. Many farmers in central states, though, if roads improved, would still have to hold large supplies of staples until their prices rose and rail shipping rates declined. Those prices and rates, determined beyond rural communities, could scarcely be affected even by large agricultural organizations in the depression, though farmers might reduce their expenses by efforts in a locality to cut spending on roads. They might avoid tax increases for participation in the new highway program, whose matching funds came more from farmers in many central states than in the East, where urban populations offered larger tax bases.

Thus, farmers’ sentiments on roads were greatly influenced by conditions that did not vary by state lines. Such conditions as aridity of the West and Plains, high population of the rural South, or low prices throughout a crop belt affected farm resources taxable for construction. Yet states were political systems in which both the new road program operated and many farmers expressed their sentiments. Examples from central states illustrate some responses farmers made to the road work of 1920-22.

Conditions in Five Central States

In many areas in central states in winter 1921-22, farm goods’ prices had been low the past year. Land values had dropped, and some farmers had large debts. Taxes seemed to remain high or even be increasing. In some states here, many farmers were using autos and tractors, and large shares of the land were under cultivation. Revenues states raised for the new road program and others, using varying
methods of taxation, interested many residents. Farm groups and agricultural journals sometimes favored using some of the revenues for work on local roads instead of main highways. That might have provided for local tax cuts for farmers, whose property taxes paid to build and maintain county roads. It would have sustained the authority of local road officials, who were operating under growing supervision by state officials in the new road program and others. Opposition to the new roadbuilding or to laws on spending road revenues often accompanied criticism of state highway agencies.

Roads and taxes were discussed often in the depression, though particularly in early 1922, when many people were planning the year ahead. Federal credit for farming had been offered during winter through local banks. Still, many farmers with incomes reduced by the depression were nearing a March 1 settlement date for other debts. Winter was a season of many farm groups’ state conventions. Political candidates were readying campaigns. Local officials approved the year’s public works, including those on roads. They also considered late-1921 changes in federal highway law that gave more authority to states. And unemployed men waited in towns and cities for spring’s jobs in farming and construction.

*Nebraska*

The growing state and federal activity in roadbuilding brought objections in several forms. The construction still relied often on taxes on land, particularly while the market for borrowing remained sluggish. Some people argued its projects cost more than work did under county authority. Many people said road work should wait on better crop prices. Others believed new revenues from motor vehicles might instead be used to cut local taxes. In early 1922, Nebraska’s governor proposed a gasoline tax for building roads and cutting other taxes for state government.

Among residents of Lancaster County at Lincoln, paving’s urgency faded as access to credit receded. Even near an urban center, the county’s “paving plans for the ensuing year are in a rather nebulous condition,” a newspaper reported in January 1922. Still, “officials look for some activity along this line, especially if the money market eases perceptibly. A couple of months ago, when there was plenty of money, there was plenty of talk of paving, but financial conditions and the great satisfaction given by properly graded and cared for dirt roads have caused a marked diminution in the agitation.” Only two miles of road were paved in the county in 1921, and that relied heavily on local resources, particularly taxable land.

In central Nebraska at Loup City in January 1922, county officials and taxpayers met, concerned over roads and who should supervise work on them. People at the meeting said work using federal aid on a nearby road was costly, and they called for giving such funds instead to local governments. At the meeting “it was practically unanimous,” a newspaper reported, “that the roads constructed by the county are in as good condition as the federal aid road, although costing about one-tenth as much.” The recent
road construction, supervised by state and federal officials using their engineering standards, displeased many at the meeting, so that even "charges against the state authorities for criminal extravagance were freely made."\textsuperscript{10}

The group voted to request legislators to "investigate and get comparisons from all over the state, showing the cost of highways under [federal] government and state contracts, and the cost of similar highways under county supervision." They approved a request that a proposed special legislative session give counties more of state funds then being allocated for federal-state roads and "permit the said funds to be expended by the counties under direction of their county authorities." If county officials could spend those funds, the group agreed they should only give "to the state and federal government itemized statements of the manner in which such funds are expended." Enacting such a challenge to state and federal supervision likely would have left only local funds to use for construction. County governments, with established employment networks among some local men, were being displaced in road spending at a time of community need. In other communities in January also, people adopted resolutions against highway spending.\textsuperscript{11}

Nebraska Farmers' Union opposed the new road program at its January convention. The group opposed activities requiring revenue to match federal funds, which would have included programs for roads and agricultural extension. Its resolutions included one stating that "we are opposed to the dollar matching game with the federal government in the road building and similar activities in the state." Members favored "reduction in public expenditures" and declared they were "opposed to the calling of a special session or the passage of the gasoline tax" proposed by Republican Gov. S. R. McKelvie.\textsuperscript{12}

Some Farmer's Union members, like some Loup City taxpayers, wanted state funds matching federal allotments to go instead to local governments. Among resolutions Farmers' Union's legislative committee offered at its convention, a newspaper reported, "one of the proposals most enthusiastically received condemned the present system of financing federal aid roads, by which the state puts up half and the federal government half." It reported that "this is held to encourage wastefulness and to result in constructing state highways when what the farmers most desire is a network of roads centering on their market towns." The committee suggested "a new division of auto license money by which the counties will receive the larger part of the funds and the state about 25 per cent, instead of 75 per cent as at present."\textsuperscript{13}

Nebraska Democratic party's state committee also voiced opposition to a special session, "the avowed purpose of which is increase taxes." In mentioning highways, it opposed "the centralizing of powers in the state government that properly belong in the local subdivisions of the state" and sought "a return to the fundamental principles of local self-government." It stated that "government retrenchment and strict economy is mandatory" when that was being required of taxpayers. The committee contended
that "no extensive improvements, however desirable, that must be paid for by taxation, should be undertaken until the products of the farm are once more marketed at a profit and not at a loss."¹⁴

The governor, speaking to Nebraska Farm Bureau Federation, proposed the gasoline tax to allow cutting state taxes on land. A newspaper reported that McKelvie told the convention “he expected the legislature to reduce the levy of the next year $1,000,000 and remove much of the burden from the land, and put it on the professional man who owns a big automobile.” The governor, publisher of Nebraska Farmer, said all state funds for roadbuilding should come from the gasoline tax, allowing cuts of at least 10 percent in general tax levies. A farmer could drive 7,500 miles to pay as much in the proposed gasoline tax as he now paid in other taxes, he said, and a farm renter could drive 1,500 miles to pay as much as he paid in poll taxes. The federation’s state secretary favored a gasoline tax exempting tractors and engines for farm power. Yet delegates decided against endorsing the gas tax or condemning matching funds for roads. Soon, McKelvie, in an open letter to county officials at Loup City, welcomed the investigation of state roadbuilding they had requested, and he asked them to permit one of their own road work.¹⁵

In the special session in January, the governor sought the 1-cent tax on gasoline for motor vehicles as a way to cut taxes on real and personal property. A fair way to raise road funds “is to tax those who use the roads,” McKelvie told legislators. “The argument is advanced by some that road building should be discontinued at this time,” he said, noting that it would be reduced though it seemed unreasonable for such a suggestion “to come from communities that have been fortunate enough to have part of their road program completed.”¹⁶

Legislators sought retrenchment. Nebraska’s House rejected a gasoline tax, and the legislature cut more than $2 million from the two-year state budget approved in 1921. The tax was defeated by Democrats, Nonpartisan League members, foes of the state administration, and House members who were candidates for state offices, a newspaper reported. “A number of members were presented with a Nonpartisan League threat of a referendum and refused to take the challenge,” and so voted against the tax. The legislature cut property taxes 30 percent and approved the governor’s request for hearings on roadbuilding costs.¹⁷

As legislators cut taxes early in an election year, some farm prices rose. At York and Hampton in east-central Nebraska, “farmers seem to be cashing in more of their produce than for some time,” a newspaper reported in early 1922. “A good many horse-drawn wagons heavily laden with wheat and corn were heading for the loading points,” and two wagons hauling hogs and corn “were being drawn to town by automobiles.” Rising farm prices by early February were reported by the War Finance Corporation, which since mid-1921 had provided credit for farmers. “Corn is now selling at country elevators in Nebraska and Iowa at 40 cents a bushel as against 20 cents four months ago,” the agency’s
administrator, Eugene Meyer, announced. "Hogs command a good market and reports indicate that farmers are getting the equivalent of 80 to 90 cents for corn that is marketed on the hoof." Wheat prices, though, stayed low through 1922.18

Hearings on roadbuilding costs opened March 1 though many counties were withholding information. In its second day, the committee heard that comparing costs was impossible because the state built more-permanent roads than counties. After five days, the committee adjourned to mid-April and began touring counties to study their costs. Before adjourning, "a resolution was passed asking clerks of forty-three counties who paid no attention to the committee's request" for figures on county road costs to send them. The committee had "run up against the obstacle that few counties have any complete record of expenditures on roads," *Omaha Bee* reported, and "outside of half a dozen counties, none has an organization capable of extensive operations." State roads were wider than those of counties, well drained, and maintained at a smoother surface, sometimes even graveled. "One can go out on any state road and hold the speedometer at the legal limit of 35 miles an hour all day long except at turns and in towns." In contrast to travel on main routes, traffic would remain "very light" on trails through sandhills of Nebraska's western, Plains counties.19

Throughout the depression, Nebraska taxed property to raise state funds for roads. From those taxes came funds to match and obtain federal aid for highways, a connection Farmers' Union members noted. Counties collected the taxes and gave them to the state treasurer, over objections by some county officials in early 1922 that they should build roads, for the sake of economy. Legislators cut appropriations from those funds for matching federal aid in 1921 and in its 1922 special session. "The question of meeting federal aid will come before the 1923 legislature," Nebraska's chief highway official said in late 1922. "Formerly the funds have been met from a general property tax, but the last legislature passed a resolution against the continuance of federal aid as the property tax was too high." To obtain funds for roads, he supported raising taxes on motor vehicles.20

**Kansas**

Highways were among tax problems for many American farmers, according to National Farmers' Union, holding its annual meeting in November 1921 in Topeka. Its resolutions committee urged opposing political candidates not pledged to cut taxes. Besides calls by many farm groups in 1920-22 for tax cuts, retrenchment was sought often through abolition of public functions, perhaps influenced by the rapid federal demobilization after the war. "State, local and highway taxes are growing so rapidly that they threaten the confiscation of farms and homes." States such as Kansas and Nebraska taxed land for highway funds, and many of the nation's counties taxed land for local road work and for participating in the new federal program. The committee urged "that our state and local unions not only oppose any
further increase in such taxes, but exert their whole influence to abolish unnecessary officers, boards, and commissions and the institutions of experimental and costly highway projects.” The committee likely was advocating abolition of state highway departments. Though those departments were required for states to receive federal highway aid, opposing them held a chance of limiting their activities in a depression and diverting some funds to local governments.21

Earlier in the depression, Kansas Farmers’ Union opposed even a reduced program by the state highway commission. The commission had rejected contracting for paving as too costly, though it continued projects of grading and drainage. Even so, Kansas Farmers’ Union asked the legislature to stop providing state funds for paving for at least two years. That was sought in a measure the state’s House passed by early 1921.22

In January 1922, Kansas Farmers’ Union opposed federal-aid roadbuilding more strongly. It supported the custom in depressions, retrenchment. Indeed, members at its 1922 convention approved a resolution asking Congress “to discontinue all future appropriation of federal aid for road building.” Seeking local control of roads and road revenue, the group voted to “recommend that the state highway commission be abolished and that the county and township unit of road construction and control be continued as it is at the present time and that local self government be maintained.”23

Some Kansas farm groups combined efforts to cut spending. Kansas Agricultural Council, whose five members represented eight farm groups, adopted resolutions in January favoring “retrenchment in expenditure of public funds, state and local.” The council urged assessment of land at lower values and opposed issuing bonds. Two groups cooperated in other activities. At Kansas Farmers’ Union’s early 1922 meeting, candidates to lead the group were endorsed by Kansas Nonpartisan League’s publication. That issue of the League’s paper appeared to be “a Farmers’ Union organ, with a spread on the front page lauding the organization and a two-column picture of the new building the union is erecting” at Salina, a newspaper reported. The chairman of Kansas Farmers’ Union’s resolutions committee, together with the League, “have been charged with being behind the taxpayers’ leagues, which recently have sprung up in several sections of the state,” according to the newspaper. “These ‘leagues’ have been bombarding city and county officials with demands for stringent reductions in expenditures.” Urging another method, Kansas Farmers’ Union adopted a resolution calling for consolidation affecting all state agencies “consistent with the strictest economy.”24

Taxpayers’ groups in several communities in winter 1921-22 advocated varying ways to cut public spending. At Wichita in December 1921, Sedgwick County Farm Bureau formed a taxpayers’ league to seek economy in county government and tax cuts by township and district boards. Yet by late January 1922, Wichita voters approved $1 million in school bonds over objections the amount was excessive in a depression. A branch of Kansas Tax Reform League formed among farmers and other
people at Mound City, in southeastern Kansas. A former county commissioner was elected its president, and its resolutions urged suspending road paving and forming a committee of county school boards to set one scale for teacher pay. At Concordia in north-central Kansas, Cloud County Boosters Club urged land assessment at 1918 valuations. At Abilene, in east-central Kansas, 150 Dickinson County residents formed a taxpayers’ group and planned to attend a state convention of the groups. They criticized state expenses and county officials’ salaries. To cut public spending in their area, farmers near Cottonwood Falls in east-central Kansas donated labor, horses, and tools for road work in winter’s farming lull. Continuing practices of statute labor, they showed that some road work still could be done cheaply, by local men, and without supervision by agencies beyond the community. In their project of grading, draining, and graveling a road, “they decided the best method would be to donate their own time, furnish teams and wagons and do the work themselves.”

A different sentiment, supporting wage work, appealed to a labor union member in Topeka. Public works could employ many in the city, said T. B. Garrett in his newspaper column on activities of Topeka Industrial Council’s labor unions. Though “a great deal of public work which could be pushed forward at this time would naturally entail an additional cost,” providing work would help the city avoid costs of bread lines. Similar in principle had been an endorsement in May 1921 of federal roadbuilding and other construction by Kansas Federation of Labor. Road work was planned by the state highway commission, which in January 1922 authorized spending $1.4 million to match an equal amount in federal funds. Highway officials sought to make jobs quickly. “Only such counties as petitioned for federal aid for immediate use were granted aid, the aim of the state highway commission being to help relieve the present acute unemployment situation,” a newspaper said. Also from sentiment unlike that of many farmers, commercial groups were organizing in early 1922 to seek better roads.

Leaders in opposing road spending included Democratic officials from an urban county, at Wichita, where fifty landowners objected to a large project. “Bids for close to a million dollars worth of construction work in Sedgewick County” were expected in March 1922 to pave 21 miles of road, a project aided by federal funds, a Wichita newspaper reported. The county’s Democratic chairman, meanwhile, said that, because state taxes had risen, local delegates to the party’s state caucus would meet to discuss a plan to cut state offices. Part of the plan, said a newspaper, was for abolishing the highway and industrial commissions, grain and oil inspectors, and the auditor. Recently, though, the state tax commissioner had announced that, of revenues raised by all Kansas governments, state taxes were 10 percent and school taxes 40 percent. Most revenue from motor-vehicle fees also went to local governments, said the secretary of state, whose office reportedly had been “swamped with letters inquiring what is done with the state auto license fund.” Taxpayer leagues’ delegates from fifty-five counties formed a state group at Topeka in March, when they called for a holiday on roadbuilding until
“economic conditions warrant construction of permanent highways.” The group rebuked “efforts to centralize power,” a newspaper reported, and urged greater authority of “county, township, and city officials in handling duties of state boards and commissions.”

For many Kansas farmers, the new roadbuilding was increasing taxes in the depression. Owners of land near roads that were improved in the federal-state program paid part of the work’s cost directly through special taxes, not assessed on land farther away. The special taxes, in Kansas and elsewhere, were levied near the road on the theory the improvement raised land values. Similar special-taxing districts had been a rural practice in early-1900s drainage or irrigation projects. Under states’ laws on roads, districts were formed on initiative of some landowners, though sometimes over objections of owners of other included land. Landowners near a road graded with federal and state funds near Sabetha in fall 1921 believed their special taxes were well spent, according to a Topeka newspaper, whose publisher, Arthur Capper, also was a Kansas senator and publisher of farm journals.

Still, the costs of paving, which would bring special taxes much higher than those at Sabetha, concerned many Kansas farmers. Though prices for corn and hogs improved some in early 1922, conditions for wheat remained depressed. To bring in income, some farmers had worked on federal-aid road projects in 1921. Yet in winter 1921-22, farm and taxpayer groups and political officials urged retrenchment. Expansion of federal-aid roadbuilding in many Kansas counties in 1921 had stirred opposition among farmers, and many supported county control of road work to reduce spending in a depression. Still, city residents had voted $1 million in local bonds for a high school. And Kansas in 1922, like Nebraska, remained a leader among Plains states in building roads with federal aid.

Missouri

Farmers were part of a debate over roadbuilding in Missouri that lasted through much of the summer of 1921, diminishing the new program’s effect while the economy was worst. Compared to states on the Plains, many in the Midwest had large urban populations and more routes with heavy traffic needing paving. Plains states might accommodate wishes for economy among their many taxpayers who were farmers by initiating projects of relatively low-cost kinds of construction (graveling, grading, and draining roads). Most midwestern states, though, needed to provide also for numerous motorists of urban centers, whose taxes could help pay paving’s costs.

Missouri farmers formed opinions of roadbuilding and taxes in a context unlike that of the Plains. Economic changes were greater and population was smaller in the two Plains states than in most states of the Midwest. In Missouri, roadbuilding relied less on farmers (urban population was larger) and less on farmers recently tossed amid boom and bust by wheat prices. Missouri roadbuilding got more money from a larger allotment of federal aid and could match it more easily, from a larger total for taxable
individual incomes and a more-developed tax base. Missouri’s 1920 population exceeded that of Nebraska and Kansas combined. Yet net incomes of residents of the two Plains states combined exceeded those of Missourians during 1918-1920, though not in 1921 and 1922. Missouri farmers’ sentiment likely was tempered also by improvements yielding a 1922 rise in the state’s total for taxable individual incomes, which regained all except 4 percent of its 1920 boom level. In contrast, 1922 income totals remained below 1920 by 31 percent for Kansans and 42 percent for Nebraskans. Both Plains states used taxes on land to match federal aid in the depression, though farmers in Missouri knew by the election of November 1920 that for years ahead much of the matching funds would come from state bonds. The bonds had been approved by wide margins among voters of St. Louis and Kansas City, though opponents had been numerous in such counties as Nodaway and Sullivan, where farmers’ clubs had campaigned against them.30

Missouri’s legislative debate over what kinds of road to build reduced construction in much of the depression. Thus, the state’s road bonds remained unused through mid-1922. Still, Missouri began considerable work in 1921. Indeed, it far outspent Nebraska and Kansas as they worked amid conditions of the Plains. Yet its slow start appears in comparison to the Midwest’s seven other states; Missouri ranked lowest in federal aid paid for projects completed by mid-1922. The legislature adopted by August 1921 a plan for using Missouri’s bonds. Earlier, its debate had featured contests over paving or graveling and over whether spending should be by the highway commission or counties. The approved plan provided for starting to spend funds from the $60-million bond issue. It specified that two-thirds of federal road funds be used for graveling, one-third for surfacing of more costly kinds. Motor-vehicle fees would repay the bonds.31

A farm group worked in winter 1921-22 to call another referendum on roads. Missouri Farmers’ Association had planned to circulate petitions for a referendum on suspending the bond law. The law, passed in the special session of summer 1921, authorized sale of $10 million in bonds as a first installment in the $60 million voters had approved. The first bonds were to be sold after March 1, 1922, or when state road funds had been apportioned for all road projects approved by the time of the law. The group supported increased road work, particularly that already scheduled. Dropping plans in January 1922 for its petition campaign, it noted a recent resolution by Missouri’s highway commission to complete all road projects approved prior to the special session. The commission acted, a newspaper said, because “there is money enough in the state treasury to pay for all of the uncompleted projects.”32

Such a further referendum Missouri Farm Bureau Federation had opposed. In December 1921, its president, Chester H. Gray, said the federation continued to support roadbuilding and did not approve “any effort from any sources whatever which seeks to delay or destroy the operation of the road legislation that has been recently enacted by the general assembly.” That position, which the state federation
adopted, was favored by members “about 100 to 1” in recent messages to the group’s headquarters, though the office noted “communications from two counties” in opposition. The federation had supported the bond question in fall 1920 in the first referendum. By December 1921, the governor named to the state highway commission a member of Missouri Farm Bureau Federation’s executive committee. The federation said the legislation met recommendations of its roads conference, held before the 1921 special session.  

Despite the legislature’s agreement, local authority in roads might be considered, the state highway commission chairman told a farm group. The legislature might change the state’s road law, Commissioner Theodore Gary said at annual Farmers’ Week activities in January 1922. “No one will say, I believe, that the law is adequate, or that it is satisfactory in every respect. It lacks in provision for proper administration whereby local people may be enabled to help themselves.” The legislature’s debate and its result met some objection at the farmers’ meeting, cosponsored by the state university and board of agriculture. Gary proposed further discussions and suggested road work should proceed. Like state highway officials elsewhere, Gary said the state’s work on roads freed local governments from tasks earlier done with property taxes.

Work on a county’s smaller rural roads remained a large part of local government, particularly near urban traffic. A local political organization in the Missouri county including Kansas City was using county road work in winter 1921-22 as an important resource for patronage, providing jobs for supporters and excessive payments for some contractors, a newspaper reported. An accounting of work on the county’s “sponge roads” had been called for in 1921 by Kansas City Star, which attacked “county road graft” and county methods of awarding contracts. Soon, it published a report on county roadbuilding by a grand jury that had returned no indictment. In early 1922, county officials more than doubled their spending for roads, though, the newspaper said, “it has been shown that much of the huge road fund last year was squandered on political jobs and stolen by political contractors.” The county engineer’s report noted that in 1921 his office spent $996,747, providing for labor, equipment, road repair, and oiling road surfaces, though, the newspaper said, “not one mile of new roads was constructed.” Charges were filed in January 1922 against a contractor and a former county engineer, who allegedly made fraudulent representations by which “the county was induced to pay thousands of dollars in excess of the true work done.” Except for the scale of funds, such complaints resembled those made for years by roads enthusiasts about the work of many of the nation’s counties, urban or rural. Rural townships still might accept payment of their road tax through work. Yet county governments, in their early-1900s road responsibilities, had had a steady source of small public works and tax revenues, useful for cementing political organizations if not for making permanent changes in roads.
For rural men, local road work could provide a way to participate in government. Becoming road overseer in a rural area near Kansas City indicated a man had some connection to local political powers, some status in the community. Road overseers in the county, appointees of leaders of the local political machines, worked to keep up roads and tend the machine's influence in their area. Harry S. Truman was a road overseer in the county in 1915, after his father had held the post, and his brother was among such appointees during 1920-22.  

Truman campaigned in mid-1922 for elective office, advocating better roads and retrenchment alike as he sought to help govern a county that had not paid its expenses from property taxes even in good times. Though endorsed in a primary election by the county's Pendergast political organization, he urged reform. Truman traveled his rural district's roads to meet voters, handing out leaflets stating, "My Platform: Good Roads, A Budgeted Road Fund, Economy, A Day's Work for a Day's Pay, Fewer Automobiles and More Work for County Employees." He told a group in July that he would hire experienced road overseers who wanted to work, that better budgeting would leave enough cash to begin building permanent highways where traffic was heavy, and that the legislature should bar counties from going into debt. Other candidates made similar statements in a campaign that also remained over control of county jobs and contracts. Truman narrowly won the Democratic primary on August 1 and easily carried the general election. Auto traffic was reducing many voters' acceptance of the old political system's methods, which increasingly seemed an obstacle to building durable roads. In office, Truman soon named road overseers from among his own supporters and sought to economize, supporting sale of thirteen of the county road engineer's autos. Even in an urbanized county, rural people could influence roads through a local political organization which sought their votes and offered construction jobs. And roads, increasingly about motorized transportation, were still important to a rural area in setting political relationships.  

In an urban county, postwar roadbuilding had expanded largely by county, not state or federal, programs. Expansion resulted from factional rivalry and growing auto traffic, together with an effort to create jobs, which had been a function of road work in depressions in many cities. Expenses under usual methods of administering and building roads had grown, offering numerous items to cut in retrenchment by mid-1922, when the economy had improved. Local authority in roads could rely on centralized organization and a large urban area's tax base. The 1922 vote in one of an urban county's rural districts was indecisive about local factions' campaigns, giving a narrow primary victory to the leading political organization's candidate, who talked of economizing. Promising to provide roads more efficiently might gain votes in many Missouri rural areas, including those near cities. In a few such urbanized counties, Missouri's auto traffic, growing even in 1921, was heaviest; Kansas City and St. Louis had one-third of Missouri's registered autos.
Both cities were centers not only for local traffic but also for motorists traveling through the state and nation, as roadbuilding proponents noted. Central states contained main routes across the nation, raising the value of paved roads for merchants, shippers, and travelers. Such sentiment influenced Missouri's legislative debate, though many of its participants favored state and federal projects to gravel smaller rural roads. Farmers in many counties in a 1920 referendum had supported issuing state road bonds. Missouri farmers in the depression knew state bonds, repayable from vehicle fees, would help relieve them of road taxes. The Farm Bureau endorsed bonds in 1920, outlined members' sentiment on roads before the legislature's 1921 session, and in 1922 defended the session's result. Community political structures influenced state road policy as Missouri, like other states, held to earlier practice by setting many issues in the legislature instead of in a state agency. Though protracted legislative debate delayed using state bonds, Missouri matched federal funds with other revenues in 1921 and 1922, while the state's economy fared better than many on the Plains. 39

Illinois

Paved roads east of St. Louis were benefiting farmers who used them to bring to urban markets goods and livestock they produced in Illinois. By shipping over paved or improved dirt roads in southern Illinois instead of by railroad in 1922, farmers were "relieved of the burden of high freight rates they have been paying for several years," L. A. Richards of Madison County, Illinois, wrote to Prairie Farmer during the depression. More than thirty trucks a day took those farm goods into St. Louis and East St. Louis, often returning with supplies ordered by country stores along the way. A dairy cooperative delivered to the cities daily, and "there is one long-distance truck running day and night operated between Indianapolis and St. Louis on the Old National Trail," a main route in the early 1800s before railroads. Working for wages had increased on many roads. Though farmers had done the work of maintaining the local dirt roads in earlier years, he said, the county engineer had gotten the largest of the roads designated as part of the state system, maintained regularly by men employed for the work. 40

Authority for locating roads, an issue in Missouri's legislative debates, concerned J. W. Poindexter of McLean County in central Illinois. State maintenance of roads was not something people should favor, Poindexter told Prairie Farmer in spring 1922, because "the plan of building and locating state aid roads is so unsatisfactory." Farmers and local officials from many regions often objected to giving state agencies the increased postwar role of defining locations for new main roads or designating some old ones as part of a state system. In that role, state authority had been increased in the federal-aid program by late-1921 changes by Congress. Such route decisions would benefit some rural residents, affecting land purchases for road right-of-ways, values of farmland and businesses, or the scheduling of
projects. Though customarily matters for local political systems, those decisions increasingly were occurring outside the community.\textsuperscript{41}

Illinois voters, like those of Missouri, had approved a postwar bond issue of $60 million for roads, easing reliance on revenue from property taxes. Road work, advocated in 1919 by Illinois’ highway superintendent to hire men expected to be jobless as the military demobilized, had expanded in the depression after mid-1920. None of the bonds the state’s voters authorized in fall 1918 were marketed until late 1921, partly because projects could use other large amounts, from state funds and Illinois’ allotment of federal aid. Taxes still were an issue, for some people suggested giving more of vehicle license fees to road and bridge funds of local governments.\textsuperscript{42}

In his letter, J. W. Poindexter of McLean County opposed providing jobs in road work and favored local use of auto revenues, which would have allowed cuts in property taxes. Another Prairie Farmer reader also believed using license fees to maintain local roads would answer calls for tax cuts in early 1922. “The average person condemns high taxes in an abstract manner,” said I. S. Brooks of LaSalle County in north-central Illinois. “He has a feeling that there is some injustice, he doesn’t know where.” To Brooks, it seemed that “this is a good time to develop sentiment in favor of spending some of the auto license money on maintaining” county road systems. From the same county, J. G. Schumacher in early 1922 wrote the journal he thought taxes should be shifted. “We agree with you that we must not impair our splendid school system or the improvement of our country roads,” Schumacher said. “There should be, however, a more fair distribution of taxes.” The journal had urged that 17,000 miles of county roads be turned over “to the state for maintenance, the cost to be paid from the auto license fund,” a change that would cut counties’ expenses.\textsuperscript{43}

The journal in late 1921 had opposed paving county roads as costly and supported cheaper improvements only where taxes for them were approved. In the “pay as you go” plan, “there are no bonds and no interest to pay” for work on county roads. Other roads—the main routes forming the state-federal system—were being built with the state’s $60 million in bonds, which the journal noted without mentioning any problems from using bonds in a depression to pay for road work. Having bond funds for state road work may have reduced taxpayers’ concern over state-federal roadbuilding.\textsuperscript{44}

Opposition to bonds might extend beyond their use for roads and might reflect varying theories of bonds’ effect on the economy. In May 1922, Prairie Farmer noted a statement by American Farm Bureau Federation’s president, J. R. Howard, that “tax-exempt bonds are rapidly increasing and unless soon checked will more than equal the value of all farm properties in the United States.” Yet many of the era’s bonds, issued by cities or states instead of counties, were repayable largely from urban taxes or motor-vehicle fees, not just from a locality’s farm property. Also, adopting an opinion widely stated in the period, the journal said public bonds removed money from commerce. “The money that goes into
tax-free securities cannot be used for business or farming. That is why we see cities and states carrying on extensive and often extravagant programs of public improvements at times when farmers and businessmen can hardly get the credit necessary to keep their business going.” The description indicates a belief bonds were a cause of the depression or of its persistence, and it neglects a large reason farmers and businessmen could not get credit—their capacity to repay had declined with the worth of their inventories because few consumers could buy them. The journal did acknowledge that funds to make the period’s federal farm loans resulted from tax-free bonds. It noted Howard’s comment on those bonds, that “the farmer is certainly as much entitled to tax-exempt securities as anyone else.”

Amid farmers’ discussions, Illinois continued to spend large amounts to pave main roads during and after the depression. Interest in retrenchment such as farmers and other taxpayers voiced in other states failed to slow Illinois road construction, supported by the state’s large, diverse economy. Illinois’ total for residents’ taxable incomes was triple Missouri’s total in 1918 and 1919 and increased its lead in 1920-22. Both states’ income totals grew in 1922 by 5 percent over 1921, though the Illinois total barely reflected a depression (incomes at the taxable levels declined less than 1 percent in 1921). Indeed, for the depression’s worst year, 1921, Illinois’ income total was more than double the combined totals for Missouri, Kansas, and Nebraska; the smallest totals, for Kansas and Nebraska, heavily dependent on wheat farming, had fallen most. Still, like farmers in those states, some in Illinois sought for localities more of the new revenues from autos. Paving projects in Illinois in 1920-22 used bond funds, other state revenues, and federal aid. Highway officials claimed achieving a world record for paving in 1922. Voters approved $100 million in state highway bonds in 1923, after farm groups secured provisions for improving farm-to-market roads. Farmers remained part of the state’s roadbuilding, working as laborers or hiring out their horses.

**Minnesota**

Minnesota pursued a compromise similar to that in Missouri, though with less debate during the depression. Low-cost graveling projects extended improvements to many rural areas, though some main roads were paved. Bonds and auto fees provided state road funds, reducing the need for property taxes. State highway officials often noted projects’ benefits to farmers and localities in jobs, taxes, and travel. And Minnesota’s economy fared better in the depression than some on the Plains. An effort at federally aided graveling operated steadily, improving more miles of road than the program did in any other state. Yet its spending stirred little of the protest farmers voiced in Kansas and Nebraska.

Income fell for farmers, including many near Bagley, in north-central Minnesota, where notices of mortgage foreclosure sales appeared frequently in newspapers by late 1921 and in 1922. At Madella in early 1922, amid low corn prices farmers bartered their crop in trade with nearby merchants. The
depression changed incomes in Minnesota, though less than in Kansas and much less than in Nebraska. Amid strong demand for farm products, Nebraska had outranked Minnesota slightly in totals of 1918 incomes that residents reported on federal tax forms. Yet in 1919-22, Minnesota surpassed each of the two Plains states in income. For all three, incomes declined in 1921, and 1922 brought little change. In Minnesota, incomes remained steadier; for 1922, Nebraska’s total was 51 percent of Minnesota’s.

Further, roadbuilding costs could be supported more easily by Minnesota’s larger population. State law allowed use of auto fees and $75 million in state bonds to pay for state projects, relieving Minnesota farmers of taxation for building main roads. Obtaining state revenues for local road work was less of a concern than elsewhere.48

Early, large spending and low-cost methods also aided Minnesota’s efforts and likely increased support. Spending federal road funds early in the depression used more of the trend of lower building costs to extend the program, allowing its funds to operate over greater mileage. Minnesota expanded its federal-aid program more quickly than Kansas or Missouri, much more than Nebraska. That provided more jobs and reached rural communities over more miles of roads than in any of the three other states, raising chances of winning support of farmers for state-coordinated road work. Minnesota officials’ emphasis on a low-cost kind of road work (putting on gravel surfacing) allowed them to complete improvements on many miles of road, use construction skills and equipment many farmers had, and award contracts more easily, cheaply, and quickly than for more-complex construction. In using federal funds, by mid-1922 for each mile of paving, Missouri completed two of graveling, the same ratio as for Nebraska; Minnesota completed seventeen. Graveling in Minnesota totaled 1,011 miles of roads, the most for any kind of federally aided work in the forty-eight states. Most of Minnesota’s large amount of work was in a form (graveling) that farmers often said in 1920-22 they preferred to paving, which concentrated funds in projects of small mileage on main routes. Paving in Minnesota cost an average of three times the price of grading in 1922 and ten times the price of graveling.49

Minnesota Farm Bureau Federation was among farm groups in several states in early 1922 that advocated graveling and supported using federal-state funds on smaller roads instead of main routes. It favored continuing federal appropriations for roads, and like Missouri’s Farm Bureau, it acknowledged the need to build roads where traffic was greatest. At the Minnesota group’s January convention, members resolved that graveling seemed better than paving, for “construction of an adequate mileage of serviceable roads is vastly more important than the building of a few perfect miles.”50

Farmers were part of road work in the depression’s two winters, scheduled in Minnesota as elsewhere to provide jobs. In Traverse County in December 1921, the county engineer reported 367 farmers were working in projects of the state highway commission. Road camps were being readied that month in some of forty projects begun by the commission. For grading 50 miles and graveling 300 miles on
trunk highways in the projects, contractors were "getting crews in action in almost every section of Minnesota." Highway officials estimated 7,500 men "would be given jobs on a team work basis." Besides the construction, the state's "special maintenance work partly for the benefit of local farmers is advancing in some sections," a newspaper reported. Truck owners in Minneapolis and St Paul, it said, protested "that contractors were taking work at less than cost," and in some localities the work was using horse "teams rather than trucks toward giving unemployment relief." State highway officials were planning similar projects later in winter 1921-22. Work was done at low cost then and in winter a year later, officials said. Low wheat prices continued beyond 1922 to affect farmers in states including Minnesota.  

Officials acknowledged farmers' sentiment also by scheduling some fall highway work to reduce conflicts with harvests. When contracts were awarded for thirty projects on trunk highways in August 1922, a newspaper said the plan by the state highway engineer was that "work not interfering with harvesting on the farm will be pushed" for fall. Because much work in August contracts was to be done by spring, officials could adjust project schedules to account for farming needs and winter weather. Harvesting wheat required many laborers, reducing roadbuilding's labor supply and raising wages. Similarly, opening a road project would compete for laborers with farmers. 

Taxes on land in Minnesota were too high, though one cause was spending for schools, a man wrote a farm journal in early 1922. For the resident of Dodge County, in southeastern Minnesota, the only objection to road programs concerned the cost of county engineers and their assistants, an expense he advised cutting by one-third. To reduce local taxes, "it will be necessary for the people in each county in the state to get together, either in the Farm Bureau, or to organize a taxpayers' league, and draw up resolutions as to what changes need to be made." 

The state highway commissioner noted a benefit for local governments from federal and state funds that provided for all work on main routes, Minnesota's trunk roads. This saving, said highway commissioner Charles M. Babcock, allowed local governments to fund work on farm-to-market roads, work requested often by midwestern farm groups. "During 1921 and 1922 the counties being relieved of all responsibility for construction on the trunk highway system, were able to make a very substantial showing in the improvement of the farm to market roads," he said. Counties increased their work on farm-to-market roads, indicating support for road work, even when funded from local taxes. Several local groups met with state officials to seek improvement of particular routes. 

State officials using federal and state funds graveled roads leading to many communities. The projects hired many men from the state, including farmers, in the regular building season and in winter. A small proportion of funds had been spent for paving, yet road work and taxation in a depression still concerned some residents. In the opinion of a taxpayers' group at Monticello, in Wright County,
commissioners of the county had wasted money in roadbuilding in the past two years. They asked a court in April 1922 to block further work on a county road project. Elsewhere, debate over roads continued near fall elections. A Minnesota farmer claimed in his local newspaper that "it is time that farmers' road taxes were spent on farmers' roads." The state highway bulletin, a newspaper noted in September, soon replied, saying the farmer seemed unaware county and township taxes were used on farmers' roads, as were all state auto taxes, which funded work on the trunk highway system instead of being used in urban areas, whose residents paid much of them.55

Taxes and economy of spending were issues for farmers of many states in the depression. Even where road construction by state officials largely complied with farmers' wishes, spending and taxation by local governments could affect them. States varied in how their taxation affected farmland. Some relied heavily on such taxes to build roads. Others, such as Minnesota, used state bonds for revenues, together with auto fees clearly designated as paying for work on main roads, relieving localities of duties there. Even where taxation for roads rested less than heavily on real estate, farmers often advocated graveling instead of paving in the depression, preferring construction that was cheaper and that extended improved services to more communities. Those wishes by farmers coincided often with efforts at quick expansion of a new national program. True, by 1920 paving had uses for many people, including farmers when they drove in urban traffic or traveled some distance. Yet farmers in the depression at best accepted some paving as needed. Measuring the proportion and extent of graveling or other low-cost work with federal funds indicates how well the new program's roadbuilding through 1922 matched many rural constituents' requests.

**Improving Farmers' Roads**

Despite Minnesota's recent completion of many miles of graveling, a man there in fall 1922 urged spending farmers' road taxes "on farmers' roads." For some farmers in states nearby, his statement could have meant obtaining more of state revenues from auto fees for use by localities. For others, spending federal and state funds on rural communities' roads seemed to increase if states chose low-cost kinds of changes, extending improvements to more miles of roads, more parts of a state. For them, "farmers' roads" might result from low-cost projects that could quickly improve travel and endure rural areas' comparatively light traffic. Even when agricultural groups endorsed paving where needed for heavy traffic, they usually urged graveling over a larger mileage in other areas.56

In the expanding postwar highway programs of federal and state governments, officials had to build for traffic both heavy and light, improving not only routes for autos and trucks between large cities but also roads for farmers' autos and wagons to cities and towns. The federal program had developed partly to improve rural mail service, a goal tied to spreading improvements over many miles of roads.
Also, state and federal highway officials acknowledged rural people as an important constituency, well-represented in legislatures and productive of much economic activity and government revenue. Yet farmers, in a period of depression and unfamiliar roadbuilding procedures, often perceived officials beyond their community as needing reminding of local conditions. A similar response had developed often in the early 1900s toward reformers from outside the community seeking changes in various rural practices, including those in health and schools. Well before the war, officials in many counties and localities had opposed state agencies’ growing authority over roads. In wartime, rural people had worked often with nationwide efforts. Still, in the postwar period, many farmers remained part of road work authorized and carried out in small local districts within their counties. Their own experience in building a workable road made it easier for some farmers to say in 1920-22 that county engineers’ skills were luxuries in a depression and that state and federal officials knew less of local needs than they.

Though proceeding in ways that many farmers remained unsure of by 1922, the federal-aid road-building in the depression had produced better travel for many rural communities. Though its projects were begun partly by officials no one in the community knew well and were based on a plan that took into account many localities as much as any particular one, they had made roads locally that were better than before. Low-cost kinds of improvements had been a priority using federal funds in many states, particularly in states where urban traffic was relatively small (figure 9, upper left map). Reducing costs extended improvements with available funds over larger mileage, reaching more communities, improving travel for their residents of farms and towns. Among nine kinds of work using federal funds, three low-cost kinds formed large proportions of construction in many states. The three kinds—grading and draining dirt roads, applying a sand-clay surface, and graveling—had a combined cost averaging $5,134 per mile in federal aid in the forty-one states completing such work by mid-1922. Usually more costly per mile were projects for building bridges and for surfacing with concrete or four other kinds of materials. Concrete paving, most widely used among the five more costly surfaces, could withstand heavy traffic yet cost an average of $16,251 per mile in federal aid in the forty-two states completing such work by mid-1922. The combined cost of three low-cost kinds of work was on average nearly one-third paving’s cost. In road projects, federal aid was matched equally by amounts from within states. For farmers in areas where revenue for matching federal aid came from localities, low-cost kinds of work required less in taxes.

In funds for projects completed by mid-1922, the three low-cost kinds of work accounted for 34 percent of federal aid spent for nine possible kinds, though the ratio varied by state (figure 9, upper right). Indeed, in the top third of states, ranked by that ratio, each state spent more than half its federal aid for the three low-cost kinds of projects. Farmers reading of road work noted large amounts spent for paving, often without acknowledging that even small amounts of funds could improve many of their
Figure 9. Low-cost road work extended improvements to more rural areas and required less in taxes on roadside land. Data from Agriculture Department, Report, 1922, 477-78, 483-84.
nearby roads. Yet low-cost kinds of improvements formed 66 percent of federal-aid mileage completed in forty-eight states by mid-1922. In the depression's worst months, many states' highway officials had chosen low-cost kinds of road work, completing two miles of that for every mile of more costly surfacing. That ratio emphasized less-mechanized kinds of work that particularly used farmers' skills and horses. It began projects in areas where farmers easily could obtain wages from the projects. It made projects easier to begin quickly in many states than if a larger proportion of their work had been in the complex, costly projects of paving. And it kept taxes lower on land near the projects. 59

Further, the low-cost kinds increased to 71 percent of mileage in federal-aid work under way by July 1922, perhaps reflecting effects of farmers' protests in an election season. The increase might have resulted also from officials' wishes to raise employment, begin projects quickly, or stretch dwindling funds over more mileage. Some states raised the percentage from low levels. Kansas, which had emphasized paving, making low-cost work only 14 percent of federal-aid mileage completed by mid-1922, had under way then low-cost projects for 44 percent of its mileage total. States including Nebraska increased percentages already high. 60

Those states were among twenty-seven where the percentage of low-cost work increased, when comparing federal-aid projects completed by mid-1922 to those under way then (figure 9, lower left map). Of those, fourteen states were from the Old Northwest or in the Mississippi, Tennessee, or Missouri river valleys. By contrast, fifteen states for various reasons reduced the share of low-cost work in their projects under way by mid-1922, and six of them were from the nation's central area. Unchanged in using none of the three kinds low-cost work were six states of the North Atlantic region. They were small states, needed improvements for heavy traffic, or had been leaders in surfacing rural roads in 1914, before the federal program. 61

In mileage of low-cost work, many leading states were from the nation's central area. In completed federal-aid projects by mid-1922, the sixteen states with greatest mileage in low-cost kinds of work included nine from that area. Minnesota had completed the most miles of such work, 1,063, followed by Texas, with 900. The fourteen other states (from the Midwest, South, Plains, and West) had completed at least 274 miles each. Similarly, in federal-aid projects under way in mid-1922—during an election season and after recent comment by farmers—of the leading sixteen states in low-cost mileage, ten were from the central area. In that measure, Texas and Nebraska were by far the national leaders, each having projects under way for at least 1,450 miles of the three low-cost kinds of work. When totals for the two periods are combined (for projects completed by mid-1922 and those then under way) the largest mileages for low-cost work were in two areas where rural roads were less-developed than in the North Atlantic states and where urban traffic often was low. States with largest mileage of low-cost work 1920-22 with federal aid form two contiguous belts, from North Carolina to New Mexico and
from Wisconsin to Wyoming and Montana (figure 9, lower right). High-cost paving, to withstand heavy traffic in and between urban centers, formed much of the mileage in federal-aid programs of states from Illinois to the East Coast and in much of the North Atlantic region.\textsuperscript{62}

In forty-eight states, federal-aid projects in the three low-cost kinds of work were completed on 8,874 miles of road by mid-1922 and were under way then on 13,143 miles. Mileage rose also in the five more costly kinds of surfacing as the program expanded during 1920-22, though less than in the low-cost kinds of work. The costly kinds of surfacing in completed projects totaled 4,451 miles; in projects under way, they increased to 5,105 miles. Comparing totals for five high-cost kinds of surfacing to those for low-cost work indicates their proportions changed during the depression. For each mile of high-cost surfacing, low-cost work totaled 1.99 miles in completed projects, rising to 2.57 miles in projects under way.

Roads and Taxes

Roadbuilding costs and taxation were issues for farmers often in central states and beyond. Anecdotes and the data on widespread use of low-cost road projects suggest the issues concerned farmers in many parts of the nation. Even if roads were improving in numerous rural areas, taxes remained a problem for many farmers. Though low-cost projects might use federal aid to extend changes to more communities, the new road program could still affect farmers’ taxes where financing was partly local, particularly if high-cost paving projects began. Federal aid offered an incentive to begin projects. And the example of federal-aid projects in a depression might stir local officials to start work of their own. Many farmers were uncertain of how the various roadbuilding efforts—in federal, state, county, and township programs—would influence them while prices were low for farm goods.

South Dakota

Though falling wheat prices greatly cut South Dakota incomes before and during the depression, farmers had no federal-aid paving in the state to criticize. In January 1922, delegates at South Dakota Farm Bureau Federation’s convention urged local governments to cut spending. “The financial depression and other causes together with rapidly rising taxes have brought about a condition such that it is almost impossible for farmers to meet their taxes,” according to a resolution by the delegates from thirty-seven county Farm Bureaus. Local taxes were the largest problem, they said, and “the two largest items causing high taxes are the cost of road construction and maintenance and the cost of the local schools.” The group urged delaying road construction. “We affirm our interest in good roads, but express it as our belief that we cannot afford, under present conditions, to forward our road building program as rapidly as is now being done.” The group’s resolutions did not mention the federal-state
road program. Delegates sought “a conservative road building program based upon the absolute necessities of the various counties until such time as the prosperity of the country justifies heavier expenditures.” Though school taxes were “a large part of our heavy tax burden,” they cautioned that “a serious injustice may be done our children by a reactionary attitude in connection with our schools” and urged studying ways to economize. Like many other farmers’ groups in the period, they opposed bonds. “We emphatically protest against the practice becoming too common of bonding our communities and towns for new improvements that we can not well afford.” They opposed “issuing bonds that run beyond the life of the improvement made,” a frequent complaint among early-1900s farmers about impermanent road work under methods available to local governments.63

Meanwhile, resolutions for economy in government and cuts in taxes, particularly of localities, resulted from a meeting of Codington County taxpayers at Watertown. The group did urge, in the words of a newspaper, “strictest economy in all departments of government, national, state, county, township and school districts.” The report had no mention of federal or state road programs. The group gave “almost unanimous support” for three proposals—to repeal a mortgage-registration tax; to cut by half the limit on tax levies by counties, towns, school districts, and townships; and to abolish the “county levy for the road and bridge building funds in 1922.”64

Oregon

In many states, local citizens’ meetings and elections offered residents forums on issuing bonds as well as on cutting taxes. Farmers influenced bond issues in many Oregon counties, where such revenues were used to match state and federal road funds. They included residents of Douglas County, where Roseburg was on the Pacific Highway between Portland and California. In March 1921, at a public meeting at the courthouse, delegates from many of the county’s more than sixty road districts endorsed putting on the June ballot a $1.1 million bond question for work on market roads. Soon a local Taxpayers’ League narrowly voted to support the plan. At its meeting, a member noted recent poor harvests and prices. In reply, another member said road work that “the farmer would be able to get with his team if he desired would more than make up his amount of tax.” By May, arguments against bonds had some success in the county’s rural areas. Many people who conceded bonds were needed opposed them “on the farmer’s inability to pay.” At a debate in Melrose community, a “prominent member of the county and state grange” opposed bonds. Yet in June elections, rural voters favored bonds by a large margin, putting the county among nine in the state where results approved road bonds.65

Rural men had been “doing a great deal of donation work” on roads in one district in May 1921, though they had needed a small amount of the county’s funds. By late summer, county officials were spending some bond funds. To reduce costs they rejected several road contracts as too high and decided
to build the projects themselves, using a wage-labor force labor the county would hire and manage. Maintenance of other roads was done by supervisors who were farmers, which left repairs neglected in growing season, said some officials when the county decided in fall 1921 to buy three construction tractors. On a main route, sections of the Pacific Highway in the county were being paved in fall 1921. The county by then had started many of its own projects, whose workers included local farmers. Bond revenues in many counties remained available past 1921 for matching funds. In Oregon, paving had been a small part of federal-aid mileage. And chances of federal-aid work affecting farmers’ taxes declined as construction in the new program slowed in 1922.66

Arkansas

Using local districts to build roads helped put heavy taxes on farmland in the depression. Earlier, before much federal-aid work began in the nation, special tax districts for building roads in Arkansas had grown in number and in spending, for construction and later for maintenance. Most road districts’ revenues were from rural land, taxed at a flat rate for undeveloped and cultivated land alike, and so tax assessments might exceed land’s assessed valuation. Engineering costs were low, avoiding a complaint of farmers in some states yet reflecting inadequate planning for some projects and lack of experience in large projects by the farmers who usually were district commissioners. Though some taxpayers said they were told federal aid would pay half of costs for projects of their independent district, lack of district or state planning in 1920-22 jeopardized federal participation. Arkansas’ constitution prohibited state or county bonds, and the state highway commission lacked construction authority. Thus, roadbuilding expanded using the districts in 1919 and 1920, while construction prices were at boom levels. Though state law allowed creation of districts by landowners’ petitions and provided for appeal of taxes, other districts were initiated by the legislature and often limited chances for appeal. In 1920, the legislature abolished many districts lacking bonded debt or uncompleted work. It increased counties’ share of auto-license revenues to 70 percent and approved a 1-cent gasoline tax for revenues the state and counties would divide equally. Counties and districts built roads.67

In early 1921, landowners were part of tax protests against road districts in counties including Pulaski, Yell, Poinsett, and Benton. Indeed, in March a group in a court at Lake City in Craighead County, told by lawyers their action against a road district was unlikely to succeed, forced district commissioners at gunpoint to resign. By May 8, federal officials halted aid in the state and required repairs to earlier projects. By early June, in two railroads’ challenge of a road district’s assessments, the U.S. Supreme Court ruled against Arkansas’ law by which the districts formed and taxed. Debts secured by land remained for road districts, totaling by mid-1922 some $62 million, an amount equal to bond authorizations for many states. By early 1923, when federal officials stopped aid again, many road
districts were in bankruptcy, and farmers in many districts owed large amounts in taxes. The era’s road work, including that in federal-aid projects, did include many low-cost kinds of projects. The three low-cost kinds of improvements accounted for 62 percent of mileage in federal-aid projects completed by mid-1922. Despite low-cost kinds of surfacing in some projects, though, taxing methods of local, sometimes unresponsive road districts raised many farmers’ expenses while incomes and land values were low. Better rural roads had seemed local improvements, reducing taxation of urban residents or motorists.68

**Indiana**

In December 1920, a resolution asking the legislature to repeal the state highway law was approved by Blackford County Farmers’ Association. The group’s members contended funds the law put under state officials’ authority would have more benefits if given to the county road repair fund. Such action would have allowed cuts in local taxes levied for the county fund. In February 1921, a bill in Indiana’s Senate sought to abolish the state highway commission, give its revenue to the state school fund, and put roadbuilding under authority of counties. On other issues, highway work brought evaluation of state authority and increases in it. The state Board of Accounts reported that the highway commission, from 1917 to fall 1920, made purchases without proper bids and had much larger administrative costs than Ohio’s commission. It said it doubted the commission could build roads in 1921 fast enough to spend the funds available. In March 1921, the legislature approved higher registration fees for heavy trucks and powerful autos. Farmers and others also protested county road programs, opposing Elkhart County’s construction in spring 1921 until prices fell further. Marion County officials had told constituents in Taxpayers’ League of Indianapolis they would delay construction until material prices declined, a policy the state highway commission had adopted at the governor’s urging. Still, in April 1921 the county officials awarded contracts for six projects after meeting with officials of the taxpayers’ league, who opposed the work, and with delegations including farmers and women who supported it.69

In early 1922, residents of a township near Indianapolis met with county and state officials at a high school to discuss tax assessment. One farmer said an assessor valued his hogs at more than he could have sold them for; another said that happened in valuing his land; a third asked how assessors set values for property of urban corporations. A member of the state tax board suggested at the meeting that taxpayers approve bonds only for necessary purposes. At Anderson, Madison County officials let contracts for some $221,000 in road work, prompting objection that taxes were higher because of its 1921 road work. Amid opposition to further work, particularly paving, Madison County’s commissioners announced in February they would reject petitions for road work during the rest of 1922. The state highway fund, which a farmers’ group in 1921 had sought for counties, included $2.7 million collected in
vehicle-registration fees in the first half of 1922. In several counties, farmers were to attend summer demonstrations of methods for improving dirt roads using machinery from the state highway commission and farmers' labor and teams. Nearly all federal aid spent in Indiana in 1920-22 paid for concrete paving. The only low-cost kind of work was 18 miles of grading and draining.  

**Texas**

In the Great Plains belt of aridity, running through much of west Texas, sparse resources and settlement rarely made counties' participation easy in the new federal road program. Few such projects began there in 1920-22, greatly reducing chances such expenses would affect farmers' taxes in those areas. Yet in central and eastern counties, many miles of road were built with federal aid, often using matching funds from local road bonds. As efforts to use bonds increased in 1922 in Texas counties and road districts, voters approved a total similar to that in 1921, though defeated bond questions were for much greater amounts than before. Apart from rural concern over taxes, one farmer said road construction and jobs in oil fields were raising what farmers had to offer in wages. Seeking to cut his costs, he asked Congress to allow greater emigration of Mexican laborers, who would work for less than others.

In Texas' black-earth belt in central counties, road construction in early 1920 was growing, and its "contractors are offering wages that the farmers can not compete with," farmer Joe Worsham told a congressional committee. "Why, they built a road right by my farm from Dallas to Fort Worth and they were offering for the average common labor $4 a day. They would take the men off the farms as fast as the farmers could get them, and the farmers could not keep men plowing in the field because of that construction work." The depression cut wages in farming and roadbuilding in 1921 and 1922 below boom levels Worsham cited in early 1920, yet it expanded road work as an alternative for many men. The depression also raised farmers' needs for income, met partly for many near Fort Worth in winter 1920-21 by roadbuilding, said Tarrant County officials, who would use bond funds voted in mid-1919. Yet in Hayes County, plans for greater spending on roads diminished confidence in county government among some residents near San Marcos. They suggested their county government name "a committee of six good citizens" to meet with county officials and offer comment when dealing with "the vast amount of road construction" expected. Outside the arid western counties of Texas, farmers in many communities received employment and better roads from federal-aid projects while reducing the risk of higher taxes by choosing low-cost kinds of work.

**Ohio**

Much roadbuilding by the state was planned for 1921. State and federal funds totaling $11 million were available, and local funds for state programs were expected to rise to about $19 million. The
state paid up to 90 percent of road projects’ costs in poorer counties, though usually more than half of costs came from counties, townships, and property owners. Ohio’s spending by summer 1921 seemed excessive to at least one resident, W. L. Leffler. “Many are of the opinion that money is being squandered on roads.” His letter to a farm journal argued paving was too costly amid the year’s low prices for grain. Leffler advocated graveling to extend improvements quickly to more roads farmers used. Tax problems involved more than the depression’s roadbuilding, though, for he said that “farmers’ taxes have about doubled in the last decade.” In fall 1921, soon after roadbuilding was suggested at the President’s Conference on Unemployment as a way to hire the jobless, an Ohio farm journal’s columnist objected. “When the city wage earners are content to accept a scale of wages on a par with the prices of farm products,” he said, “there will be little need for providing government created jobs for the unemployed.”

For 1922, state highway officials urged local officials to hold assessments of special taxes on land near road projects to the legal minimum, 10 percent of project costs. Paving often required the assessments, and the state highway department planned many such projects on main roads in 1922. Its director said that “it would seem under existing conditions that assessment beyond this percentage is not only unfair to the farmers but is bound to result in a reaction against the good roads movement.” He asked the state’s Farm Bureaus and Granges in early 1922 to help locate high assessments needing adjustment. In five counties by July, Farm Bureaus also appointed committees to meet with local governments about obtaining better roads, and “in one county 136 Farm Bureau members in ten townships have pledged themselves to drag dirt roads.” Ohio continued to build few low-cost stretches on the state highway system, and by late 1922 some counties had obtained improvements on less than 30 miles of roads in the system. Because local matching funds were required, southern counties with small tax bases particularly lacked paving projects. The need to improve dirt roads was an issue in fall 1922 political campaigns, and state efforts to surface many of them with gravel began in 1923. Low-cost kinds of projects rarely used federal aid in Ohio in 1920-22; the only such projects, under way in mid-1922, were for grading and draining on 15 miles and graveling on 6.5 miles. Many roads had been improved earlier, for the state ranked second nationally in 1914 in surfaced mileage.

Tennessee

Taxes were a problem for Tennessee farmers by 1920, before the depression and increased road work. Industry had grown, though nearly three-fourths of the state’s residents farmed for income, and the state’s tax system kept reaching farm land and other real estate much more than personal property. In 1921, reform efforts failed, and in 1922, when land taxes produced a record amount, business and farm groups called for economy in government. A May 1922 meeting of farmers in Montgomery
County called for “elimination of waste and extravagance in all departments of the state government, and the abolition of all needless offices.” They complained that taxes fell “heavily on the farmers and farming interest,” and they endorsed a county resident for the Democratic nomination for governor. A Maury County farmers’ meeting in July favored abolishing many offices, reorganizing the state highway department, and ending the state’s reassessment system. Both candidates for governor in the 1922 general election advocated economy in government, changing the tax system, and reorganizing the state highway department.75

Residents of the Bolivar area, in southwestern Tennessee, acted both to cut taxes in November 1921 and to raise them by issuing road bonds in April 1922. “Hundreds” of citizens met there at the courthouse in November to seek tax cuts, granted later that week when county officials unanimously cut school, bridge, and road taxes. Yet jobs and better commerce and travel seemed served by a proposal in March 1922 to bring a main route, Lee Highway, through either Bolivar or nearby Jackson, depending on which of two counties first raised the local share of funds. At Bolivar, Hardeman County immediately pledged to pay one-third of costs for the new road and set a bond referendum. Advocating bonds as benefiting rural men, a writer to a newspaper said the road project “will furnish work for every available man, white or colored, and all their teams in the county.” Local editorials supported the road bonds for providing jobs, for developing businesses on the new route, and for creating taxable wealth in the county that “will eventually reduce instead of increase taxes.” In April, a large majority voted for the bonds. Despite political activities over taxes, very small amounts of revenue from Tennessee had been used in federal-aid projects completed by mid-1922, though the increase was large in such projects under way then. The three low-cost kinds of projects accounted for small mileage, yet other work was in relatively less costly kinds of surfacing. Many roads in the depression remained much as they had been in 1914, when Tennessee ranked twelfth in mileage of surfaced roads.76

Michigan

An early-1900s method of sharing state and local revenues in building roads was continued in using federal aid. Yet the local funds, reduced in their share of expenses where federal aid paid half a project’s cost, might increase in amount in the more costly kinds of improvements in postwar construction. Landowners continued to pay part of costs through special taxes of assessment districts formed near road projects. Some tax benefits were available to landowners in poorer counties from a state provision requiring matching shares of local funds according to counties’ assessed valuation. Yet the varying scale of local matching would offer no tax relief to farmers in wealthier counties who had low incomes in the depression. The local share became difficult to raise in 1921, when the depression’s slower money market left counties and districts unable to sell their bonds. Counties owed the state highway
department $2.4 million by late 1921 as their share of projects, leaving the state owing some $2 million to road contractors. The delay in payment was the equivalent of tax relief in that amount in the depression's worst year. Yet also in 1921, counties and townships expanded their own roadbuilding, for which state approval was not needed, building a state debt to them of $4 million for its share, an amount local taxpayers would pay on until the state could produce its funds.\(^7\)

Federal aid was part of road projects in twenty Michigan counties by mid-1921, expanding to thirty-one other counties by mid-1922. Of those projects, the largest amounts of federal aid went to wealthier counties, those paying the full 25 percent of building costs under the state's scale of local matching. Farmers and other taxpayers in those counties paid that higher rate of matching and, because wealth usually was greatest in populous counties, likely paid part of costlier kinds of projects, needed to provide for heavy traffic. Farmers in less-wealthy counties also paid taxes on such costly kinds of construction on main routes being developed to cross the state. Where roads had less traffic, state highway officials favored surfacing with gravel "to serve a greater number of people" than paving would allow. Still, federal aid went increasingly to costlier kinds of work. Low-cost kinds of projects, including graveling, accounted for 45 percent of federal-aid mileage completed by mid-1922, declining to 34 percent of mileage under way then. Graveling mileage nearly doubled in the projects under way, yet paving mileage nearly tripled.\(^8\)

**Arizona**

In early 1921, *Arizona Taxpayers' Magazine* opposed letting auto ownership qualify residents to vote in road-bond elections. That practice met the state constitution's rule that voters in bond elections be property holders, yet it allowed owners of such temporary property as autos to vote permanent debt on real property, it argued. Arizona had issued no state bonds, though some of its counties had issued them after the war. Sentiment against paving seemed indicated by lack of state funds such as those a bond issue would have yielded, said state officials. They paved only small, scattered stretches, believing "that it is impossible for any state agency to succeed with any policy not backed by a majority of the people within the state," though they predicted state bonds would pass when the economy improved.\(^7\)

Because state funds were lacking, twelve counties issued bonds by 1922 to match federal aid. Urban Maricopa County, at Phoenix, found strong support by early 1921 for a second postwar bond issue for roads, raising the total to $8.5 million. Paving for some 284 miles was planned, making "a gridiron of roads that will serve practically all the county's farming areas," many in irrigated parts of the Salt River Valley. Taxes would rise for the county's farmers, though bonds would be repaid also by the many urban residents. The county's urban and rural development would support the bonds, which totaled more than those issued for roads by eleven other counties. Also in early 1921, Gila County
Taxpayers' Association commended county officials for "their retrenchment in the various departments" they controlled and urged economy upon candidates about to take office in the legislature and in localities. Most of Arizona's federal-aid road work completed by mid-1922 was of low-cost kinds, and the proportion increased in work under way then, easing chances of requiring taxes on farmland.\(^{10}\)

Even when farmers were not protesting roadbuilding, problems of taxes and other costs amid the depression's low incomes remained. Farmers meeting in Bonneville, Idaho, adopted resolutions in early 1921 on railroads instead of highways. At the meeting, called by Bonneville County Farm Bureau, participants resolved that the state utilities commission should file a complaint with the federal Interstate Commerce Commission seeking lower freight rates for Idaho farm produce. In Alabama's Coffee County, farmers in summer 1921 objected to high assessments for county taxes and refused to pay them, questioning new tax records after the usual ones were stolen. In response, officials of the federal land bank at New Orleans said they would stop lending in the county because farmers there had obtained land-bank loans by agreeing to keep all taxes paid on their lands.\(^{11}\)

In the depression, problems were varied. Yet roadbuilding had become significant for many people by mid-1922 in taxation, in spending large amounts for construction in many localities, and in increasing the influence of state agencies on roads while diminishing that of officials of rural communities. Roadbuilding in every state at once in the depression gave opponents in many distant rural areas a common platform and similar methods, a shared effort they followed in newspapers and journals. Efforts to build auto roads, delayed by the war, had proceeded during the depression, even while growing as a topic of debate and criticism. By early 1923, sentiment for cutting taxes, including those for roadbuilding, seemed located mostly in states west of the Mississippi River, said Illinois' former highway superintendent, S. E. Bradt. East of the river, residents of states where agriculture and industry formed much of the economy seemed to favor "a continuation of about the present annual expenditure." Yet, he said, "in no state is there a demand for increased expenditure" for highways. Most criticism of road work from citizens, like much of a 1922 attempt in Washington at retrenchment in many areas of federal spending, Bradt said, was caused by interest in lower taxes.\(^ {12}\)

Spending for roads had recently been large and had "for some time been due for a review by the people," said editors of Engineering News-Record. In the programs of various governments in the nation, spending for highways had been larger "in the last three years than history has recorded in a similar period for any public work." One result was that "more than a third of the outstanding bonded indebtedness of all the states is for highways." Another result was a season of public debate and evaluation. Opponents of roadbuilding, it said, included farmers and others whose incomes remained low and whose taxes reflected higher motor-vehicle fees and the first payments on the era's road bonds. Other
opponents included some railroad officials, who believed roadbuilding aided competitors, and motorists, whose associations objected to registration fees or weight limits for vehicles.  

Many rural residents sought more of the era's new revenues for use in their localities. Often during the depression they advocated larger shares for counties of the proceeds of states' motor-vehicle fees. That would have strengthened existing structures of roadbuilding under local control. And it would have given local officials the choice of continuing construction in a depression or using the funds for road maintenance and tax cuts.

Rural people often compromised with postwar efforts to build auto roads, supporting low-cost kinds of work, which could extend state and federal funds to more communities. Those kinds also could provide jobs using many farmers' skills, horses, and tools. Farmers advocated low-cost kinds of road improvements also to help avoid the tax increases on their land that more costly projects would require. In projects built with federal aid, officials in many states often chose low-cost kinds of improvements, particularly in areas of the South and in northern states from the Midwest to the West. Low-cost road projects were kinds officials chose for an increasing share of federal aid in many states by mid-1922, amid political campaigns and comment on taxes by farmers and other taxpayers.
CHAPTER 9

IOWA FARMERS PROTEST TAXES AND ROAD COSTS

Iowa lacked state bonds for building roads and relied often on local funds, as it did on county authority. Despite such influence of localities and frequent protests there by farmers over road work, the new federal-aid program expanded to every county. To help match federal aid, the state raised some of nation’s largest revenues from motor-vehicle fees, including many paid by farmers. State laws were unready for some parts of roadbuilding’s acceleration by new funds, traffic growth, and a depression. Yet they gave local voters the initiative on whether a county would pave main roads and issue paving bonds. Where voters approved paving questions, which was likelier in counties with large urban centers, taxes might rise to help pay off county bonds for federal-aid projects. Further, farmers owning land near roads being paved would pay special taxes. When Iowa farmers opposed local bonds and taxes, using methods resembling those practiced elsewhere, they often acted as local groups speaking to their officials and neighbors on issues usually decided within the community, particularly on retrenchment in a depression. As in other states, in Iowa a nationwide program affecting rural property owners operated in 1920-22 in a context where citizen comment was customary.

Most Iowans experienced the depression’s impact. The state’s total for incomes, reported by individuals for federal income taxes, had risen during and after the war. From a booming 1920 to the slow economy of 1921, the total for incomes fell by larger percentage in Iowa than in any other state except South Dakota, where incomes, particularly from wheat, had kept declining. By 1921, prices were low for many farm products, including corn, hogs, and cattle, and many Iowa farmers had debts from recent expansion. The federal income tax, enacted just before the war, “has made it much more difficult to raise state and local revenues,” an Iowa farm journal contended in early 1922, urging local tax cuts. A western Iowa newspaper discounted the federal tax’s effect, given 1921 incomes. “In the middle west it looks like the man who will pay an income tax this year will be a man of distinction.”

Counties exercised much of the initiative on when to start federal-aid projects and what kind of improvements to make. Projects in the federal-state program, on primary roads, were requested by county officials, then designed, approved, and funded partly by state or federal officials, after which
they began when county officials decided to approve the local share of spending. In several counties, roadbuilding was a topic at citizens’ meetings, at sessions of local officials, and in county chapters of farm groups. Discussion often was on whether to pave main roads in a county and to issue county bonds to do so. In the absence of state bonds for roads, thirteen of Iowa’s ninety-nine counties gained authority from their voters by winter 1920 to issue bonds to pay the local share of costs for paving projects on primary roads. Through 1922, nine of those counties, with large urban populations or on a main route across northern Iowa, had issued $7.8 million in primary-road bonds. Only two of those counties—Scott at Davenport and Cerro Gordo at Mason City—issued bonds to the limit voters had authorized. Four rural counties whose voters had authorized bonds issued none. Urban as well as rural counties often used their federal aid to complete low-cost work of grading and graveling. The era’s new funds interested various groups. City and town officials requested a share of revenue from state motor-vehicle fees, which, like federal aid, were being allotted to counties by area. And rural groups sought revenues from the fees for use by counties on smaller, secondary roads.

In early 1921, the legislature greatly reduced counties’ costs for primary-road bonds. It allowed counties to use their allotments of federal-state funds to repay bond principal, leaving them to pay only interest. Also in 1921, the legislature allowed counties to borrow from their future years’ allotments of state and federal revenues, easing counties’ need to issue bonds. Still, by a taxing method that differed for rural and urban residents, one-fourth of paving’s costs in federal-state projects were assessed in special taxes on farmland beside the road. With farmers’ help, sentiment among Iowans prevented passage of ballot questions to authorize primary-road bonds in any county in the depression. After farmers defeated questions on paving and bonds in Dubuque County in late 1921, groups in many communities in winter 1921-22 opposed paving. Even in the improved economy of June 1922, voters rejected primary-road bonds for Linn County in the Cedar Rapids area.

Rural and urban residents alike raised large amounts for matching federal aid by paying the state’s motor-vehicle fees. After fee rates rose in 1919, they doubled the revenues in 1920, the amount ranking as the nation’s third highest. Revenues kept increasing in 1921 and 1922 as Iowans increasingly drove autos. By 1920, autos in Iowa averaged one to every six people, the nation’s highest per-capita rate, and 40 percent of the autos were in use on farms. The number of autos in the state had tripled in five years.

Though farmers could not affect prices of goods they bought or sold in a depression, they could express opinions on roads and have some influence on road programs of county, state and federal governments. Farmers’ opinions on roads varied, as did their economic interests and their information. Even before the depression, some farmers in mid-September 1920 had opposed spending on main roads designated by the highway commission instead of on smaller roads. As road work increased in 1921 and
1922, people debated conflicting claims—that the federal-state road program's work was not from local funds, that paving in the program raised farmers' taxes, that road work in a depression was extravagant, that issuing bonds aided the wealthy, and that paving was not recommended by some officials yet might be started by a county's voters. National farm groups criticized road work, forming policies state and local chapters sometimes endorsed. In early 1921, some Iowa legislators proposed to abolish the highway commission. That year, opponents of Iowa road work, particularly paving, included many farmers, often concerned over taxes. Yet for road projects then, some farmers worked as laborers or teamsters, hired out their horses, or sold grain for horse feed or land for right of way. 

The new federal and state funds were adding to a debate on centralizing authority over roads that for years had interested many Iowans. In the mid-1800s, Iowa roads were controlled in small districts of more than 4,000 administrative bodies, though authority of townships and counties grew. By the late 1800s, groups discussed rural road problems often in efforts to provide for free mail delivery. In 1904, though attempts to create a state highway department failed, a commission was formed to devise methods of road work and demonstrate them in counties. In 1913, the state gave the commission authority in localities to supervise road officials, investigate conditions, and approve plans for permanent road improvements. A trend to a cash basis for road work continued in communities. By 1920, counties and townships spent millions of dollars to pay for work on roads, though amounts would decline in 1921 and 1922. Some Iowans still paid poll taxes by working on nearby roads. Many farmers supported pre-depression road improvements, often favoring gravel surfacing on farm-market routes and opposing paving as unnecessary. Yet in local elections by 1921, twenty-six counties won authority for paving on primary roads; many of them had the state's larger urban populations. In thirteen other counties, the question of paving had been put on the ballot but defeated, not to return for at least two years.

Even before the depression, Iowa Farmers' Union had favored work on smaller, local roads and opposed work on main routes. At its 1920 convention in mid-September, members resolved that "we condemn our present road law as working an injustice on the rural districts within which there is any considerable proportion of urban population," apparently opposing urban support for paving main routes, often by using county bonds. They urged legislation "to provide for the grading and draining of all our country roads, as opposed to a designated road laid out by a Highway Commission unacquainted with our rural needs." Milo Reno of Ottumwa, formerly a Populist speaker, was elected Iowa Farmers' Union secretary in fall 1920 and became its president in fall 1921. Reno discussed taxes and roads in the group's newspaper and in speeches in 1921 and 1922. He objected to taxes to pay county agricultural agents yet, in an opinion that required explaining, supported some kinds of road work to hire the jobless. Though favoring inflation by issuing greenbacks, Reno opposed county road bonds, putting initiative for moderating depressions on the federal government instead of partly on localities.
In the depression's early months, opinions on road work varied, as did the work's effect on farmers and others. In Scott County, forty farmers owning land on a route considered for paving attended the county supervisors' meeting in early 1921 to object. For another road, though, the mayor of a town on the route and twenty other people asked the board for paving. At Iowa Falls, keeping roads open in winter was a project of the Community Club, which worked on 65 miles of roads one week with money and other help furnished by local businessmen. Yet for many farmers shipping produce, the immediate transportation problem was with railroads. With prices low for farm goods in February 1921, “transportation is the greatest problem we have to solve at present,” said J. R. Howard of Iowa, president of American Farm Bureau Federation, “and we are holding a conference with the railroads to see what can be done about this matter.”

In some areas that recently had supported road work, farmers quickly opposed it in the depression. Some objected to road work on a project in Scott County for surfacing with bricks, planned for 1921. The group—92 owners of land along the road—told county supervisors in February 1921 they wanted the work delayed until prices for materials and labor were nearer those for farm products. That reversed the opinion in a petition of summer 1920, when more than sixty landowners had requested paving the road.

In spring, when many farmers settled debts and local governments planned road work, taxes were a topic in some communities, even before road work expanded in the depression. In April 1921, a group met at Pleasant township hall near Bladensburg to complain of low farm prices and high taxes that were “causing much bitterness among the farmers of the community, who are disposed to hold their servants in public office to strict accountability,” said an Ottumwa newspaper. The group asked the township board to cut tax assessments to 1919 levels. Where federal-aid road work was under way near Atlantic, 200 farmers petitioned Shelby County in May to stop work on primary roads, which they termed a waste of money. Wapello County farm groups and township trustees, invited by county officials, sent representatives to a June meeting on seeking state reimbursement of local funds used in 1920 bridge building for federal-aid projects.

Farmers and county officials who were opposed to the highway commission's authority over roads may have been pleased by the introduction of a bill in the legislature in early 1921 to abolish the commission. Yet “the farmers of Iowa should not allow anyone to fool them about the State Highway Commission and its work,” said Wallaces’ Farmer, whose publisher, Henry C. Wallace of Iowa, had just become secretary of agriculture, administering in Washington the department including the federal-aid road program. The state commission had saved Iowa farmers millions of dollars, the journal said, by standardizing road work, requiring bids on contracts, and inspecting construction: “Some people try to make the farmer believe that the Highway Commission is responsible for voting bonds or for building
hard roads,” yet it “simply sees that the work is carried out at a fair price when the people have voted the bonds.”

With roads being built in rural areas in 1921, work for men and horses in Iowa increased. The change from the year before was greatest for the new federal-state program, working on primary roads. By spring, the highway commission discouraged paving on primary roads, favoring low-cost kinds of projects that avoided raising farmers’ taxes while produce prices were low. After the roadbuilding season, the commission reported that 1921’s primary-road work helped relieve unemployment “and has given some stimulation to business in the communities where work was in progress.” Road work provided wages spent locally and required purchases of supplies, including grain to feed horses.

Opposing Road Costs, Late 1921

By fall 1921, parts of the new roadbuilding, particularly paving, drew farmers’ opposition in resolutions of farm groups and in an urban county’s election. On several occasions, a group was speaking to its locality’s governments or voters, for the highway commission had since spring 1921 recommended against paving except at community request. Early in November, Linn County Farm Bureau members asked that “the first consideration in the good roads program be that of the farm-to-market road,” according to Wallaces’ Farmer. Thus, it reported, they had “joined forces with many other farm organizations in opposing hard-surfaced roads.” They favored building gravel roads until the economy improved, and “oppose the letting of any such exorbitant prices as have been paid in the past.”

In the November election, farmers in northeastern Iowa expressed sentiments that would continue in many parts of the state in 1922. Another county voted on whether to pave primary roads and to pay for part of that work by issuing bonds. In the referendum by Dubuque County, both questions lost, and “farmers voted almost solidly against” them, a newspaper reported. “The vote outside the city indicated that the farmers were organized thoroughly and figures indicate that they were a unit in their attitude toward the issues.” The referendum seemed important to Dubuque County Farm Bureau, whose president had at first opposed the questions, then resigned before the vote, along with two other bureau directors, and supported paving and bonds as a compromise with city voters. “I feel the farmer resident of the county must meet the city man half way,” explained the former president, J. J. Murray. “We will have our secondary system improved only through hard surfacing of the primary system.” Yet the rivalry he noted in local efforts for roads showed in the voting.

By mid-November, a new law governed the federal road program, requiring spending federal aid on main roads—systems of 7 percent of each states’ roads—and supporting state control of matching funds. The program’s funds grew, raising incentives for states and counties to begin federal-aid projects. Such changes did nothing to damp protests among many farmers, including those at National Farmers’
Union's mid-November convention in Topeka, Kansas. The resolutions committee declared, "State, local and highway taxes are growing so rapidly that they threaten the confiscation of farms and homes." The committee urged "that our state and local unions not only oppose any further increase in such taxes, but exert their whole strength to abolish unnecessary officers, boards, and commissions and the institutions of experimental and costly highway projects." The committee urged Farmers' Union members in 1922 elections to oppose candidates unwilling to limit taxes.

The recent Dubuque County vote was unclear in its implications. For Dubuque County's agricultural agent, N. G. Malin, the referendum's returns meant farmers had won, and "upon them also falls the responsibility of initiating and promoting action on the project of the people's choice," which he said was graveling. In December, Malin, also secretary of Dubuque County Farm Bureau, suggested a joint effort by farm, labor, and commercial groups to promote graveling. Malin proposed the effort in an open letter to Dubuque's Trades and Labor Congress and its Chamber of Commerce. The labor group later voted to support a petition for graveling Dubuque-Cascade road. The chamber's spokesman, though, objected to Malin's statement that the vote meant support for graveling. Malin "knows absolutely that there was no such counter proposal submitted to the people in the special election," said Dave Cassat, chamber secretary. Votes in the city, in fact, were about seven to three in favor of paving, Cassat said, and "any organization that purports to represent the people of the city of Dubuque should govern itself accordingly."

Also in the month after the referendum, officials from seven northeastern counties met in Dubuque to discuss roads and wages for work on them by men and horses. Main roads such as the Grant highway from Dubuque to Waterloo should be paved, said Buchanan County's engineer, H. M. Tschirgi, because "gravel will not stay on a road subjected to the volume of traffic we have at the present time." Dubuque County's engineer, G. A. Blunt, suggested the counties adopt a uniform scale of wages for road work, an issue affecting farmers as road workers instead of as taxpayers. "With prices as they are today," said Buchanan County supervisor E. D. Duckett, "I believe that the farmer, many of them bankrupt, who receives even $4 a day for himself and his horse team in road work will benefit. "We have in the past been educated up to $20 hogs and $2 corn, but conditions are changed. Today we have $5 hogs and 35-cent corn," and so must cut local government's expense, in which the largest item is labor cost. In Dubuque County, having a large city meant higher wages for farmers in road work, said supervisor Charles Datisman. "When a man with team has been used to receiving $8 to as high as $12 per day in the city of Dubuque, the average farmer living a few miles away simply drives into town when he wants work." Farmers in Dubuque County, he said, would object to a wage as low as $5. A wage of $3 a day would be fair for a man and team in Fayette County, said supervisor W. E. Anderson. Delaware County officials would set their wage after the meeting, said supervisor F. A. Mead. "We are
approached every few days by men who want to know what we intend paying for road work next year.”
With feed costs low, $4.50 a day for a man with a team seemed fair, he said.\textsuperscript{17}

Yet also in December, some Story County taxpayers considered wages for local road work too high. Cuts in various local appropriations and taxes were called for by a meeting of about 500 people at Nevada. Of seven resolutions passed, the first, said a newspaper, sought “suspension of county road work or other public work until a reasonable balance between farm and factory products can be established.” The group also wanted lower local taxes and cuts in spending, including that for road engineering and Farm Bureau. On county road wages, the group resolved, according to the report, that “public officials pay no more for labor than private individuals pay for the same class of labor.” In Iowa County, which includes the Amana communities, residents formed Farmers’ Loan and Equity Tax Reduction League by mid-December. Through it they planned to work for election of farmers to the legislature in 1922 and for changing the tax laws.\textsuperscript{18}

About 200 taxpayers met at Mason City to discuss taxes with Cerro Gordo County supervisors. One of the group’s supporters, Soren Petersen, said the meeting was held because of the “enormous amount of drainage” work, clearing water from low-lying land, “that the county supervisors forced upon us” and about paving that “was put in at the very highest figure that Cerro Gordo County officers could find.” Though the group was represented by several attorneys, “it seemed nothing could be done to stop” the officials’ projects. Such discussions had been part of a December meeting of Grimes Township Farm Bureau in Thornton, where comments included those by the county agricultural agent, to the displeasure of Petersen, a supporter of Iowa Homestead.\textsuperscript{19}

In Linn County, Farm Bureau members objected to the state’s procedure for authorizing paving and to paving’s cost. In December, at the county group’s annual meeting, members supported increasing local authority for opponents of paving. State law provided that, where questions of paving primary roads were defeated, a new referendum could be held after two years. The Linn County group wanted the provisions to apply where paving questions passed, as an attempt to keep paving under control of local voters. Predicting that paving, if approved in the county, would take years to complete, they adopted a resolution that “gravel roads will pull Linn County ‘out of the mud’ while we live; but, with continued building of hard surfaced roads our children’s children will see Linn County still in the mud.”\textsuperscript{20}

In several counties in winter, farmers re-enacted waning customs of local control of roads. Dubuque County farmers donated their labor and provided horses to put gravel on smaller roads. Using earlier roadbuilding methods, they proceeded with improvements on secondary roads without seeking compromises with city voters on paving primary routes. In Buchanan County, a “cooperative plan” for work on secondary roads resembled parts of the state’s special-assessment system, though with added
duties for farmers. When asking the county to gravel a secondary road, a newspaper reported, farmers would present with their petition a “signed up subscription list, showing that the farmers have raised a certain sum of money and asking that the county spend an equal amount in making the improvement.” Farmers in nearby Black Hawk County were donating labor to advance graveling of roads, and in a meeting at Waterloo they gained support from city representatives for the county to supply gravel. Reporting the agreement, a newspaper noted that “many good roads programs have failed to bring about desired results because of the differences in opinion of the two classes, the city man invariably standing for hard surfaced roads and the farmer for graveling.”

Paving was being opposed also by the highway commission, in response to the depression’s conditions of low income that were being mentioned frequently by farm groups. In late 1921, the commission said its 1922 road work “should see a decline in the mileage of pavement constructed, but should see a marked increase in the mileage of grading, draining, and graveling.” Yet the policy had begun earlier. In August 1921, commission member Anson Marston said that “we have announced publicly many times since the spring of 1921 that we believe under the present conditions paving on highways should not go forward except in communities which make special request therefor.” In 1921, much federal-state work had been for improvements other than paving. Farmers’ protests still had the effect of speaking to their county’s urban residents or others who might pursue plans for paving. And the state officials’ action in changing spending could encourage taxpayers seeking cuts by local governments.

Farmers support of graveling might bring them some income, as Dubuque County’s Farm Bureau noted. It supported using local men and materials in public projects for graveling roads, which would provide jobs and purchases in the county. At the group’s annual meeting in mid-December, members voted to “recommend the use of local material for the surfacing of our roads and commend the plan of our county board of supervisors of eliminating contract work on county road work and the employment of home labor.” To increase revenues for work on secondary roads, the group advocated allowing counties to keep all motor-vehicle fees they collected and to tax gasoline. It supported removing most of the federal-state program’s special assessments on rural land for paving, saying hard-surfaced roads were mostly for tourists and trucks.

Bonds for paving roads and other activities presented taxpayers with costs that could not be cut in a depression. Payments on bonds kept their usual schedule even if the economy slowed. When taxes for 1922 were set in November 1921 by supervisors of Woodbury County at Sioux City, taxes to repay primary-road bonds were the largest item, exceeding taxes for operating county government. Despite spending cuts, the total for county taxes increased over the year earlier because of “four items which the board was unable to cut—the primary road fund, voted by the people in 1919; bridge bonds, the county
road funds and the county home bonds." In January, the county said its expenses totaled $1.65 million, exceeding $1 million for the first time, with paving the largest single item.\textsuperscript{24}

Changing the state law that required the special assessments along primary roads could speed paving in many counties, according to Dubuque Telegraph-Herald. The reason in Illinois for "far more rapid progress than Iowa" in road improvement "must be the more practicable method of financing" the work, it said in an editorial in December. Iowa's law, providing for local control, during 1920-22 required elections before counties paved primary roads or issued paving bonds and required special property taxes on nearby farms for paving. The editorial pointed out that neither was required by Illinois. "Instead, state road bonds are issued and the state highway commissioner selects the roads to be hard surfaced. The result is that no county pulls back on the harness." It recommended changing Iowa's law.\textsuperscript{25}

People might consider such changes, though some attributed too much of farmers' problems to paving, according to Wallaces' Farmer. "In counties where there are big cities with a large number of people who want paved roads, it is impossible for the farmers to prevent the paving of roads," a January editorial noted. Yet paving was not as much of a problem for farmers "as certain people would make them believe." People in towns paid over half the money in the state's primary road fund, and Iowa's road law "is really quite fair." Still, it said, farmers might consider proposals to amend it so that all the cost of paving voted by county residents would come from the fund and none would be assessed to rural landowners. Yet instead of paving, it said, "the thing to do now is to use primary road money for grading and draining." Contract prices for that were as low as in 1913, and "common labor is unemployed and willing to work at pre-war wages."\textsuperscript{26}

**Seeking Cuts in Spending, Early 1922**

In many U.S. cities, contributors had produced funds to employ the jobless. Such efforts were in addition to municipal appropriations for immediate public works, recommended in late 1921 by the President's Conference on Unemployment, whose coordinator was Commerce Secretary Herbert Hoover. A policy of planning federal public works in advance for work during depressions, also a recommendation of the conference, was proposed in a bill introduced in Congress by Iowa Sen. William Kenyon, who led debate on the bill before its defeat in February. Recently, Congress had approved new roadbuilding funds and made them quickly available.\textsuperscript{27}

Yet among farmers in many areas in 1922, an election year during a depression was a time for appeals for government economy. Farm problems including low prices were topics in late January at an Agricultural Conference called at Washington by Secretary Wallace at the request of President Harding. The Harding administration in early 1922 urged efforts both to economize in programs generally and to
speed various kinds of government construction to raise employment. In Iowa, in a season of annual meetings of farm groups in many counties, newspapers in January and February reported the groups’ resolutions opposing spending and road work. Many meetings were described in two farm journals—*Iowa Homestead*, whose publisher, Dante M. Pierce, continued his opposition to the federal-state road program, and *Wallaces’ Farmer*, whose publisher in March 1921 had become secretary of the federal department in charge of the program. Besides the local meetings and their resolutions, the state’s Farm Bureau leader suggested planning for cuts in local taxes and giving counties money from vehicle fees to work on secondary roads. County and township taxation, said H. E. Cunningham, Iowa Farm Bureau secretary, should be studied “with a view to bringing about such changes as will tend to reduce taxation to a minimum.” He suggested a Farm Bureau group to plan farm-market roads to be drained, graded, graveled, and placed under county authority.28

In the first two months of 1922, Iowans at meetings in at least twenty-seven counties discussed taxes, public spending, or roads. Frequent topics were various activities of local governments and paving in the federal-state program. Many of the meetings were held by county chapters of farm groups. They included twelve by Farm Bureaus and five by Farmers’ Unions. Eleven other meetings were attended by a locality’s taxpayers generally.29

*Farm Bureaus*

In at least twelve counties, Farm Bureaus discussed taxes, roads, or the highway commission in January and February. The topics seemed interrelated for many people, and the meetings often adopted resolutions on several of them. Hardin County Farm Bureau members decided to “demand an investigation of the tax situation for the purpose of increasing efficiency in the handling of public business” in the county. Also, a newspaper reported, “further improvements in the primary road system were opposed until the cost of this work comes down to a point comparable with prices of farm products.” Hancock County’s Farm Bureau demanded “a reduction in local and state taxes” and requested reductions in salaries of the county agent and the other county officials.30

For Page County Farm Bureau members, local tax problems seemed caused by federal-state roadbuilding. They petitioned county supervisors “to expend no county funds for the following expenses connected with the construction and the maintaining of the primary roads in Page county: drainage, grading, surfacing and maintenance,” or for rail crossings, culverts, or bridges. O’Brien County Farm Bureau resolved to “urge a more economical system of grading township and county roads.” Keokuk County’s Farm Bureau adopted resolutions reported as “advocating a policy of economy and retrenchment in the conduct of public business.” It sought “an amendment to the road law to permit part of the auto license funds to be spent on secondary roads.”31
Though funds for state-federal roadbuilding had little effect in raising taxes of most Iowans, Webster County Farm Bureau agreed to “oppose the arbitrary power and reckless expenditure of public funds, which now characterizes the administration of the state highway department.” Until farm prices improved, they stated, “we favor a reduction of all tax levies to a pre-war basis” and a reduction of “all new projects in road building and other unnecessary expenditures of public offices.” Winneshiek County Farm Bureau’s directors opposed the federal-state program before learning that it did not raise taxes. The directors “passed a resolution asking that work on the primary roads be stopped as a saving of taxes,” a newspaper reported. Later a county supervisor told them of the amount collected as vehicle fees and other amounts added in federal funds for work on primary roads. Then the bureau passed a resolution to expunge the one by its directors.32

Paving was a concern in Jefferson County, whose Farm Bureau resolved that “we oppose a hard roads program for Jefferson County and urge our board of supervisors as well as every official in the county to curtail every unnecessary expense.” Linn County Farm Bureau opposed paving by endorsing the building of “properly graded, drained and graveled roads.” It did favor the immediate construction of those roads, though “at a cost in relation to economic conditions.”33

In Cherokee County, Farm Bureau members supported local authority over roads, stating, “We favor a restriction of the power of the Highway Commission so as to return more control in the matter of road construction to the Board of County Supervisors.” The group also said vehicle fees should be distributed for work on all roads of a county, not on just primary roads. In southwest Iowa, Cass County Farm Bureau endorsed “the stand of Mr. N. G. Malin in his fight against the Dubuque county bond issue” and urged that “the expense for highway engineers be cut at least 50 per cent” if not altogether. Preferring localism to a statewide agency, the group agreed that “the power of the highway commission should be curtailed so that the will of the people shall be carried out in building roads.” Yet it also would restrict localism, by legislation that “all voting of bond issues for road paving and road improvement purposes shall be by the owners of real estate that would be affected by such bond issue.” Property owners would decide on new roads, not the public generally, which had created the traffic, if Cass County Farm Bureau’s resolutions were put in practice. In neighboring Montgomery County, its Farm Bureau, in terms similar to those the same week in Webster County, resolved “that we are opposed to the arbitrary power and reckless expenditure of public funds which has characterized the state highway department.”34

Farmers’ Unions

Farmers’ Union chapters mentioned similar issues at early-1922 meetings in five counties of central or southern Iowa. Taxes, roads, and the highway commission seemed to be problems, as they did
Boone County Farmers’ Union agreed that “county taxes are above the resources” of farmers and asked that the county issue no more bonds until the economy improved. It urged reducing salaries of county officials, stopping salaries of the county engineer and officials receiving fees, and replacing county spending for the county agricultural agent with funds from subscription. It asked Boone County supervisors “to suspend all work where possible until the prices of farm products and factory articles are reestablished.” And the group recommended that “the State Highway Commission should be abolished.”

Cuts in spending also were advocated by Farmers’ Union members in Adams County, in south-western Iowa. At their annual meeting, they were reported to have opposed “any new work on roads, bridges or other public improvements.” They favored legislation enabling people of a county “to dispense with the services of the county agent and county engineer, if they so desire” and favored abolishing the highway commission.

Jefferson County Farmers’ Union heard a speech on taxes of county, state, and federal governments at its annual meeting at Fairfield. And it heard and adopted a report of three members who had discussed proposed changes in a road with the county engineer and supervisors. The three men, according to the group’s secretary, “were very grateful to the county officers who took them over the road and explained the work.” Also in southeast Iowa, Van Buren County Farmers’ Union meeting at Keosauqua opposed paving and “the present extravagant and wasteful way in which the taxpayers’ money, the automobile tax and the federal aid money are being spent in this state.” It called for repeal of the state’s road law and replacement of the highway commission with a smaller engineering staff located in districts. Public officials’ salaries should be reduced, and a farmer should be elected to the legislature, it decided. Nearby, Davis County Farmers’ Union called for repeal of laws authorizing a highway commission and county engineers and the law providing for public funds for “compensation of the farm bureau agent (county agent).” Such changes, sought also in some other counties, would have returned authority for all road work to county supervisors and would have removed comparatively recent additions to local government’s officers.

A mid-February meeting of farmers from Iowa and elsewhere, the American Cooperators’ Congress, was sponsored in Des Moines by Farmers’ Union, American Society of Equity, and Equity Cooperative Exchange. Its three days of sessions included speakers on marketing. J. E. Kelly of St. Paul, Minnesota, a director of the exchange, said Congress had not helped farmers though it had guaranteed railroads’ income in the 1920 Esch-Cummins Transportation Act, for which Iowa farmers were partly to blame, for “you put Cummins back in the United States Senate.” Someone in the audience stated, “It was the Farm Bureau that did that.” Several speakers criticized Farm Bureau policies, bringing applause, according to Iowa Homestead, which noted that “references to county agents as the
instruments of Farm Bureaus, and all hints that the county agents ought to be abolished met similar approval." Resolutions approved by the meeting began with objections to local bonds and paving, a recommendation that county engineers be abolished, and the suggestion of "an amendment of the automobile tax law, so that 50 per cent of the tax may be used on our secondary roads." The group also decided to "favor the abolishment of the state highway commission and ask the return of their power to the people." A resolution favored a bonus for ex-servicemen, Wallaces' Farmer reported, and on a motion of Milo Reno, Iowa Farmers' Union president, "this was amended to read that the bonus was to be paid in greenbacks." 38

**Taxpayer Meetings**

Besides annual meetings and a convention sponsored by farm organizations, local meetings were held in early 1922 for anyone concerned over tax or farm problems. During the year's first two months, taxpayers' meetings were held in eleven counties. Polk County farmers met at a Des Moines hotel to discuss taxes, said a newspaper. "Declaring that the prices of their farm products had been 'beaten down by rings of speculators until they are far below the cost of production, '" and that their wealth was one-third of its value of three years earlier, they demanded tax cuts equal to their losses. The group, which had representatives from every township, named a county committee to work for tax cuts. At one of its weekly meetings, Polk County Taxpayers' League objected to high taxes, bonds, and paving assessments. Though county bonds required higher taxes to repay them, the group objected on grounds that issuing "tax-free bonds exempts the rich speculator from taxation and throws the additional burden on the farmer and laboring man." The group favored building farm-to-market roads "under the control of the board of supervisors," and demanded "that all costs of constructing primary roads be paid out of the primary road fund," instead of requiring special assessments for paving. 39

Jasper County taxpayers and farmers met at Newton. After a speech by a representative of Iowa Homestead, the group by "a practically unanimous vote" adopted resolutions urging cuts in county spending, opposing county bond issues without a vote of the people, and demanding cuts in local officials' salaries equal to the drop in farm prices. The group decided to "denounce the policy pursued by the highway commission, in the state, and advocate the election of a legislature which will place a curb on its powers, which should have been placed there when the original law was enacted." And it demanded "a return to local self government in all matters relating to local taxation." 40

In southeast Iowa, farmers and taxpayers attended a meeting at Washington, Iowa, sponsored by Washington County Farmers' Union. Petitions with some 2,000 names were presented, and resolutions supporting them were adopted. They demanded cuts in spending and taxes, favored a "pay as you go" policy in county projects. They called for salary cuts for officials and demanded that "wages paid for
road employees other than common labor shall not exceed $5 per day." A state senator from the county spoke about road work. In Hardin County in central Iowa, about 1,500 taxpayers met at Eldora and resolved that “all public work shall be cut to the minimum until such time as farmers’ products shall bring a fair return.” They contended that “the state highway commission is spending millions of the people’s money where the benefits will not measure up to the costs,” and they called for a “two year holiday in drainage and road work except such as is absolutely necessary.”

In Hamilton County in January, at a meeting aiding a legislative candidate’s campaign, farmers adopted resolutions for tax cuts. Webster City’s court room “was filled by farmers from practically every section” of the county, responding to a general invitation to meet to discuss farm problems, a newspaper reported. They approved resolutions “asking for economy in tax levies, opposing the issuance of bonds except by a vote of the people,” and “asking a ‘holiday’ on road and drainage work until conditions are more propitious.” They wanted the highway commission to curtail its work. And they supported a local man’s bid for reelection to the state senate with enthusiasm. In March, farmers met again at Webster City, on a call to endorse other legislative candidates. Men who visited a newspaper’s office to announce the meeting included “a number of the leading farmers from various parts of the county.” Resolutions of the meeting supported local (and opposed state) control of roads, favored graveling, and sought “repeal of the present paved road law.”

Taxpayers of Ida County in west Iowa opposed a project between Ida Grove and Battle Creek. They urged county officials to reconsider the primary-road project, which they said was a “wanton squandering of the taxpayers’ money.” At Denison in neighboring Crawford County, some 750 farmers and townspeople met at the opera house in mid-January and supported economizing in local government, particularly in road work. The group “demanded that no new road work or other public improvements be initiated until better conditions prevail” and opposed any increase in public debt.

In Louisa County, farmers near Morning Sun met in January and petitioned county supervisors to reduce county salaries and hiring and to dispense with offices of county agent and county engineer. They also wanted to make sure railroads paid enough taxes. Similarly, in the county’s Letts community, taxpayers gathered at a hall, protested county government’s expense, and called for abolishing offices of county agent and county engineer. They favored “discontinuance of public road work except the road dragging and such repairing as was necessary to the public safety,” said a newspaper.

Other taxpayers meetings occurred soon at Montezuma in Poweshiek County and at Creston in Union County. In many counties, Iowa Homestead noted, meetings were being held and “taxpayers’ leagues or associations are being formed.” Indeed, it considered the time “ripe for the formation of a statewide taxpayers’ organization that will unite all the local and county associations or leagues” to work for laws to cut taxes.
At Cedar Rapids, a public meeting on roads had such sponsors as the local Farm Bureau, Chamber of Commerce, and Society of Engineers. The 500 people at the February "farm-to-market road congress" included road engineers, businessmen, and farmers. At the start, "several delegates jumped to the floor at once urging the repeal of the road law and the abolition of the highway commission," though the commission's chief engineer, F. R. White, described its work in recent years. During the meeting "quick action in improving roads was urged in every speech though there was a wide divergence on how it should be done." Many favored gravel roads.46

For at least one farm group in early 1922, roads was a recruiting issue. Farmers' Legislative Council was asking farmers to join, although its lobbying efforts, in Wallaces' Farmer's opinion, would duplicate those of Iowa Farm Bureau Federation, Iowa Farmers' Union, and the Society of Equity. "Last winter there was some effort made to sell memberships in this organization" to send its leaders to Des Moines for the legislature's session. They had little influence on legislation, and now the group's way of seeking members "seems to be to persuade the farmers that an effort is going to be made to put thru an extensive hard roads program this next year, and to warn them that their only safety lies in each of them paying the Legislative Council fifteen dollars to prevent it. This agitation seems to be made up very largely out of thin air" to add members. The three other farm groups already had opposed paving until it cost less, and the highway commission agreed, the journal said in February.47

Some opposition to the new road program likely came from what seemed to be similarities to customary road work of counties. Some came from its complexities. "A copy of the plans of the state highway commission should be placed in the hands of every citizen in the state," according to Council Bluffs Nonpareil. "Most of the kicking and objecting to road construction in Iowa is due to the fact that the fellows that are doing the objecting do not understand the situation."48

Holding another opinion, Iowa Homestead noticed little good in federal-state construction. Vehicle fees were amounting to much more than Iowa's federal aid, publisher Dante M. Pierce pointed out. Compared to road funds raised in Iowa through the fees, together with county and township taxes, special assessments, and county bonds, "the amount which we get out of the federal aid fund is only a drop in the bucket."49

Pierce had opposed parts of the federal-state program in 1921. He said then that Iowa's road laws should be changed to carry out a slogan of "Make every Road a Better Road." He also contended that "we are still robbing our county and township roads for the construction of federal aid projects." He supported legislative changes that had permitted by 1922 using primary-road funds to build bridges. That change relieved counties of an obligation that had required regular amounts of local funds, the kind of obligation still mentioned as a problem in resolutions of 1922. Pierce also opposed special assessments made on land near primary roads being paved. He argued that since "the federal and state
governments have taken from the counties power to determine their own local road programs in many important respects” it was unjust to compel counties and individuals to pay funds other than federal taxes and license fees.50

In early 1922, Pierce rejected the highway commission’s statement that Iowa received much more in federal aid for roads than it paid. It seemed to Pierce, what with “the clouds which are banking upon the horizon of the Iowa State Highway Commission, as it functions under the present Iowa road law, that its propagandists can find a far better field to operate in than this defense of the principle of federal aid.” Receiving federal money, Iowans lost much of their local control of roads, Pierce argued. “I am perfectly willing to have the federal government appropriate money for road building, if it desires to do so, but I do not believe Congress should make this aid contingent upon a sacrifice of our local rights of self-government.” Incentives of federal funds could lead to road projects that raised farmers’ taxes to pay matching funds.51

The two Iowa farm journals in February said farms were overtaxed. Pierce argued in Iowa Homestead that “the property tax, and particularly the tax upon land values, has become the most important of our taxes,” partly because wealth in land cannot be concealed and is considered “one of the most important measures of the ability of a citizen to pay taxes.” Though a $50,000 farm may yield a modest living, the owner pays more in property taxes than a more-prosperous professional man, “who will escape direct taxation, other than the federal income tax.” For Wallaces’ Farmer, edited by Henry A. Wallace, “the most important suggestion” for cutting farmers’ taxes was to raise assessments of railroad property. Cutting local spending in road work is “being agitated very strenuously in Iowa,” together with proposals that some revenue from vehicle fees “be applied to the maintenance of secondary roads, so that local taxes for this purpose can be cut.” Yet “school taxes bear down more heavily on the farmer than road taxes.”52

A Better Economy, Spring 1922

Because of recent increases in corn and livestock prices, farmers were making settlements due March 1 on land sales, leases, and rentals with less difficulty than expected, according to several Des Moines bankers. Few defaults were reported. Loans were available at lower rates, though higher produce prices let many farmers pay in cash. The rise in prices helped Iowa banks reduce their borrowing from the federal War Finance Corporation, which had offered credit for agricultural purposes, and reduce their debts to the Federal Reserve Bank at Chicago and other banks.53

Though Marion County’s supervisors had been criticized for primary-road projects and bridge construction, an examiner’s investigation, reported to the state auditor in March, found no problems. Supervisors had let contracts to lowest bidders, and the highway commission approved the contracts, a
newspaper reported. "And while the price paid for land was too high," it said, "the board got it as cheaply as possible." The examiner also said taxes in the county had increased before the depression, rising 288 percent from 1910 to 1920. Still, early in 1922 about 1,000 people in the county petitioned for a meeting to oppose a primary-road project planned by county supervisors.54

Despite higher produce prices, some farmers and other people continued meeting to discuss taxes. In Humboldt County in north-central Iowa, the county Farm Bureau’s legislative committee favored a "reasonable," more-limited supervision by the highway commission over the primary-road system, and its members decided to "oppose the paving of any of our public roads. We favor gravel roads." They also called for cuts in the county’s spending and taxes.55

The economy’s recent improvements changed attitudes among some farmers in southeastern Iowa, particularly on local taxes. In the Burlington area, “one indication that the farmers are feeling more cheerful is a decline in the agitation for impracticable tax reductions,” Des Moines Register reported in March. “When the agricultural depression was at its worst, meetings of farmers demanded wholesale abandonment of necessary works and in some cases suggested that the half yearly tax collection should be passed up entirely. Sentiment of this sort appears to have evaporated,” it said. And “it is noted as evidence of the change that a large part of an assessment for a roadway from Burlington to Middletown was paid in cash.”56

Yet in nearby Keokuk and Mahaska counties, taxpayers’ meetings continued opposing spending. At Sigourney in Keokuk County, a March meeting’s resolutions sought repeal of laws authorizing the highway commission, county engineers, and county farm agents. Paving should be voted on only by residents who live outside of towns and cities, the meeting’s participants held, and farm-to-market roads should be improved instead of “spending vast sums of money on a small portion of our roads.” About 1,000 people were reported at a Mahaska County meeting at Oskaloosa, at which they called for a variety of cuts in spending and more-economical government at all levels. They demanded that the “enormous amounts heretofore expended for rounding corners and establishing new roads” and replacing good bridges be stopped, together with all funds for a county engineer. They wanted “a reduction in all road labor proportionate to the price of farm products.” And they objected to the “arbitrary power” of commissions, demanded abolition of “the state highway commission, and favored local self-government in county affairs.”57

In northeast Iowa, similar resolutions emerged from a taxpayers’ meeting in Chickasaw County. All state and county officials should cut spending to ease the weight of taxes, the group decided, and the Esch-Cummins railroad law should be repealed. It decried “removal of authority from local official bodies” and asked the legislature to abolish the highway commission.58
Members of American Society of Equity unions from Cedar, Clinton, and Scott counties sought reduced spending to allow tax cuts. Meeting at Wheatland in Clinton County, they unanimously adopted resolutions. One demanded retrenchment because the "burden of taxation had become almost intolerable," a newspaper reported. Another opposed issuing tax-free bonds.\(^{59}\)

At Chariton in Lucas County in south-central Iowa, farmers and other taxpayers held meetings. At one, they heard a speech on federal-state road work by William Collinson of Chariton, the highway commission’s chairman. Yet the “hundreds of farmers who crowded the courtroom,” Iowa Homestead reported, were “in no mood to listen to a lengthy defense of the highway commission or its autocratic interpretation and administration of the present road laws.” The group unanimously adopted resolutions urging repeal of the state highway law and favoring legislation to allow people to dispense with county engineers and county farm agents and to prevent the state or counties from issuing bonds without a vote of the people. Similar legislation on issuing county bonds was requested in April by Crawford County Farmers’ Union at Dennison.\(^{60}\)

During late 1921 and early 1922, meetings on taxes and roads were held in at least thirty-five counties (figure 10). Most of the meetings, those in twenty-seven counties, occurred in the first two months of 1922, when farm work was slow in winter, tax assessments were being made, and settlements were prepared for farm debt and rent. Recent changes in federal road program had strengthened state authority and spending for main roads. Frequently, meetings were part of activities in county chapters of statewide farm groups, including Farm Bureaus of fifteen counties and Farmers’ Unions of six. Many of the meetings—sponsored by those and other local groups, candidates’ supporters, commercial groups, taxpayers’ leagues, or county officials—were open to anyone. The count is anecdotal, reflecting largely the reports in two farm journals, together with those from scattered issues of several newspapers. Thus, though figure 10 helps locate the meetings discussed in this chapter, it cannot indicate a pattern of where meetings on roads and taxes were held. Township and county meetings on local taxes and property assessments, particularly in hard times, likely occurred often in many areas before the postwar era and its more costly roadbuilding. In late 1921 and early 1922, the meetings occurred in numerous counties throughout the state, offering people in communities and towns a chance to comment on taxes and the costs of road work in programs of local, state, and federal governments. Meetings were frequent among chapters of a few statewide farm organizations, at a time when they usually held annual meetings and considered resolutions, and often their concerns were similar.\(^{61}\)

In some counties, road work started in 1922 despite opposition. In January, Buchanan County Farm Bureau adopted a resolution urging “that a policy of real retrenchment and economy be adopted” for all activities of government and that “the letting of expensive road building contracts and other unnecessary construction should be deferred.” It stated that its members “favor and heartily endorse
Figure 10. In at least 35 of Iowa's 99 counties, groups discussed taxes and roads in late 1921 and early 1922, a season of low farm prices and preparation for road work and political campaigns. Farm groups held some of the meetings; political candidates, a commercial club, and taxpayer groups sponsored others. Resolutions adopted at the meetings often sought cuts in local taxes and in spending for roads. Many opposed paving main roads by matching federal aid.

<table>
<thead>
<tr>
<th>Map No.</th>
<th>County</th>
<th>Kind of Meeting</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adams</td>
<td>FmU</td>
<td>Feb</td>
</tr>
<tr>
<td>2</td>
<td>Boone</td>
<td>FmU</td>
<td>Jan</td>
</tr>
<tr>
<td>3</td>
<td>Buchanan</td>
<td>FmB</td>
<td>Feb</td>
</tr>
<tr>
<td>4</td>
<td>Cass</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>5</td>
<td>Cerro Gordo</td>
<td>taap/FmB</td>
<td>Dec</td>
</tr>
<tr>
<td>6</td>
<td>Cherokee</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>7</td>
<td>Chickasaw</td>
<td>taap</td>
<td>Mar</td>
</tr>
<tr>
<td>8</td>
<td>Clinton</td>
<td>Equity</td>
<td>Mar</td>
</tr>
<tr>
<td>9</td>
<td>Crawford</td>
<td>taap</td>
<td>Jan</td>
</tr>
<tr>
<td>10</td>
<td>Davis</td>
<td>FmU</td>
<td>Feb</td>
</tr>
<tr>
<td>11</td>
<td>Dubuque</td>
<td>FmB</td>
<td>Dec</td>
</tr>
<tr>
<td>12</td>
<td>Hamilton</td>
<td>taap/cand</td>
<td>Jan</td>
</tr>
<tr>
<td>13</td>
<td>Hamilton</td>
<td>cand</td>
<td>Mar</td>
</tr>
<tr>
<td>14</td>
<td>Hancock</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>15</td>
<td>Hardin</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>16</td>
<td>Hardin</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>17</td>
<td>Humboldt</td>
<td>FmB</td>
<td>Mar</td>
</tr>
<tr>
<td>18</td>
<td>Ida</td>
<td>taap</td>
<td>Jan</td>
</tr>
<tr>
<td>19</td>
<td>Iowa</td>
<td>TaxpLeague</td>
<td>Dec</td>
</tr>
<tr>
<td>20</td>
<td>Jasper</td>
<td>taap</td>
<td>Jan</td>
</tr>
<tr>
<td>21</td>
<td>Jefferson</td>
<td>FmU</td>
<td>Jan</td>
</tr>
<tr>
<td>22</td>
<td>Jefferson</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>23</td>
<td>Keokuk</td>
<td>taap</td>
<td>Mar</td>
</tr>
<tr>
<td>24</td>
<td>Keokuk</td>
<td>FmB</td>
<td>Feb/Apr</td>
</tr>
<tr>
<td>25</td>
<td>Linn</td>
<td>FmB</td>
<td>Nov/Dec/Feb</td>
</tr>
<tr>
<td>26</td>
<td>Louisa</td>
<td>taap</td>
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<td>27</td>
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<td>28</td>
<td>Mahaska</td>
<td>taap</td>
<td>Mar</td>
</tr>
<tr>
<td>29</td>
<td>Montgomery</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>30</td>
<td>O'Brien</td>
<td>FmB</td>
<td>Feb</td>
</tr>
<tr>
<td>31</td>
<td>Page</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>32</td>
<td>Polk</td>
<td>taap</td>
<td>Jan/Feb</td>
</tr>
<tr>
<td>33</td>
<td>Poweshiek</td>
<td>taap</td>
<td>Jan</td>
</tr>
<tr>
<td>34</td>
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</tr>
<tr>
<td>35</td>
<td>Union</td>
<td>taap</td>
<td>Jan</td>
</tr>
<tr>
<td>36</td>
<td>Van Buren</td>
<td>FmU</td>
<td>Feb</td>
</tr>
<tr>
<td>37</td>
<td>Washington</td>
<td>taap/FmU/cand</td>
<td>Jan</td>
</tr>
<tr>
<td>38</td>
<td>Webster</td>
<td>FmB</td>
<td>Jan</td>
</tr>
<tr>
<td>39</td>
<td>Winnebago</td>
<td>FmB</td>
<td>Jan</td>
</tr>
</tbody>
</table>

*a Candidate (cand); Commercial Club (Com); Engineers' Society (Engr); Society of Equity (Equity); Farm Bureau (FmB); Farmers' Union (FmU); taxpayers (taap); Taxpayers' League (TaxpLeague).
the farm-to-market road building plan.” Later in January, though, the county engineer suggested paving of primary roads to save money while prices were low and to provide jobs and spending. After county supervisors in February voted to seek bids on a paving project, debate by county residents, road officials, and others occurred at meetings over several weeks. An early meeting, at a farm-produce sales pavilion, drew 800 people, including owners of property on the road, of whom an estimated 90 percent had signed a petition that day opposing the paving project. State highway officials told the crowd the project would begin at local decision. A newspaper called the meeting and its questions and speeches an exercise in self-government.62

Buchanan County’s supervisors had spent little in federal and state funds for roads before approving a large paving project in March. Their decision, by a 3-2 vote, reversed a vote of a few weeks earlier and “came as a surprise to the people,” a newspaper reported. “There has been opposition to hard surfacing this year, owing to the financial conditions of the farming community, while others have urged doing such improvement work as a means of relieving depression by putting money into circulation locally.” Though landowners at first objected, the supervisors awarded a contract, and work on the $422,782 project to pave 15 miles proceeded, increasing the area’s employment and traffic. In June, two of three supervisors up for reelection were renominated—one had voted for the project and one had opposed it. Another incumbent who had opposed it lost in the primary. Opposition among owners of property by the road may have subsided partly because their special assessments were to be delayed until the legislature met, after the November 1922 elections, on the chance it would reduce the share of paving cost to be paid by such taxes. The day after the June primary, supervisors of neighboring Black Hawk County awarded a $497,145 contract to pave 17.7 miles of the same primary road.63

In much of Iowa by summer 1922, despite farmers’ continuing opposition to paving, public sentiment on road work had seemed to change, sometime before primary elections. In winter 1921-22, roads had been a topic in numerous meetings, and paving a subject of frequent opposition. Still, county officials in 1922 increasingly decided to spend their nonlocal road funds, those allotted in the federal-state program for working on primary roads (table 2). According to the number of contract lettings they authorized, county supervisors often started primary-road work before June 5 primary elections. In May, they awarded contracts for more than twice as many primary-road projects as in May 1921, and numbers of such projects remained above 1921 levels through November. The change began in April, the first month in 1922 when contract lettings for primary roads outnumbered those a year earlier.64

The economy had improved in parts of the state. Farmers had been receiving higher prices since early 1922 for hogs and grain. Some farmers paid debts due March 1 with fewer problems than
Table 2. Primary-road projects for which Iowa counties awarded contracts, 1921 and 1922 building seasons

<table>
<thead>
<tr>
<th>Month</th>
<th>1921</th>
<th>1922</th>
</tr>
</thead>
<tbody>
<tr>
<td>December (preceding year)</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>January</td>
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<td>7</td>
</tr>
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<td>February</td>
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<td>July</td>
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<td>August</td>
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<td>24</td>
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<td>September</td>
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<td>28</td>
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<tr>
<td>October</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>November</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>158</td>
<td>212</td>
</tr>
<tr>
<td>Number by June 5 (election, 1922)</td>
<td>70</td>
<td>84</td>
</tr>
<tr>
<td>Share of year’s total by June 5</td>
<td>44%</td>
<td>40%</td>
</tr>
<tr>
<td>Number after June 5</td>
<td>88</td>
<td>128</td>
</tr>
</tbody>
</table>


expected. Spring activity rose in trade, manufacturing, and railroads. In May, later in the roadbuilding season than in 1921, county officials increasingly awarded contracts on primary-road projects, weeks before elections. After June’s primary voting, the increase continued. From June 6 through November, county supervisors awarded contracts for 60 percent of the year’s primary-road projects, compared to 53 percent for June-November 1921. For all 1922, the 212 primary-road projects that county officials decided to let was an increase of 41 percent over the 1921 total.

Opinions on road work may have helped reduce the number of federal-state projects begun in early 1922. Yet after farm groups’ resolutions in early 1922 opposing road work, public sentiment in late spring was considered by local officials to be favorable enough to permit increasing work on primary roads. The farm economy had improved since winter. County boards of supervisors held the most lettings for primary-road projects in 1922 in May and September, weeks before primary and general elections. Most projects were for work other than paving. By late 1922, primary-road projects, complete
Roadbuilding slowed in 1922 from problems including concern over taxes, the highway commission said. Rain delayed spring work. Strikes by rail shopmen and coal miners slowed work needing trains to haul materials or fuel. And county supervisors put off some road work because they thought "public sentiment, during the early months of the year, did not warrant them in letting extensive road building contracts," according to the commission. Many contracts for primary-road work were not awarded before spring or midsummer. Other plans, it said, for nearly 400 miles of road work ready to begin, the counties left without contracts that year.66

Farmers wanted tax cuts, and road taxes were a considerable part of taxes collected by their counties and townships. By mid-summer, though, when the economy had improved and campaigns for the June primary for state and local offices had been completed, sentiment for tax cuts declined. In response to that sentiment earlier, Iowa Farm Bureau had studied taxes and spending. It determined that, though economy in government was needed, few opportunities existed for large spending cuts, a newspaper said in July. "Agitation for tax economy throughout Iowa is less intemperate now than it was a few months ago, but it is still insistent, an official of the bureau declared." Tax problems, the study found, resulted not from extravagance or inefficiency but from addition of functions over years. Also, the number of autos in Iowa had grown steadily, and summer's increased travel in 1922 included many farmers among motorists on main routes.67

In 1921 and 1922, farmers' groups as well as urban property owners mentioned special assessments as a reason they opposed paving. Still, assessments for paving primary roads were limited by property value, declined by distance from the road, and could be paid over ten years. A problem in paving assessments was their complexity, which officials of Cedar Heights, near Waterloo, tried to clarify, describing in a newspaper ad the provisions for deferring the tax payments. In late 1922, the highway commission recommended repealing the system, so that none of the cost of paving on primary roads would be assessed to property by the road.68

The economy's effect in 1920-22 on farmers had intensified their protests against paving. Yet Iowa Farmers' Union had criticized paving before the depression, and opposition would continue among some farm groups after farm prices improved. Such groups included State Grange of Iowa at its annual meeting in December 1922. "The farmer wants good roads" and other modern conveniences, the state Grange's master, A. B. Judson of Balfour, said at the meeting. The question was whether he could afford them, he said, and how to build them with least waste of public funds. Judson and some in his audience may have considered the expansion of roadbuilding in 1921 and 1922 signs of waste of public...
funds. Building main routes, emphasized by late-1921 changes in federal law, may have strengthened their opposition. "Many miles of high-priced roads are being built for the purpose of obtaining the federal aid when the benefits will not justify the cost, and in many cases the people are not asking for these roads because they know that under present conditions they cannot afford them." What those roads would cost people he did not say, though he may have been referring to special assessments on landowners for roads that were paved. Judson suggested the group adopt resolutions of the National Grange, including one urging more attention for farm-to-market roads to railroad stations, "where ninety percent of the products of the farm are delivered." Some Iowa Grange members considered paving unwise even in an improved economy. Interpreting events in terms of the group's familiar concerns, they discussed whether better main roads might raise railroad rates.69

Many projects began in the federal-state program during 1920-22 under Iowa's laws as they existed in 1920, though also with modifications in 1921 to allow counties to repay road bonds from their allocations of primary-road funds. Further adaptation to postwar roadbuilding soon reflected recent expressions of popular sentiment. Some changes in road taxes sought at meetings of farmers and other taxpayers in winter 1921-22 were made at the legislature's next session, in early 1923. The legislature cut in half the 25-percent share of paving to be paid by special assessments on land near the road, and it made the change retroactive. Half of all amounts that had been paid in special assessments were to be refunded to taxpayers from primary-road funds. Other new provisions allowed using the primary-road funds, from vehicle fees and federal allotments, for work on secondary, farm-to-market roads if a county's primary roads had been graded, drained, and surfaced. Seeking further to shift roadbuilding costs from rural landowners to road users, the legislature approved a gasoline tax, which the governor vetoed. After protest from local groups in the depression, primary-road construction became funded more from state and federal sources, relying less on the taxes from counties and from roadside land that earlier were considered community checks on spending. Those changes in the sources of funds also prepared roadbuilding to proceed in depressions without opposition from farmers.70

In 1920-22, few people in Iowa argued that farmers could not get by without paved roads. Grading, draining, and graveling were improvements most Iowa roads still lacked. Paving, the only primary-road work requiring special tax assessments on land near the route, was an issue on which many farmers saw their interests as opposed to those of other road users. Farmers' resolutions favoring economy, in road work as in government generally, stated their interest in reducing property taxes. They also allowed farmers to participate in road programs, as they had when all road work was decided on and carried out within the community. Some farm groups' resolutions may have been intended to prevent referendums on paving, required before counties could pave or issue paving bonds for primary roads. During calls for
spending cuts, by farm groups and others during the start of election campaigns, local officials put off some federal-state road projects that were ready to begin in early 1922. After the economy improved in spring and many farmers made their annual settlements for debts, local officials increased the number of projects near elections. As in the year before, most projects were for work other than paving. In opposing paving in 1921 and 1922 for tax reasons, farmers were opposing the worst kind of road work for creating jobs. Grading, draining, and graveling roads provided more jobs and cost less, as the highway commission and some city groups said.
CHAPTER 10

PREFERENCES IN HIRING FOR SCARCE JOBS

Roadbuilding in 1920-22 was intended partly to provide for veterans. When approved by Congress in early 1919, a hiring preference was part of the federal-aid road program to relieve their unemployment, expected as the economy adjusted to peacetime. When the program began expanding as the economy slowed in 1920 and 1921, sentiment among many men favored influencing its hiring by that preference and others. Some men advocated hiring American citizens instead of Mexican nationals, many of whom had worked in the wartime economy in varied jobs, including farming and roadbuilding. In urban counties in areas including the southern Plains, political organizations often gave hiring preference to men associated with them, sometimes excluding blacks. In many areas, local men claimed they should have preference over transients. Unlike farmers who called for tax cuts, laborers often opposed hiring other laborers from a belief that road spending might be too small to provide them work.

A preference for local men might seem established by their earlier efforts on roads. Until recently, most work on the nation’s rural roads had been done by local authority and labor. For generations, men had worked on roads as a local duty, for little or no cash. In sparsely populated areas in the southern Plains and the Southwest, though, local labor had been less effective in road work, as in agriculture. Particularly in labor shortages of the war era, counties, states, and contractors there relied on labor mobility in road work; convicts worked more, and Mexican nationals supplied much wage labor. In 1920-22, local governments continued to tax land in communities for road funds, with which they often hired men from the area. Interest in getting the jobs grew quickly as the economy slowed.1

Since the 1800s, easy rail travel had made available in much of the nation a large, mobile workforce. That helped maintain a use for hiring preferences, to deal simply and quickly with transient individuals as members of easily identifiable groups. Through the preferences, groups often acquired particular economic statuses, a system of ordering weakened by the economy’s wartime expansion. In peacetime, sorting the new relations among groups was a problem heightened by rapid demobilization, a boom in 1919 and 1920, and then a depression. The cooperation urged widely in wartime turned to
competition for work. In small towns in 1920-22, local men sometimes opposed outsiders in hiring for road work. In areas where labor mobility was more accepted, some white men opposed others on a basis of ethnic identification.²

Such opposition could occur often in towns and cities partly because the federal road program strengthened many local governments. Despite objections in 1920-22 to further centralization of authority over roads (continuing an early-1900s contest between localities and states), the federal program in many cases offered counties reduced-cost public works. True, projects abided by state and federal officials’ objectives for forming state systems of roads and by their standards for engineering and contracting. Yet always a locality gained spending and jobs, and county officials often represented the community at hearings by state highway officials or decided on starting a federal-aid project. Particularly where county bonds, not those of a state, matched federal funds, people could influence the federal program by local actions. County bonds’ approval required support from local voters, who, in a depression, included many men seeking work. Also, people not hired at public works might receive relief from local charities and governments, often concerned with caring first for residents. Where local officials approved road contracts, many constituents wanted road jobs to be available first to local men, providing incomes for resident families and reducing spending for relief.

Hiring preferences such as those of the early 1920s had been used earlier, particularly in depressions’ job scarcity. In the 1870s depression, a congressional committee, named to study its causes and solutions, had advocated exclusion of immigrants from China, a sentiment some California residents voiced in demonstrations. Tramps, numerous at times near midwestern rail routes, often were sent away from cities by prosecutions for vagrancy. Local officials often wanted hiring limits on public works to avoid drawing jobless people to their area. To challenge the hiring of others, men might argue for a local preference or some other. Thus, in early 1922 veterans near New York City opposed employing Chinese laborers to dismantle buildings at a military base; the contractor replied he had hired the men in Manhattan’s Chinese section after offering the work to veterans. Also in early 1922, labor unions in Richmond, Virginia, objected to hiring out-of-town men for work supported by local taxes. Cities often gave hiring preferences in their relief public works to local men with dependents. In 1920-22, preferences were advocated sometimes for those who were resident not only of a locality but also of the nation. That sentiment, resembling much expressed in the 1906-07 recession, affected people accustomed to traveling to the United States for seasonal jobs, especially Mexican nationals, among whom were many laborers in agriculture and construction in the southern Plains and West.³
Postwar Lack of Laborers

Migrant Mexican nationals provided labor in the early-1900s U.S. economy, often at low wages. Many worked on farms or railroad-track crews or in mines, and their employment grew in World War I. In the postwar boom, particularly in the Southwest "braceros in search of employment faced little competition from native labor," notes Lawrence A. Cardoso. Many blacks and whites who had gone from the Southwest to the North in the war remained there, "and most homecoming soldiers did not seek stoop labor or pick and shovel work, especially when continued industrial prosperity" offered better jobs.¹

Mexicans were among men who worked on roads while the war and the boom made labor scarce and while lack of equipment kept construction labor-intensive. Photos before mid-1920 of contractors' crews paving Iowa roads with concrete often had "looked like they might be scenes from a Mexican, Italian or Austrian army camp," the state highway commission reported. "In the foreground there was always a great array of foreign or negro laborers with wheel barrows and shovels." In the center of the photos would be a machine mixing cement, and beyond that "another small army of miscellaneous laborers spreading and placing the concrete," then "still further back more men shovelling earth upon the finished and partially set road slab." Many contractors tried to offset postwar labor scarcities by greater use of equipment in paving.²

To avoid labor shortages that some growers expected in the West and Plains, the Secretary of Labor extended wartime immigration waivers in January 1919. He ruled that braceros could enter in whatever numbers U.S. employers needed. Spokesmen of organized labor opposed extending the immigration, protesting that many Mexican nationals left farm work and undercut Americans by accepting low wages in other industries. In early 1920, as the postwar boom continued, growers' needs for wage laborers, even in well-populated central Texas, were described in congressional hearings.³

Texas farmers needed Mexican immigrants because other potential farmworkers were taking jobs drilling for oil or building roads, a farmer said at the hearings. "Farmers can not go in competition with the oil fields and these contractors that are building the roads," said Joe Worsham of Dallas, a lawyer and farmer. Oil fields were hiring "a great deal of labor." And large amounts of roadbuilding were planned in central Texas, for which "the contractors are offering wages that the farmers can not compete with." In one project, Worsham said, "they built a road right by my farm from Dallas to Fort Worth and they were offering for the average common labor $4 a day. They would take the men off the farms as fast as the farmers could get them, and the farmers could not keep men plowing in the field because of that construction work." In road construction, "contractors were offering wages that the farmers can not afford to pay. You can not clear land at $4 a day," for farm labor's wage locally was $2.50 a day, he
said. Where wage labor was important in cultivation, farming's scale of operations exceeded that of earlier community self-sufficiency. Though statute labor could keep road work from competing with farming for wage labor, competition with farming did develop in the roadbuilding by contractors, spreading after the war. 

Laborers were scarce also in the southern Plains' wheat areas near oil fields, Worsham said. Some growers failed to get all their wheat harvested, because in oil fields near north Texas "labor was being paid seven, eight, ten, and twelve dollars a day, and they could not get men to thrash for three or four dollars a day." Also, white laborers would not take work grubbing new lands in Texas, Worsham said. Usually, they would not take the stoop labor in the sun involved in picking cotton in Arizona, said Rep. Carl Hayden. Instead, "the Mexicans from the other side of the border, and the Indians, who are employed to some extent, are glad to do it."  

Another farmer told the committee immigrants were needed because many Mexicans who were Texas residents had moved away from rural areas. Some had gone to Michigan to work in the beet harvest, and "I understand that the railroads have absorbed them as never before because the wages have increased enormously," said J. C. Minus of San Antonio, a vegetable grower. Also, "a great many enterprises in the city use Mexicans, as truck drivers and people of that kind, and altogether they have taken away apparently the population that has drifted from the farm into the city."  

A fraternal group's spokesman objected to the employers' requests to allow Mexicans to migrate to the southern Plains and West, saying demobilized veterans might need farm work there. "This whole agitation is the same old fight for cheap labor and nothing else," James H. Patten, representing Patriotic Order of Sons of America, told the committee. "There is going to be as much labor in this country, in my humble opinion, next summer when these beets come on and when this cotton grows as there will ever be." Because the economy soon changed, even more laborers than usual were available in much of the nation by summer 1920, for some factories in the East had begun laying off workers.  

Local Men Unemployed  

As layoffs continued in many locations, the scarcity of labor that had slowed roadbuilding in the boom ended by early 1921. While unemployment grew in much of the nation, reducing job prospects for the new season of outdoor work, public demonstrations of sentiment against hiring Mexicans became frequent in the southern Plains. Many Mexicans often gathered in winters in cities including Fort Worth, Texas, waiting for spring work on railroads and in eastern industries. In January 1921, Fort Worth's chamber of commerce received an anonymous letter threatening to burn parts of the area unless officials could "rid the city of cheap Mexican labor while white workmen starve." It warned attacks
would start at businesses hiring Mexicans. A group of white and black men marched on the city hall protesting hiring of Mexicans in construction.11

Road work was sought by many central-Texas men, apparently including some who had worked for railroads. Mexican migrants were considered their competitors in local road work in Tarrant County, surrounding Fort Worth. Officials of local unions of rail firemen and carmen complained in early January 1921. They told county officials “that a great amount of foreign Mexican labor is being employed by the County Commissioners on county road work, while there is plenty of local labor available,” a newspaper reported. Union officials said hiring Mexicans who were not citizens violated a preference for local labor specified in the county’s contract for the work.12

Several commissioners replied that unskilled Mexican labor could be hired at lower wages. The county “cannot control the price of unskilled labor,” commissioner Hugh L. Small told the union group, “but we have gone so far as to demand that skilled labor be employed in the work.” Still, Small said county officials had written road contractors about “numerous complaints” that “while there is any amount of local and white labor obtainable, a great many Mexicans who are not citizens of Tarrant County are now being employed on the county road work.” The letter reminded road contractors their contracts required a preference for local labor in hiring and requested that they correct any violations.13

Mexicans were a concern for some also in their work for Fort Worth. A day after meeting with county officials, five members of the union group went to Fort Worth’s city hall and asked that “Mexicans employed in any of the city departments be discharged,” a newspaper reported. City officials renewed a promise to hire only citizens in the future. A newspaper explained that “a considerable number of Mexicans were employed on public works in the city last summer and earlier when the labor supply was as short as it is large now.”14

Soon many jobless Mexicans were being arrested for vagrancy in Fort Worth and sentenced to work on chain gangs. Because of Mexicans’ frequent appearance in local courts on vagrancy charges in early 1921, the city’s chamber of commerce, responding to a request from the local welfare association, began seeking employers in Texas needing unskilled labor. Similarly, in Denver, Colorado, the county jail was too congested to continue sentencing Mexicans on vagrancy charges, said a county attorney, who suggested chartering a train to return them to Mexico. A gathering point in winters for men who worked other seasons for mines, railroads, and sugar-beet growers, Denver would have large numbers of jobless Mexican men again a year later, in early 1922. In parts of Texas and Oklahoma in early 1921, groups opposed employment of Mexicans in oil fields and in construction.15
Obtaining Road Labor

Despite concern growing among men seeking work in early 1921, the prospect of sufficient labor for a season of roadbuilding was uncertain among contractors. The scarcity of laborers that slowed road projects in 1920 in much of the nation might be changing, some officials argued in Texas. Indeed, one said, the growing unemployment meant road officials would need to keep the support of local men for their construction plans, many of which depended on voters’ approval of county bond issues.

Members of Texas Roadbuilders’ Association, at their first annual meeting, in early 1921 in Austin, debated ways to obtain labor. B. P. Panas of Houston said using convict labor in competition with free labor would be wrong and impractical. If convicts were used, a newspaper reported, “he declared it would prove a boomerang to the counties interested in good road building, inasmuch as it would antagonize the labor unions and laboring men would not vote in support of bond issues for road purposes, where the funds derived therefrom were to be applied to projects employing convict labor.” Besides the convicts that Panas mentioned, transients from the United States or Mexico would offer competition in hiring for such unemployed local men.

Mexicans might soon be needed in road work, said the roadbuilders’ president, R. G. Tyler. Indicating he expected the depression to be brief, Tyler said he doubted labor conditions after 1921 would differ much from the scarcity of the previous two years. “As an alternative,” the newspaper reported, “he suggested either the use of state convict labor or the importation of cheap Mexican labor.” Noting recent recommendations to abolish the state’s prison farms to remove their expense, Tyler suggested convict labor might be available soon to use on roads.

Another kind of required labor—that of local men to pay their taxes—was being considered in at least one Texas county. At the panhandle town of Hereford, 40 miles west of Amarillo, county commissioners decided in early 1921 to enforce the state’s road law, turning over grading and repair of county roads to designated local overseers, whose laborers would be men continuing a custom of working off taxes. By Texas law on statute labor on roads, a newspaper noted, “overseers are required to call for road work all men between the ages of 18 and 45 years,” unless they had paid their yearly $3 poll tax by February 1. A report of the county’s decision mentioned that “farmers may be called, under the law, to work the roads ten days each year.” Yet such a source of labor, used often in the small road-repair projects through the early 1900s, often would be insufficient for postwar plans for large projects to expand roadbuilding.

One Texas locality where the statute-labor system had not worked well recently was Wilbarger County, on the state’s northern border, about 80 miles east of the panhandle. Though the county spent $54,000 in 1920 to keep its roads passable, some farmers neither paid their road taxes nor worked them
out. That required the county to spend on roads some funds it had intended for other purposes, according to a report of statements by a county commissioner: "Some of the farmers have gone out of their way to cooperate with and aid the commissioners in their work, he said, while others have not extended their assistance so readily."\(^{19}\)

Greater use of local labor could be made by the method announced in early 1921 by officials of Hunt County, Texas, where nearly 100 miles of new road was planned. On a 23-mile section, they had saved taxes by making the county the contractor, which avoided awarding work to "a nonresident contractor." The government of the county, some 100 miles northeast of Dallas, had competed with several private contractors, submitting a bid $100,000 lower than any other. After awarding itself the contract, the county bought equipment and part of a quarry. Soon, on a 28-mile section it awarded itself a second contract after underbidding contractors by $134,000. Contractors stopped bidding on further work, leaving the county to build all its system. Funds available for the extensive construction were large, indicating support among local residents. Bonds totaling $1.6 million had been approved by county voters, to be used with $300,000 in federal funds and $25,000 from the state. "While economizing we are paying better wages than any contractor in the state," said county engineer A. D. Duck. "Our foremen receive $12, $10 and $8 a day. Our machine-men get $6 a day and our laborers get 50 and 60 cents an hour."\(^{20}\)

Many counties in the southern Plains and West were using cash for road work. They might keep collecting some of taxes by the option of cash or work, to provide labor for keeping their smaller roads passable. Yet like other counties throughout the nation, they increasingly turned to the new form of road work after the war, relying on large amounts of cash, including some from the federal government, to build roads to standards adequate for auto and truck traffic. Often the new road work was done by contractors who could bring large amounts of equipment and labor to a county, speeding work on projects of large scale. And often the new roads were wider, more direct in their route, built on more-substantial bases, and given surfaces of gravel or paving to hold their shape against growing traffic.

**Preferences as Jobs Decrease**

Hiring preferences sought for road work resembled those urged for other jobs. Sentiments favoring local men or white transients in hiring were expressed often in 1920-22 in many parts of the nation, though some funds for public works were being supplied in a depression by the federal government. Often the object of such statements was to limit hiring of Mexican nationals. In Idaho, repatriation of Mexican nationals recruited earlier for farm work there was set for investigation in late 1920 by former Gov. W. J. McConnell, immigration inspector for four states in the Northwest. Farming season had closed, a newspaper said, and "these Mexicans, some of them now employed by the railroads in their
maintenance of way departments, are standing in the way of employment for Americans during the winter months." In wheat harvests of the Plains and the Midwest, Mexican nationals, usually numerous among the laborers, were largely displaced by unemployed Americans. California’s Valley Fruit Growers of Fresno urged members to hire white men. Though such jobs earlier had required Mexicans to camp out nights under fruit trees, in 1921 many whites did so in their autos. As growers’ organizations in California urged employing white Americans instead of Mexicans or Asians for farm work, many Mexicans gathered in cities. Arizona’s State Federation of Labor called for deportation of Mexican nationals who had been recruited to pick cotton there.  

At Idaho Falls, Idaho, in spring 1921, a group left a newspaper a statement against hiring transients and Mexicans. The men, calling their group “Home Builders,” mentioned in their note recent talk of finding jobs “for the idle men” of the city. “Will you kindly answer through your paper why it is that the residents and tax-payers of Idaho Falls have to beg for work and not get it and at the same time let every transient that comes along take the jobs and when they get tired move on to the next place and let us taxpayers lose our homes and starve our families for want of the work that is ours?” Their note suggested, “You take public highways for instance. Who pays for them. It is not the Mexicans and people who just drop in for a month or so but we taxpayers who are trying to build homes and raise our families here.”

Preferences were demanded also in employment on private projects in 1921. At Pine Bluff, Arkansas, in February, a crowd at night routed some forty Mexican laborers from their camp six miles from town. The Mexicans, brought there two weeks earlier by a railroad to work on tracks, asked the company to move them. Near Seward, Nebraska, a disturbance occurred in March “when a local stone company imported Mexican quarry workers.” At Abilene, Texas, some 100 white men gathered in August where a church was under construction “and took charge” after ordering Mexican and black workers away. “The white men asked that they be given preference in employment.” The events were consistent with other postwar activities in which groups of white men claimed particular rights to demonstrate their wishes for the society.

Ethnic divisions influenced the belief that local men could demand a preference in hiring. The local support required for approving road bonds in county elections needed to extend only throughout a voting majority, or among whites but not blacks in many counties in the South. Blacks voted in the urban area of Houston, Texas, for example, yet sentiment on public works indicated various groups worked in separate segments of the economy and relied on different political organizations. Thus, some blacks believed they could find jobs more often at Houston’s port than on nearby rural roads. In the 1922 general election, a black newspaper in Houston, supporting Republican candidates, opposed a referendum question on issuing local bonds for roads, arguing the new funds would enlarge the county’s
Democratic patronage. Yet the next month, the newspaper supported issuing bonds for port improve-
ments, citing jobs the port was providing for blacks, including those as longshoremen. Similarly, in
Norfolk, Virginia, a black newspaper had supported a bond issue for port improvements in early 1922
partly because “it will solve unemployment.”24

Despite frequent calls in the period for a hiring preference for local men, Mexicans and others not
from areas near the projects likely worked at many roadbuilding jobs, particularly where population was
sparse. Many laborers were needed, given the number and size of road projects completed or set under
way by mid-1922 with federal funds. Mexican nationals and other transients may have been excluded
from much work near cities, a problem likely also for urban residents who were members of local vot-
ing minorities. Yet Mexican and other transients may have found jobs more accessible at projects in
sparsely settled areas—where jobs were more numerous than local applicants and where contractors
sought to economize in their added tasks of providing food and housing. Those were the kinds of
locations where, earlier in the 1900s, many Mexicans, willing to labor for low wages and live at the site,
had worked for mines, large farms, and railroads in the southern Plains and West.25

The early-1920s depression heightened a contrast of rural and urban interests. Many farmers had
debts to pay with reduced income, and some sought tax cuts to trim their costs. The new federal
program of roadbuilding could raise their taxes in many areas, depending on state laws and on the kind
of road project nearby. In cities, though, thousands of workers lost jobs in a few months, and many
sought work at construction projects, including those beginning in the federal program. Some men’s
belief that those jobs were needed led them to try to keep others from them. Often they sought to
exclude groups who usually had worked largely in rural areas in agriculture, mining, and railroads—
businesses that often hired fewer workers in a depression. Indeed, they often sought to displace those
groups from wage work remaining in agriculture, such as that in producing fruits and vegetables in the
Southwest.

Most men publicly seeking preference in hiring for the period’s scarce work were white, and
many men they sought to exclude were considered members of other ethnic groups. Black men likely
were kept from many road jobs near cities by local political organizations’ practice of hiring their asso-
ciates, often representing mostly an area’s voting majority. Similar practices had influenced access to
work including road jobs in much of the urban and rural South in the early 1900s and likely changed
little in the postwar era. Without a need for protests, white men could retain a preference over blacks in
road work in many areas. Particularly in the southern Plains and West, though, Mexican men formed a
supply of workers highly variable in number as employers needed, transportable, and willing to work
for low wages. Many Mexican men had immigrated to the booming U.S. economy during and soon
after the war, and in those periods of labor scarcity many of them had worked in agriculture and roadbuilding. They would be available for many jobs in the depression, at low wage and with some experience, unless protests could reduce their hiring. Such protests were made, consistent with other activities by some white men seeking to reorder postwar work and society. That such protests might bring reply or discussion seems to have been much less accepted. In the period’s reports in selected newspapers of general circulation, rarely were public statements of any kind made by men who were black or Mexican.

The preference for hiring veterans in federal-aid road work, which might have excluded some white men in favor of others, was generally pursued without protest. Many white men gained work on such projects from a competing preference, that for local residents. Indeed, farmers' groups often called publicly for low-cost kinds of road projects, which could use many of the skills and horses of local men accustomed to work on nearby roads. Jobless men of a community sometimes protested the hiring of transients for road work. Preferences might have conflicted if a transient veteran had opposed a local resident in hiring for a job, though many contractors were able to hire enough men from those groups to complete construction and comply with wishes of much of the community. The depression's quick increase in labor supply diminished many employers' needs for Mexican nationals, after thousands of them had been recruited in wartime. Still, Mexicans found many roadbuilding jobs in the depression, not only where contractors near cities sought to lower construction costs in the depression but also in rural areas of the southern Plains and West where sparse population provided few local laborers. Road contractors also hired other people who had been wartime workers in industries producing for military contract or in other parts of the economy. That more-general purpose in hiring had been part of support for public works in Congress in 1919 when it designated federal road funds for reducing postwar unemployment and specified the veterans' preference.
CHAPTER 11

POSTWAR PUBLIC WORKS:
1950S INTERSTATE HIGHWAYS

Early in the Cold War, America's federal highway construction greatly changed. A 1956 decision to build a large system of a new kind of roads resulted from influences including not only weaponry and strategies but also more and faster traffic and a plan to expand the economy by methods similar to those tried first in federal roadbuilding after World War I. The new road program, approved in 1944 partly to prepare for demobilization's employment needs, only later gained the large funds required for construction. The Cold War and the uses of federal roadbuilding developing in the 1920s and 1930s, particularly in their relation to the U.S. economy, influenced the timing of the interstate highway program, helping put its start in the mid-1950s instead of earlier.

After World War II, the federal program continued to aid work on two-lane routes in communities and states, using increased appropriations of 1944. Yet a new kind of program, to build superhighways of four lanes, authorized in 1944 but limited in World War II, gained funds by 1956. Sentiment on spending for roads had altered since the early-1920s depression, when farmers' groups often opposed paving even narrow roads as extravagant. Acceptance of federal-aid roadbuilding to increase jobs and stimulate the economy had grown, particularly in the 1930s. The 1950s' urgent defense concerns helped add support for funding a much larger road program than before. And the U.S. economy's inflation of the 1940s and early 1950s had changed, after the fighting in Korea, to recession.¹

Roadbuilding in the 1930s Depression had become a large form of federal public works, which in the 1950s were related often to national security. A belief that the federal government could balance the nation's economy and promote its growth, an idea spreading in use since the early 1900s, held interest in the 1950s, when defense needs in a protracted Cold War seemed to require economic stability and expansion. In early 1954, President Eisenhower emphasized the nation's need for a growing economy. "It undergirds our international position, our military security, and the standard of living of every
The economy's transition to a peacetime basis continued without halting its growth, he said, "but we shall not leave this vital matter to chance. Economic preparedness is fully as important to the nation as military preparedness," requiring steps including "public works plans laid well in advance" to stimulate growth as needed.

Military Needs

Besides the use of public works as an economic stabilizer, concerns that were more directly military were by the 1950s familiar reasons for road work. In World War I, roads had grown in importance, particularly while U.S. rail shipment slowed in congestion. Indeed, in spring 1915, when a federal role in roadbuilding was under study by Congress, roads were speeding military motor vehicles toward the front in France. In 1919, Eisenhower led a military convoy in a transcontinental test of American roads, and between the world wars roadbuilding spread throughout the nation to serve growing traffic of motor vehicles. By 1941, some U.S. officials considered the nation to have passed through a "pioneer period of road improvement" and into an era when planning was possible for large improvements. In mid-1941, such changes were needed to meet newer standards, said officials of the federal Public Roads Administration, particularly "in view of present plans for a mechanized army." Newer kinds of roads, providing for heavier "civil and commercial traffic," were "especially pertinent to the relation between the roads and their probable uses for the national defense."

In mid-1940, a study of making highways adequate for national defense began as President Roosevelt ordered, in a letter mentioning several elements that would become basic to later construction. Writing the Federal Works Agency's chief in June 1940, Roosevelt suggested "that particular attention be paid to the strength of bridges, the width of strategic roads, adequacy of ingress to and egress from urban centers, and the servicing of existing and proposed Army, naval, and air bases." In the study, the agency's Public Roads Administration was to collaborate with the War and Navy departments and the Advisory Commission to the Council of National Defense.

The resulting report in mid-1941 noted that planning for strategic highways had begun in the World War I era. In 1916, the Council of National Defense was directed to plan for such needs, and in 1921 the Federal Highway Act provided for the council to transfer to the Agriculture Department maps and papers used in that work. The department's Bureau of Public Roads used information from the military to designate routes in the developing federal-aid road system. Thus, the "Pershing map" of 1922, road officials said in the report, showed "for the first time, a system of national routes deemed by the responsible military authorities to be of special importance from the standpoint of national defense." The War Department in 1922 had said it needed no special standards for building roads and bridges.
As conditions changed, the military revised the map in 1935, 1939, and late 1940, while studies of road conditions and military needs continued. Using the era’s network of two-lane roads, the military planned to avoid congestion by dividing convoys to travel on at least three roads between links. Thus, its map indicated route locations only generally. “No precise definition is given to the location of roads comprising the routes between major ‘controlling points,’ which generally are large cities,” said highway officials. “In fact, in its broadest conception, the network consists not of a single road between each of the controlling points, but rather of a main line and approximately parallel auxiliary lines, with suitable connections between them at frequent intervals.”

Those main lines of the War and Navy departments conformed usually to the federal-aid highway system and to routes planned for an interregional highway system, recommended by 1941 by the Public Roads Administration. Roosevelt named a committee in April 1941 to study the need for the interregional system and, through its construction, “the possibility of utilizing some of the manpower and industrial capacity expected to be available at the end of the war.” The 1941 Defense Highway Act authorized $10 million for matching by the states to make surveys and plans for highway construction.

As war seemed near in summer 1941 in Washington, a concern to match developments in other nations extended to new kinds of roads. “Other countries have found, as one of the essential needs of their national defense, the establishment of routes which are determined by the military authorities to be essential,” the Public Roads Administration’s commissioner, Thomas H. MacDonald, told a House committee considering a bill for defense highways. He showed a map of Britain’s strategic system of main and alternate highways on which military and related traffic had priority. More extensively, he discussed Germany’s autobahns, superhighways built at first in Germany and extended into other countries as the German military had advanced.

Though construction of Germany’s autobahns began the year Hitler came to power, “the beginning of this system goes back to 1926, long before the present regime,” MacDonald told the committee. It seems “that in 1926 they had definitely in the process of planning under the old regime a system of roads to tie the several states and principalities of Germany together,” he said. “At that time, the National Ministry of Transport stated that Germany had no through roads. They had all been built on a state or provincial basis, and they did not even make adequate connections at the boundary lines within Germany itself.” The plans were ready, so that “when Hitler came in, with the great unemployment that existed and the dictatorial powers which he had, he simply said, ‘Let it be done,’ and work was started on a very large scale.” By 1939, of the planned 4,300-mile system some 1,800 miles were complete, surfaced mostly with concrete.

Planners under Hitler also sought ideas on superhighways from America, the committee was told. The superintendent of New York’s state Department of Public Works said that Hitler, soon after coming
to power in 1933, began planning for war output and its transportation. “He sent engineers to this country to investigate the construction of superhighways around New York City and other metropolitan centers,” said A. W. Brandt. In summer 1941, Brandt was urging new construction in the United States. “True, we have a much better highway system now than Germany had in 1933, but that system is in no shape to serve in the kind of war that we are preparing for.”

The military effect of German superhighways benefited, MacDonald said, from “the relatively small number of motor vehicles and production capacity in the countries of Europe,” which “provided a rare opportunity to the German General Staff.” In a report given the committee, MacDonald said mileage of superhighways Germany completed before the war “could not have had more than a limited utility, but the whole scheme was symbolic of Germany’s conception of the new technique of warfare based upon fast and coordinated movement of mechanized power units” by land, sea, and air. War preparation was also relying heavily on roads in the United States by February 1941, “generating large amounts and varieties of highway traffic which demand new roads and new bridges,” MacDonald said. Much of the usual federal-aid road funds and those for work-relief were being used for defense-related projects.

Funds from the 1941 Defense Highway Act were allotted for planning highways that became part of an interregional system, which Roosevelt’s committee recommended in 1944. Those and other funds could assure “the readiness of a large body of highway construction projects at the end of the war,” said the Federal Works Agency’s chief in early 1944, stating purposes similar to those Congress adopted in 1919 to ease demobilization after the previous world war. Attempts to begin work promptly at war’s end would be defeated, the FWA chief said in 1944, unless funds were approved in advance for buying rights-of-way, particularly near large cities, where traffic was most congested and where most men needing postwar work would be. Though building would begin only after the war, the interregional routes would serve military bases and war industries.

Superhighways would require immense land purchases, often for new routes and always for much wider right-of-way, a problem of interest to Roosevelt. He suggested in January 1944 that Congress make further studies on acquiring the land and, to cut costs, “that the actual route of new highways be left fluid.” By surveying two or three nearly equal routes, the one with cheapest land for right-of-way could be chosen, for, he noted, economic development from roadbuilding would greatly benefit some landowners lucky in location. Discussing economic development more generally, a committee studying the interregional system recommended it in part as a postwar way to help replace defense spending in bolstering the U.S. economy. Its interest in averting a return to pre-war depression conditions showed in the report’s tables comparing yearly road spending 1931-42 to the number of jobs thus provided.
It argued that spending about 15 percent of national income for all construction and maintenance work, public and private, "is a condition associated with the economic health of the country." Though New Deal programs had raised such spending, it said, pre-war "unemployment was still large," and "it remained for the threat of war to provide the stimulus necessary to raise the construction ratio to the 15-percent level suggested as desirable." Indeed, federal spending increases for roads in the Depression of the 1930s had little effect in raising employment, it said, because spending cuts in non-federal road programs were at least as large. Likely, such federal spending helped maintain employment and economic activity at levels above those that would have resulted without it. By contrast, in the brief 1920-22 depression, road spending, freed from wartime restrictions, expanded in programs of many governments.\textsuperscript{14}

In 1944, Congress approved the interregional system, of up to 40,000 miles, to connect by direct routes the nation's largest cities and serve defense needs. Congress named it the National System of Interstate Highways. It agreed to pay one-third of right-of-way costs and approved three years' spending at $500 million a year. And it allowed states to use funds from other programs to build sections of the interstate system. Yet it put off trying to agree on a new funding system for the very costly project, a problem that would remain in the 1950s.\textsuperscript{15}

In the intervening period, nuclear weapons would prompt Americans to relate roads to defense in new ways. By July 1954, the nation's road system seemed to Eisenhower to have changed unevenly and slowly. "It has never been completely overhauled or planned to satisfy the needs ten years ahead." In the early Cold War, needs were changing more rapidly, Eisenhower indicated, noting that "it was less than nine years from the atomic bomb to the launching of an atomic-powered submarine." While still needing to provide for military traffic and war production, the congested highway system, often of two-lane roads, also would be required to evacuate the populations of even the largest cities quickly. By 1956, the federal government included a Civil Defense Administration sponsoring a "survival plan" of shelters and evacuation for every large city. In a study for the new Civil Defense agency of roads needed for evacuation, 185 American cities were "target areas."\textsuperscript{16}

Urban size made evacuation difficult. Proximity of some cities allowed combining plans for them, bringing the total of target areas to 161, of which 144 had population under 1 million each and were easiest to evacuate. Of the 144 areas, including some 42 million people, "138 could be evacuated in 4 1/2 hours" to areas fifteen miles from city center without changing their roads, the study concluded. Yet for fifteen other target areas, each exceeding 1 million in population, road construction estimated at $6 billion would be needed for evacuation in three hours to 25 miles from city center.\textsuperscript{17}

Using motor vehicles in a strategy against the new weapons left many problems unsolved. Without road changes, ten of the largest target areas would need 10 hours for evacuation to 25 miles. Even
with road changes, complete evacuation of the largest cities would remain difficult. If shelters could reduce the number of people needing evacuation, road construction costs could be reduced, the study noted. What effect road changes could have against rapid developments in weaponry would be unknown. And evacuation for 15 miles would not protect populations against radioactive fallout. Still, in a cautious forecast, the study supported accelerated highway and street construction as a way of “increasing the potentialities for possible survival in the atomic age.” More certainly, such projects would help produce “economic growth and development of one of the most important national assets in deterring aggression—industrial capacity.”

Thus, by the 1950s military needs for superhighways resembled those of earlier periods in the 1900s, except for needs of evacuating civilians from cities and mobilizing quickly for defense against new weapons that had made the U.S. mainland more vulnerable. Also as in earlier periods, many military needs, such as moving troops and equipment and the traffic of war production, were similar to those of the civilian economy. Yet an increase in use of motor vehicles by the time of the Cold War was creating congestion, particularly in urban areas. Highway uses that were directly related to defense would benefit from modernizing the roads. So also would uses related to defense indirectly, those Wimplied by a goal of waging part of the Cold War by expanding the U.S. economy.

Economic Uses

Factions that for years had contended over road legislation—including farm and commercial groups, truckers, state and urban officials, and members of Congress and the Executive branch—agreed on a financing plan for the interstate system in 1956. Working through a series of proposed measures the first half of the year, Congress passed legislation that Eisenhower signed by July. Record sums were voted for most road programs. Of the $25 billion in federal funds for building a 41,000-mile interstate system, the share they could pay of project costs was raised to 90 percent. Attempts to pass an interstate bill had failed in 1955, despite efforts by Eisenhower that historian Mark H. Rose calls the “most strenuous undertaken by a president” for road reform since 1939. Agreement came in 1956 in part, Rose argues, from a growing fear that urban and state officials would increase their own efforts to solve congestion, building expressways to varying standards and financing them by tolls.

Also, the Cold War had again changed influences on the American economy and thus on how much road work a president wanted. Inflation in early 1952, during military action in Korea, still concerned Truman more than problems of highways, despite arguments Rose notes from the secretary of the army for funds to build high-volume interstate roads. Though in much of 1953 Eisenhower’s administration lacked a road program, in the year’s second half, “as the economy sagged following the end of the war in Korea, several of Eisenhower’s leading officials viewed road construction as a way of
creating useful jobs." Arthur F. Burns, chairman of the Council of Economic Advisers, wrote Eisenhower in August 1953 that construction, including road work, would provide jobs and stimulate the economy.20

Using federal spending to steady and expand the economy interested Eisenhower as a way to strengthen it for the Cold War. He had approved the policy in October 1953 in National Security Council Paper 162/2. It stated that "not only the world position of the United States, but the security of the whole free world is dependent on the avoidance of recession and on the long-term expansion of the U.S. economy." Expenditures of all kinds by federal, state, and local governments "must be carefully scrutinized with a view to measuring their impact on the national economy."21

In early 1954, Eisenhower told Congress the administration was "determined to keep our economy strong and to keep it growing." He also said then that road spending had been rising in the past year. He predicted it would "be the highest in history" in fiscal year 1955. And in new road projects, emphasis would be on building the interstate system, "which comprises the most important routes for interstate commerce and national defense."22

In fall 1954, he described efforts to "give America a modern highway system" as not only a way of reducing traffic problems. Such work also would "stimulate healthy economic growth and strengthen the nation's security." In a campaign stop in Detroit in October 1954, Eisenhower spoke of recent improvements in the nation's economy and the booming production of motor vehicles. "We are pushing ahead with a great road program," he said, to "give us the types of highways we need for this great mass of motor vehicles." Eisenhower also mentioned his goal that in ten years the U.S. would attain a national income of $500 billion.23

Highways and motor vehicles had been significant in the U.S. economy by the 1920s and had remained so. By the 1950s, they generated directly or indirectly about one-seventh of U.S. jobs. Eisenhower's study committee considering a ten-year highway program announced that figure in January 1955, during preparations for debate on the interstate system in Congress, which would last that year and part of the next. Those jobs were in road-related businesses that accounted for about 14 percent of the gross national product, it stated. Motor vehicles had steadily grown in use in the U.S.—totaling nearly 10 million in 1920, 32 million in 1940, and 55 million in 1953—without a similar expansion of roads and streets. If vehicles further increased in number as expected, traffic soon would grow even worse, the committee said.24

Traffic congestion of the 1950s was a concern of businesses, particularly the trucking industry. Also, many officials noted rising numbers of auto accidents. Urban redevelopment and expansion interested many planners and business groups. In 1944, traffic growth had been a justification offered for the plan of interregional superhighways, as had been the increasing speeds of vehicles on roads built to
alignments intended for slower travel, together with cities’ needs for work on main approaches and traffic arteries. In July 1956, Senate Majority Leader Lyndon Johnson of Texas, praising recent passage of the interstate legislation, forecast its effect in creating new business districts. “It is easily possible that within a decade the investment in new industrial, commercial, residential and public facilities stimulated by this program will equal—perhaps even surpass—the value of the investment in the highways themselves.”

Many jobs also would be created by the act’s funds for superhighways and large appropriations for the earlier systems of two-lane roads, Johnson predicted. “Employment will be provided for a huge force of workmen,” expected to total about 450,000 men at road projects by 1960, up from the 300,000 then, he said. And usually an equal number were employed producing and shipping roadbuilding materials, supplies, and equipment, bringing the 1960 total expected from the road work to some 900,000 jobs. In its provisions for superhighways and other roads, the 1956 Highway Act “authorizes the largest peacetime public works program in our national history,” Johnson said in the Senate. To the federal funds, states would add others under requirements for matching. The 1956 act, noted Rep. William C. Cramer of Florida, continued a trend since 1954 of increasing federal funds for superhighways and for other road systems.

Anti-Depression Construction, 1920-42

The 1956 act continued using federal-aid roadbuilding to raise employment and stimulate economic activity. To generate growth in the mid-1950s economy, the act had adopted basic purposes of federal highway legislation in World War II. Interstate routes planned between urban centers had appeared at least as early as 1944 in the report proposing a system of interregional highways. Goals also were similar in the 1944 and 1956 plans for a large federal superhighway program. In 1944, the study committee noted its task had been to define a national system of interregional highways, “the construction of which, if begun with the termination of the war emergency, will permit the productive utilization of much of the manpower and industrial capacity then likely to be available.” Roosevelt had stated the goals during preparation for war. Similar purposes had been part of Woodrow Wilson’s support for larger federal highway appropriations at the end of World War I.

In the 1944 report, the committee based its recommendations for a road program largely on a belief in construction as a way to balance the nation’s economy. The committee said it “concludes that an expenditure for all classes of construction and maintenance work, private and public, approximating 15 percent of the national income is a condition associated with the economic health of the country.” It suggested that “the ratio should probably not be permitted to rise materially above 15 percent, and any substantial decline below that figure should be regarded as a danger signal to be remedied by immediate
increase of construction activity, by public stimulation when and to the extent necessary.” The ratio, for all public and private construction and maintenance work, including that on highways, had fallen to 7 percent for 1931-34 before rising to 13.1 percent for 1935-38 as the economy improved. Thus, “recovery was marked, but by no means assured, and unemployment was still large.” Only amid providing for war did construction spending approach 15 percent of national income. “The 14.8 percent ratio recorded for the four years from 1939 to 1942 was largely the result of expanded federal construction operations incident to preparation for the war and its conduct in the first year.” Even that ratio was smaller than the one for 1927-30.28

The 1944 report emphasized the 1930s experience in roadbuilding, a large part of federal efforts against the Depression. The report’s tables describe highway work in the nation in 1931-42, by federal and non-federal governments, in terms of spending and employment. The tables allow comparison with road construction of earlier years, including 1920-22, when much public sentiment had supported expanding roadbuilding as the economy slowed. At the start of the 1930s, spending of federal aid for road construction quickly increased. In 1930, it regained the 1920s’ highest level, the $96 million of 1924. After climbing to $242 million for 1931, it fell to $106 million for 1932. For 1933-40, yearly totals ranged between $331 million (1936) and $168 million (1940). In four consecutive years, 1934-37, such federal-aid spending remained at high levels, above $214 million yearly.29

State and local governments, though, cut their spending for highways in the 1930s to half their levels of the late 1920s. Amid those cuts, federal spending for roadbuilding grew from 18 percent of public spending for roadbuilding in 1931 to at least 30 percent yearly for 1934-37. Purposes of increasing employment and stimulating the economy were difficult to effect in the 1930s through road construction, which decreased as local and state governments cut spending. Even as federal spending increased, the total for spending on highway construction—by federal and non-federal governments—declined and remained low, particularly in 1933 and 1935, years when it was less than half the level of 1931. Stimulating the economy required federal spending, particularly as depression endured. Though state and local governments had maintained their highway spending through 1931, they cut it for the rest of the 1930s, reflecting their diminished access to revenues from taxes or bonds.30

Amid widespread experience of depression’s severity by 1933, much sentiment supported creation of other federal methods than the roadbuilding program to raise employment and economic activity. Thus, funds besides those for road construction were spent in 1933-42 in the first federal programs of work relief. Highways had been shown by 1933 to need varied improvements that might employ many men. Though many kinds of activities were funded as part of federal work-relief programs, the largest share of such spending for most of the 1930s was for highway work relief. Only in three of those years—1935, 1936, and 1937—was spending for highway work relief less than half the
total spent for work relief programs. Federal spending for highway work-relief began slowly in 1933 and 1934, though by 1935 it surpassed spending for federal-aid highway construction and remained much larger until 1942.  

Such an expansion of spending was unlike the federal activity in the briefer depression of the early 1920s. Sentiment favoring federal construction operated in 1920-22 through a smaller share of the national government than in the 1930s. Public spending’s economic effect had been diverse through the expanded federal government of the World War I period; its activities still were slowing in 1919. Yet in the 1920-22 depression, federal officials cut their spending for construction generally while the part of that for roads expanded. By 1920, total federal spending for construction had dropped far below the level of 1919, while federal spending for highway construction had increased. The decline in total federal spending for construction would continue through 1922, limiting anti-depression effects to particular segments of federal spending, including that for highways.

An increase was easier in spending for highways in 1920-22 than for most other federal activities. For, roadbuilding expanded out of interest in beginning a new program, using its funds and plans authorized since 1916, and attaining a widely accepted goal of better roads for growing traffic. Also, limits on construction in the war and the postwar boom had faded. Federal spending for construction of highways tripled in amount from 1919 to 1920 and remained near twice the 1920 level in 1921 and 1922. And unlike other kinds of federal construction spending, that for highways required matching with equal amounts from other governments, generating spending from states and counties that had funds available, often from bonds authorized before the depression. Federal construction spending for highways, only 1 percent of total federal construction spending for 1919 and 13 percent for 1920, grew to 45 percent for 1921 and 42 percent for 1922. The proportions for 1921 and 1922 were higher than for most of the 1930s. Other kinds of counter-depression spending than that for roadbuilding developed in the New Deal, allowing from more of the government the effects of federal activity in the economy.

Much of the construction in 1920-22 was by state and local governments and from the economy’s private sector. Federal construction spending declined in 1920 to less than a quarter of its 1919 level and fell further in 1921 and 1922. Yet spending by state and local governments was enough that the level of total public construction in 1920 was 68 percent of its 1919 level, and it increased in 1921 and in 1922. Private construction projects expanded in the early 1920s also, so that when public and private spending for construction are combined they show an increase for 1922, when recovery had begun by mid-year in markets for several farm staples and in many industries. Indeed, the 1922 level of private and public construction spending exceeded that of the postwar boom in 1920.

Part of the increased spending of states and localities in the 1920-22 depression was for roads. Those governments far outspent the federal program in road construction in 1920-22 as they continued
their postwar spending at more than twice the yearly levels of 1915-18. Federal spending for highways was less than 3 percent of the road spending of non-federal governments in the nation in 1919, before it expanded to 5.9 percent in 1920, 11.5 percent in 1921, 9.6 percent in 1922, and 10.6 percent in 1923. While spending for 1922 fell slightly in the federal funds, it continued to rise in road programs of states and localities. When farmers in late 1921 and early 1922 opposed road spending in many areas, state and local governments had just completed a year of expanded spending in a depression, despite a custom of retrenchment to permit local cuts in taxes on property. The federal program offered incentives for roadbuilding, particularly in the 1920-22 depression, though greater activity had begun for many governments earlier, near the end of wartime scarcities of labor, funds, and materials. The largest changes in road spending by non-federal governments, in percentage of yearly increase 1915-42, occurred as construction expanded in 1919 and 1920, when prosperity supported improvements and inflation raised prices. The non-federal governments cut their road spending for 1923, after the depression.35

Roadbuilding often was a small part of even the federal government's spending for construction and other activities. Without large increases in roadbuilding, total federal construction spending quickly expanded in the world wars, greatly affecting the economy. The economic growth resulting from wartime federal spending, for activities including construction, was difficult to maintain after the 1918 Armistice yet effective in ending the 1930s Depression. Still, in 1944 and 1956, officials recommending a large federal program to build superhighways believed highway construction, though insufficient to end the 1920-22 and 1930s depressions, could operate over many years to add jobs and economic stimulation.36

Purposes and methods of 1920-22 in federal-aid roadbuilding continued in frequent use in the Depression of the 1930s, in wartime in the 1940s, and in the Cold War in 1950s. Sentiment favoring federal efforts to increase employment and stimulate economic activity through public works had supported expanding federal roadbuilding—in construction and work relief on highways in the 1930s, in authorizing a system of interregional superhighways in 1944, and in providing large funds for such a system in 1956. The efforts resembled those adopted by Congress in 1919, when it added funds for roads, designated them to provide jobs and stimulate spending when the economy was expected to slow during demobilization, and gave a hiring preference to ex-servicemen.

Federal activities had effects on the economy in wartime mobilization far beyond those they achieved in peacetime, whether briefly in 1920-22 or during much of the 1930s. In neither period did roadbuilding reach a level considered sufficient to end depression, though, in both periods federal spending for roads increased employment and economic activity. Federal road spending's effects often were
offset by trends in other construction. Thus, in 1920-22 the federal government’s total construction spending was declining while jobs and economic stimulation came from increases in federal, state, and local spending on roads and in private construction spending. And during the 1930s, while federal spending increased in highway and other programs, activity dwindled in what in prosperous years had been large spending in state and local roadbuilding and in private construction. Still, roadbuilding’s earlier effects in adding jobs, stimulating the economy, and improving travel seemed significant to officials in 1944 and later. In the 1956 plan, large spending was authorized to occur over many years, federal coordination would increase by payment of 90 percent of costs, and roadbuilding would be part of a range of Cold War efforts with increased federal spending.

By 1956 as in 1920, a large postwar program of federally aided public works was about to begin. Again, large land purchases and new engineering standards were planned that would improve routes for drivers of motor vehicles and change locations and methods of commerce. Extensive mobilization of the U.S. economy in the world wars led in 1919 and 1944 to plans for large roadbuilding programs to help ease postwar transition to peacetime. Under those plans, road work increased when the postwar economy slowed in 1920 and in the mid-1950s.
CHAPTER 12

CONCLUSION

The period's changes in building roads may be interpreted as part of several trends historians have identified. The construction of 1920-22 reconfigured organizations affecting localities in their roads, a resource basic to community functions. The organizations' changes reflect some historians' arguments that Americans, comparatively isolated in the 1880s, participated more in matters beyond their communities by 1920 because many groups had gained efficiency in dealing with large membership or area. The community's earlier forms of organization had defenders, including many northern farmers for whom, some historians contend, local control of roads was a symbol of citizenship and a limit on costs. Proposals to improve roads sometimes evoked contests between two local groups—town boosters seeking better ways of trade and farmers opposing higher taxes—a division that resembles one attributed to urban and rural cultures of the Progressive era. To match federal funds, many states and counties in 1920-22 issued bonds for roads as the nation recently had done to support the military, a reliance on wartime experience such as that noted of the depression of the 1930s. Rising use of the auto has been cited as basic to support for 1920s highway construction, and activities of 1920-22 show its significance as an indicator of urban and rural development and of roadbuilding for the early 1920s. Also, efforts to build better roads have been considered influences in development of the modern state in 1900s America, influences evident in 1920-22, when in roadbuilding many governments sought to expand services to constituents, often by interrelation of their funds, skills, and authority.

The new road program in 1920-22 accelerated change in several practices. Officials of many counties and states became familiar with working with those of federal agencies, with considering federal standards for matters in their localities, and with treating federal funds as incentives in how they used their revenues. On many roads, construction efforts of some states, counties, and townships slowed as usual in a depression. Yet in general, such non-federal governments raised their total for spending for roads in 1920-22, continuing a postwar trend that the federal program's formation in 1916 helped establish. The increased spending in 1920-22 made use of the period's lower construction costs. That total for spending declined slightly in 1923, after the depression, perhaps influenced in many areas by farmers,
and then increased steadily for the rest of 1920s. Spending for roads could bring improvements more permanent than those before the war, using new standards of grading and draining roadways and covering roads with gravel or paving. The developing federal-aid system of two-lane main highways in the 1920s raised local interest in connecting a community's other roads to it. Such spending by non-federal governments in the 1920s grew in many areas from changes begun in 1920-22 in state tax systems, which reduced local reliance on rural land for road revenues and further diminished payment of road taxes in labor. Noting the growing sums states were raising by special taxes on road users (taxing motor vehicles and gasoline) in 1920-22, people in rural areas often advocated sharing the revenues with localities to ease farmers' taxes, particularly in a depression. Despite a tradition in many areas of small government, many states in 1920 and soon after delegated larger authority to a central road commission or department. Legislatures increasingly set policy on roads in general, instead of voting on various roads in particular, and they assigned policy's elaboration and implementation to a state agency's specialists. Among the range of functions of many state governments in 1920, highway agencies soon became comparatively large in size, revenues, jurisdiction, and capacity to affect constituents' interests. Many such agencies complied with rural wishes and traffic needs in 1920-22 by emphasizing projects for low-cost kinds of road work. In many parts of the nation, road work in 1920-22 was increasingly done by contractors, in larger projects, with revenues from autos instead of from land, and by plans drawn to state or national engineering standards. With a new kind of road work and growing auto use, rural areas became a location for 1900s public works to improve travel and influence economic trends.

Modernizing and Roads

The federal-aid program speeded change in how most rural Americans expected roads near them to be built. A plan for governmental cooperation and for federal help with the large costs of making roads for autos, approved in 1916, brought preparations in many states during and soon after the war. By 1922, partly because the economy since 1920 had allowed quick expansion of construction, the 1916 plan was established in parts of every state. Though smaller roads might be built much as before, from decisions and resources within a locality, main routes in many rural communities were being built by a more-complex process, relying increasingly on experts and distant state and federal agencies. For some people in rural areas, the change might have seemed as if "middlemen" such as those the Grangers and Populists opposed in the late-1800s economy, had gained a powerful, promising role in a task once symbolic of direct democracy in many rural areas, making roads. Farmers in many areas in 1920-22 noted the changes. Apparently to urge government economy in a depression, some demonstrated older methods, from the statute-labor system--donating their labor, horses, and tools and organizing themselves to improve a nearby road, often by hauling gravel to a section and spreading it as a surface.
Though urban and rural motorists valued better roads, the changing methods stirred comment often in 1920-22 in the countryside, where an immediate concern of farmers in a depression was that changes beyond local control might raise their property taxes. Similar changes and activities before and after 1920 have been noted by historians. David B. Danbom and Hal S. Barron describe some rural people's resistance to modernization, a response resembling one Robert H. Wiebe attributes to many Americans who, as their economy in the late 1800s industrialized and urbanized, kept trying to "master an impersonal world through the customs of a personal society."²

Wiebe describes a trend toward interrelation of communities during 1877-1920 as methods of organization changed and the nation's transportation and communications developed. A "new middle class," including managers, social scientists, and other professionals, Wiebe argues, also developed as the trend emphasized productivity, regularity, system, and efficiency. Members of this class, approving recent changes they noted in cities, tried in the early 1900s to modify customs of the countryside, Danbom contends. Farm people of northern states experienced varied effects, in activities including local road work, from the consolidating trends in commerce and culture that Wiebe outlines, trends that changed the nation as greatly as the market economy's spread had earlier, according to Barron. The new ways diminished the independence and republicanism often attributed to yeomen, Danbom and Barron argue from studies of the rural North. Yet in locations including the South's areas of sharecropping those qualities may have been limited instead by a continued influence of large landowners, local powers such as those with whom, Wiebe notes, Alliancemens and Populists contended. The new kind of organizations Wiebe describes would extend the market economy into remote areas with greater efficiency. Likely they were effective particularly where rural wealth was widely held, and so in the North sooner than in the South. Efforts for better roads in the South of the late 1800s and early 1900s failed, argues Howard Lawrence Preston, because many people considered costs in local taxes to outweigh the likely benefits.³

Modernization in 1877-1920 affected the nation, not just rural areas, Wiebe contends. True, its changes fit an existing perception among many rural people of the influence of distant cities, he says. Indeed, rural opposition to things urban seems to unite rural people often between the 1870s and 1930, which suggests it was an enduring way of overcoming rural divisions, including those of class. In the 1880s, the new trends were confusing and reordering life for many urban people, though cities "from the outside," Wiebe notes, "seemed monolithic in their strangeness, centers of alien ways and murky power." Still, modernization in America's industrialization, in Wiebe's description, often extends people's capacities of dealing with larger areas-regions or the nation. It reduces reliance on a locality, urban or rural. Yet in many rural areas, Danbom and Barron emphasize, the new ways seemed neither of
local origin nor initially under local control, and so people of the countryside often tried to adapt them to wishes of their own.  

If a frontier increased freedom by isolating individuals from governments, as Frederick Jackson Turner has argued, American rural areas by the 1880s, the modernization interpretation contends, were being drawn increasingly into relations beyond themselves by methods developing from businesses, particularly corporations. In modernization, freedom might be reduced and certainly would be redefined. Loss as well as benefit could result for rural people, who in the 1900s, besides adopting new ways, left steadily for cities that were themselves changing greatly in modernization. Still, Barron argues, rural people maintained a perspective from which to criticize modernization. Other studies imply rural people also gained in modernization’s uncertainties a better basis for criticizing rural inequalities, such as yeomen did in forming Alliances in the South, women did in acting beyond families, and blacks did in traveling. Modernization by 1920-22 would seem to some farmers to offer ways to obtain profits in marketing, using autos and roads, as it otherwise had earlier in production.

Though “modernization” may imply that the changes in organization during industrialization were improvements, many rural and urban people held to customs. New ways often operated simultaneously with older ones, creating disorder, Wiebe notes in discussing cities. The trend, though, was of replacing old ways with new. This interpretation, the organizational synthesis, among whose proponents are Wiebe, Louis Galambos, and Ellis Hawley, traces the spreading use of bureaucratic ways that tended to allow groups in politics, society, and the economy to be larger, more formal, and functional from central direction, Alan Brinkley notes. The organizational historians, he argues, challenged notions of cycles of reform and the “general belief among historians in the primacy of political events.” Yet even while identifying bureaucratic forms instead of political efforts as causing change, the organizational synthesis did not rule out an earlier belief that conditions improve. Its adherents, Brinkley contends, “could still portray history as a continually ameliorative process.” Danbom, though, describes not only early-1900s urban reformers’ belief in the capacity of institutions to improve society but also the reformers’ failure in attempting to change rural institutions. For Barron, rural experience in 1870-1930 shows “change and continuity.”

Federal-aid roadbuilding in 1920-22 proceeded through the new kind of organizations—centrally directed agencies operating throughout large areas such as states and the nation, applying technical standards of engineering to plans for road projects, seeking to make improved roads and to connect them as systems. All those highway agencies, formed since the late 1800s, expanded in 1920-22 in funds, staff, and activities. Also, they attracted to participate in their programs many county governments. Such agencies in 1920-22 were planning work to extend at least several years further into the 1920s. The Good Roads efforts of the late 1800s and the proposal of 1890s Populists for federal spending for roads
to hire the unemployed had by 1916 led to a federal-aid highway program using methods Wiebe attributes to new organizational capacities. Unlike Populists and other 1800s groups who thought a great crusade could achieve change, Wiebe argues, new reformers like the Progressives sought measured, continuous change by methods of administration.\(^7\)

**Keeping Local Initiative**

Support for such measured change rested, though, on older, varying, local activities. Many federal-aid road projects in 1920-22 depended on efforts of county governments. Counties often initiated planning, suggested projects to state officials, held hearings, conducted referendums on whether to issue bonds, and paid part of costs of federal-aid work. Maintaining older forms of protest by local groups, some farmers in 1920-22 opposed the new road agencies and their work in a depression. True, new-style organizations of farmers such as the Farm Bureau or Farmers' Union issued statements from their national or state offices supporting or opposing plans for road work. Yet also, in older ways, practiced since at least the 1880s, many farmers were active in their county, sometimes through local chapters of such farm groups. Also, some attended citizens' gatherings where they voted on resolutions opposing road work or favoring tax cuts, and some appeared before county government councils to speak about particular projects. New forums appeared in which citizens spoke for or against projects; state highway agencies sometimes held hearings in localities near planned construction. And on behalf of some local groups, legislators in 1920-22 appeared before the new state highway agencies, continuing some of the legislatures' influence in deciding details about particular roads.\(^8\)

Many farmers noted that the agencies were trying not only to build roads but also to employ men in a depression. For some farmers, the period's larger pool of potential farm laborers and the resulting lower wages offered a way to recoup farming costs while crop prices were low. Some state highway agencies tried to schedule and locate road projects to avoid competing with farmers for laborers. Many rural men worked on the roads. Farmers might have been particularly familiar with some elements of the federal highway program's structure. As in agricultural extension efforts before and during the war, in the highway program participation was at local or state initiative and relied on cooperative funding from federal and state revenues and often from county taxes.

Still, in starting projects partly to reduce unemployment in a depression, the road agencies were by 1921 unique in the federal government and in many states and counties. That role, given the road program by Congress in 1919, became a consideration in beginning projects in most states in 1920-22. The role was expanded briefly beyond road work when President Harding in January 1922 directed federal departments generally to reduce unemployment by advancing the start of building and maintenance projects. Similar practice in public works had been frequent in the nation's large urban areas since the
late 1800s. From the road program's postwar expansion by 1922, many areas of the nation gained economic and governmental capacities for large road projects, counties increased their experience in sharing funds and authority with state and federal officials, and officials and constituents developed an acceptance of measuring projects' scale partly by need to reduce unemployment. The program quickly multiplied funds available for roads in many rural counties, reducing reliance on systems of required labor and making road work a source of wages for farmers and others in a depression.

The 1916 highway program's federal-state sharing of authority and funds reflected a heritage of decentralized control of roads, which in 1912-13 had prevented much participation by states and counties in experimental federal efforts. Congress chose the federal-state structure in 1916 instead of a plan for a national highways commission operating more from a central headquarters. Considerable influence from the state level was exercised before, during, and after the federal program's postwar expansion through one of the period's occupational organizations, the American Association of State Highway Officials, formed in 1914. Though county officials had no national group that so affected policy through the new road program, many of them exercised a continuing influence on the program's activities in communities, affecting plans and funds. Such county influence by participating in a large program of the state and nation contrasted earlier community-based efforts. The strength of home-rule sentiment among northern farmers in the late 1800s and early 1900s had propelled road-improvement efforts beyond local levels of government, Barron contends. As growing road systems exceeded township and county capacities for planning or financing, "state aid emerged as a solution; but the states were often unable or unwilling to ignore their rural constituents, prompting increased pressures for a greater federal role. In this sense, then, the battle between rural localism and cosmopolitan priorities helped to create the modern state."

Also, an active rural localism concerning roads helped determine the federal highway agency's structure. A cooperative form from an earlier rural program, the 1914 Smith-Lever Act's plan for agricultural extension, resembled the one approved in 1916 for the federal role in roads. In both, federal grants of funds were matched by funds from within states, making participation in the federal program voluntary, relying on support within communities for sharing costs of expanding services within federal standards. Both programs, in using matching grants of funds, resembled earlier state efforts to improve highways while communities still exercised most road authority. In both programs, state agencies would mediate between federal and local governments. That required some states to form highway agencies to comply with the 1916 federal law. Yet it avoided many problems that community particularity had raised in a 1912 experimental federal road program, in which a Washington office tried to deal with counties directly, encountering varying building conditions and laws as well as road plans that took little account of federal standards. Relying more on state agencies could encourage some uniformity, federal
officials decided. The 1916 federal-state highway program made concessions to decentralization, described in national political terms of states’ rights, though the form was a compromise also seeking to make more manageable a rural notion of community rights, still often attached to roads.\(^\text{10}\)

In dealing with roads and other matters, several federal programs that began near the war era used matching grants, implementing decentralization. In roads, complexities of dealing directly from Washington with the nation’s counties, as in 1912, would be inefficient, federal officials continued to believe. The American roadbuilding effort should differ from the British one, in which a central office dealt with localities, the federal program’s chief, Thomas H. MacDonald, said after the war. The United States’ size, number of roads, and heritage of states’ rights would further make difficult such a centralized effort. Yet also, some sharing of authority would serve community rights, in road work as in other federal programs that offered matching grants, MacDonald argued. In comments prepared for early-1922 congressional hearings on highway legislation, MacDonald cited five federal acts of 1914-19 authorizing programs of “the federal aid principle,” of offering matching grants. The programs were for agricultural extension, road construction, vocational education, and disease prevention. “It will be noted that the objectives which are sought under all of these acts are first of all of a community or local character, and that it is the aggregate of the result in a large number of communities which form the benefit from the national viewpoint.” In these programs, states had authority that could let federal officials avoid dealing with many local details. “Under the federal aid principle,” MacDonald said, “the responsibility rests upon the state for the character of development, and it may be assumed that since the demands vary with the different localities, that this is a question which can and should be settled by and within the state.” Also, such shared authority, MacDonald indicated, both raised chances of public acceptance of the program and cut federal costs. “It is hardly open to question that in dealing with questions that are primarily of local importance the federal government can more successfully deal through local and established agencies and in cooperation with these than through the establishment of a separate organization working independently at the sole expense of the federal government.” He noted that the cooperative form and matching grants permitted local initiative, resting the decision to initiate participation in localities, not in Washington.\(^\text{11}\)

In 1920-22, the new road program relied often on localities to authorize the start of projects and to raise much of the revenue the projects required, particularly where state governments lacked highway funds. Thus, at meetings of county governments or before referendums on issuing county bonds for the projects, many rural and urban people spoke about roadbuilding in a depression. They discussed doing so using local taxes, which would repay the bonds after the depression, and sometimes using special local taxes on land near roads to be improved by paving. Though projects that started in the new program had been planned and approved by state and federal agencies, reliance on local resources meant roads
were improved in some areas and not in others. Working for greater uniformity, Congress in late 1921 changed the program, requiring states to designate systems of a few main routes, on which to spend federal aid, and setting a schedule for requiring state control of funds for matching federal allotments. The changes added reasons to protest state authority and other elements of roadbuilding, for many rural people. Public meetings to express sentiment on roads in the depression often occurred in counties or townships, not in state capitals. Some individuals and local groups, though, did contact state agencies and political representatives, and farm organizations adopted resolutions at state meetings. Reports of local meetings, together with letters from citizens, circulated widely in newspapers and farm journals.

Accommodating Cooperation

Often in such public expressions within counties, people implied their community's interests in roads and taxes conflicted with those of state agencies. The statements may have reflected, in part, some support of local officials who sensed their traditional authority in those issues declining. Yet also, the expressions in counties seem located where initiative had rested frequently in the federal-aid program and where many early-1900s rural landowners felt accustomed to participating in government. In many counties, sentiment on roadbuilding diverged. Though opposition was frequent, many local groups, seeking to aid economic development or reduce unemployment, favored building roads in a depression, which allowed the federal program to expand, often among counties that could pay large shares of a project's costs. Thus, by 1922 people in many rural areas were acquainted with local use of federal funds to build community improvements and ease a depression, offsetting unemployment among laborers and loss of income among farmers and merchants. They were familiar with the community having a role in deciding whether and how such federal highway funds would be spent locally.

That experience helped prepare for a more-general agreement on federal and local authority that in the next depression would be part of many kinds of New Deal programs, termed by Wiebe the "compromise of the 1930s." In 1920-22 and in the 1930s, the terms of federal-community cooperation would be settled locally by some parts of the community. Wiebe describes the 1930s influence of members of the middle class in representing their localities, making a compromise with outside authority that would preserve their decisive role in applying external standards in their communities. Similarly in 1920-22, discussions of road work in many communities included town boosters, local officials, landowners, and newspaper editors. At many public meetings in 1920-22, men often adopted resolutions on roads in the depression, yet they rarely discussed details of contending local interests. Likely, participation in local government was practiced more widely in rural areas where many farm operators usually believed they had a chance to profit, in early-1900s areas of grain and livestock production more than in the South. Public meetings about roads in 1920-22 seem to show a similar pattern of frequency, indicating in much
of the South a local influence that included fewer farmers and excluded those who were landless or black. Further, lack of much taxable wealth in many counties of the South, Plains, and West precluded such public meetings, for, in many states' financing systems, counties unable to raise matching funds had no option of participating in the federal-aid road program. Another form of popular influence in localities occurred in the Southwest, where access to work for laborers in construction, a matter less settled there by class and caste after the war than in many southeastern rural communities, was an issue to contest by group statements in counties in 1920-22. Many rights of rural residents, which in theory were subsumed in federal citizenship and were to be served directly by the national government, needed in 1920-22 and later to be consistent with interests of groups in influence in their community.  

Still, aiding the interests of community leaders in roads quickly expanded many state governments' activities. To finance roads for autos, states in 1920-22 often sold bonds, raised vehicle fees and property taxes, and began taxing gasoline. To spend revenues from those sources, states enlarged their highway agencies. Such agencies, frequently small before the war, in some instances had large revenue and staff by 1922 compared to any other agency in the state government. The expansion of states' road construction agencies in 1920-22 was speeded by growing auto use, improved building conditions, and readiness of the federal-aid program's plans and funds. Though capacity of counties or states to increase spending in a depression remained uneven, every state had a program through which its own revenues or those from wealthier counties helped obtain federal grants. States unaccustomed to collecting large revenues for any single purpose had by 1923 spent millions in a depression, partly to aid constituents for whom an auto had been affordable. By 1922, rural residents familiar with retrenchment had seen nearby county or state officials try to respond to conditions of a depression, using methods that in many communities maintained some income and improved roads. Thus, though interests of community leaders supported many projects, the program also brought participation as workers from non-leaders, which included in many areas small farmers, sharecroppers, and unemployed laborers. Even those who immediately benefited little from a community's better roads for autos could gain from the program through wages and through the local economy's benefit from spending of the wages and from contractors' purchase of supplies. That extended to the countryside a compromise Gerald Friedman describes as frequent in large cities during late-1800s depressions, a bargain over public works by which property owners obtained construction while costs were low and laborers got jobs while they particularly needed wages. Increasing auto use helped extend such agreement to rural areas. For, a 1912 experimental federal program had stirred little interest when its incentives were small, road laws still kept most authority in localities, and autos were few. In 1920-22, though, serving motorists' needs led to acceptance of larger state governments and of public programs providing both for roads and for jobs. Such varied roles seemed established in the expanding federal-aid road program. By late 1921, some federal officials
expected that the program’s roadbuilding would continue for years, remaining available as needed in depressions to increase jobs and stimulate the economy.\textsuperscript{13}

Many property owners benefited in 1920-22 not only from lower building costs but also from better systems of financing public construction. Road work could be paid for by other ways than local taxes on land. The federal-aid program paid up to half a project’s costs, and it allocated its funds among states by a formula measuring states’ area, population, and road mileage instead of their payments in federal taxes. Poorer states, if they could find ways to match and obtain those allotments, might receive a larger share of federal highway revenue than their residents paid in federal taxes. Similarly, with state-wide collection of revenue for roads, poorer counties could receive a larger share of revenue than their constituents paid in taxes. Systems of raising road revenues in such larger areas as the state and nation eased communities’ dependence on resources of their own. To officials of many localities, the federal and state funds were attractive incentives, allowing some construction while abiding often by what Barron cites as an element in a northern rural ideology of home rule—a wish to keep farmers’ taxes low. Also easing reliance on taxing land was the auto, which in rural and urban areas continued to multiply, a new form of property taxed in ways closely related to improving roads. Increasingly, the matching non-federal share of funds for road projects came from vehicle fees or fuel taxes, revenue forms that developed or began in many states in 1920-22. Further, the depression’s roadbuilding, by the federal program and others, quickly increased property’s value for some rural people either by making more land accessible or by buying acreage for road right of ways. In such changes for governments, farmers remained an influence during the rest of the 1920s, particularly by, as Danbom notes, their adoption of autos more than several other conveniences.\textsuperscript{14}

Methods and benefits similar to those of 1920-22 remained in federal-aid roadbuilding later in the 1900s. Roadbuilding in the program continued through the 1920s and was an early way used to employ men and increase spending in the next depression. President Hoover, who in April 1930 signed an increase in funds, “supported federal-aid roads construction as a jobs program,” according to Bruce E. Seely, “because the money went to an existing program that produced needed physical improvements.” Such a basis for the program also had appealed to many just after World War I. In early 1919, roadbuilding was advocated because it provided jobs for unskilled laborers, many of whom were affected by depressions, and because it could be started quickly in many districts throughout the nation. To speed the start of work in 1930, Hoover requested funds for advances to states for matching their federal highway allotments. Other funds were part of the Emergency Relief and Construction Act of 1932, which included $120 million in loans for federal-state roads. Soon, the New Deal greatly expanded roadbuilding, though efforts of the Hoover era, Seely notes, “did firmly establish highway work as the leading solution to unemployment.” In the New Deal, early efforts to start building projects of varying
kinds in the Public Works Administration met delays in 1933 from lack of plans or a system for evaluating them and setting priorities among them—problems for which, Philip W. Warren argues, the federal-aid road program had solutions. In the 1930s as in 1920-22, the federal-aid road program's processes, in which state agencies had continually developed and submitted plans for projects they thought needed, made it ready for expanding work as conditions improved for construction.15

During World War II, the experience from the preceding world war, in planning public works for employment and spending to prepare for transition to peacetime, helped guide adoption of a program to build interstate superhighways. The World War I experience, an influence William E. Leuchtenburg notes in federal efforts during the 1930s Depression, affected plans for demobilization after both world wars. Thus, the interstate program was approved in 1944, though increased spending for roads in the postwar transition was largely for other kinds of projects. Yet by the mid-1950s, for varied reasons—to provide for military transport, relieve traffic congestion, open areas to commerce, and coordinate local expressway projects—Congress gave the costly interstate program funds in large amounts, to be raised from fuel taxes. And like federal-aid roadbuilding of 1920-22, the interstate program was to provide jobs and stimulate a slowing economy. Interstate construction was intended to give federal officials a way to help expand the U.S. economy so that it could support larger defense spending during the Cold War. The matching-grant practice of earlier federal programs scarcely remained. To increase centralized direction and provide for larger projects, federal funds would pay 90 percent of work in the interstate system, which would connect every state if only a fraction of counties.16

The federal-aid work in 1920-22 had been much less costly than that beginning in 1956, and it had relied much more on local participation. Half its funds had come from states or counties, giving them much authority in initiating projects. By turning road work more to an operation using cash, further reducing reliance on statute labor, the federal-aid program in 1920-22 extended to many states and counties practices that had developed near urban areas. That helped establish a basis used for later roadbuilding by the nation's federal and non-federal governments. The pattern by 1922 had changed from that of 1912, when an experimental federal program's small incentives, authority, and planning attracted participation of states and localities on only a few roads. Also by 1920-22, interest in building roads had increased, particularly in states and counties where autos were numerous. The federal-aid formula, by which officials identified important areas of road use, allotted more funds to states with larger populations and larger mileages of post roads already built. By 1920, those states generally had more autos than others. In five regions of the nation, such states were allotted more federal aid, matched much of it, and generally used more of it in building roads and reducing unemployment than others in 1920-22.17

Federal funds were a small part of road spending in the brief depression. States and localities spent ten times as much on roads in 1920-22, and at still higher levels was the spending in other kinds of
public and private construction. Yet in 1921, as spending declined for private construction it increased
for public construction, including that by federal and non-federal governments for roads. Once wartime
limits on construction had eased in demobilization, prosperity from the war period helped support
states' and localities' roadbuilding, which increased before 1920 and lasted through much of the 1920s.
Since 1916, the federal program had established that better roads would be made for autos, had encour-
aged planning and development in states' highway agencies, and had allocated funds to each state to
help pay for projects. Voters of several states and counties had approved new funds for roads even amid
high prices of the 1920 boom, adding resources available in the depression. The federal program's plan
to continue building roads in a depression, authorized by early 1919, was a pattern it held in 1920-22
and was one shared by every state and numerous counties. 18

In the depression, changes to provide for auto travel accelerated. Thus, many influences in
improving roads in the 1900s had increasing effect in 1920-22. They include growing use of autos, rais-
ing funds by statewide tax systems, taxing land less and autos more, applying new engineering stan-
dards and bigger equipment, using more wage labor and still less statute labor, working through larger
state highway agencies, sharing road authority and funds over wider jurisdictions than the community,
and planning projects to connect improved sections of road as systems. Their effects increased from the
lifting of mobilization's economic restrictions and from wartime experience of large-scale public coordi-
ation and financing, particularly in using bonds. The effects increased also amid rapid expansion of
road work in a depression's lower construction costs. Further, the federal-aid program expanded quickly
from having ready plans and funds and a new purpose—adding jobs and spending in a depression. New
methods extended quickly in 1920-22 road work as states and counties participated in the federal-aid
program in particular and in a postwar increase in roadbuilding in general. States and counties often
used the new methods in the rest of the 1920s and later as road spending in their own programs grew.

Countering a slow economy with spending and jobs remained part of federal efforts after 1920-22
and spread to other activities than roadbuilding. Such a purpose had attained some acceptance in many
urban and rural areas by 1922 in roadbuilding, particularly that in the federal program, whose incentives
attracted participation by every state and numerous counties. Many rural people in 1920-22 voted in
favor of road bonds from their state or county, supported county officials in starting federal-aid projects,
or got and spent wages from the projects. Objections voiced were often about losing some local author-
ity on roads, excluding county governments from the growing state revenues for roads, taxing local
landowners to raise matching funds, or hiring men from elsewhere while many in the community
needed work. Rarely were objections about spending nearby from federal revenues collected throughout
the nation.
NOTES

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Chapter 1
1As incentive to expand roadbuilding, the federal program allocated new funds in yearly stages and required that states spend them within time limits. The 1916 law authorizing the federal-aid program appropriated funds to be made available in amounts increasing yearly over the next five years. Similarly, appropriations in February 1919 and June 1922 each were to be made available over several years. Congress made all the November 1921 appropriation available within that fiscal year. In the 1921 law, states would have two years from the end of the fiscal year the funds became available to spend their allocations from them. Any funds not so spent, called a state’s unexpended balance of its allocations, would be reallocated among all states. The 1921 law stated that funds appropriated by it, or by the law of 1916 or laws supplemental to it, would be allocated for states to spend “until two years after the close of the respective fiscal years for which any such sums become available.” U.S. Statutes at Large. Vol. 42, Part 1 (Washington, 1923), 217. Early allotments of the 1916 appropriation were small, offering little incentive to begin much construction. Many states were unprepared for large roadbuilding programs. Also, wartime federal agencies gave low priorities to roadbuilding for access to credit, shipping, and materials; labor, contractors, and equipment were scarce. The 1916 law provided $5 million for the fiscal year ending in June 1917; it made additional amounts available later—$10 million for 1918, $15 million for 1919, $20 million for 1920, and $25 million for 1921. U.S. Statutes at Large, Vol. 39, Part 1 (Washington, 1917), 356. In the 1916 law, time limits were more generous for states lacking highway departments. Allotments to states were usable the year they became available and for one afterward; where states lacked a highway department, they were usable through the “third fiscal year succeeding the close of the fiscal year for which such apportionment was made.” Ibid. In North Carolina, early allotments under the 1916 law were matched by some counties to work on “small sections of road with a few bridges.” In the war, though, “road work languished while all energies were diverted to the greater enterprise.” Cecil Kenneth Brown, The State Highway System of North Carolina: Its Evolution and Present Status (Chapel Hill: University of North Carolina Press, 1931), 61. By 1921, Georgia officials said, “It must be fully realized that the accumulation of Federal Aid during the war period, as met by county funds, has been the backbone of the highway work in Georgia.” Georgia State Highway Board, “Report,” 5-29 in Georgia State Highway Department, Third Annual Report, May 1, 1921 (Atlanta, 1922), 11-12. Federal aid allotments to Michigan were $148,000 for 1917 and $291,500 for 1918, rising to $1.9 million in 1919, $2.7 million in 1920, and $2.8 million in
1921, bringing the state’s federal allotment to some $8 million. Congressional appropriations in November 1921 and June 1922 raised the period’s total allotment to Michigan to $117.7 million. Michigan, State Highway Commissioner, Ninth Biennial Report, For the Fiscal Years ending June 30, 1921 and June 30, 1922 (Lansing, 1922), 9. For Vermont, allotments show the same trend though they were smaller, reflecting the state’s lower values for population, area, and road mileage. Vermont’s allotments were $22,844 in 1917, $45,689 in 1918, $294,117 in 1919, $429,376 in 1920, and $450,077 in 1921—totaling $1.2 million. Vermont, State Highway Board, First Biennial Report, For Two Years Ending June 30, 1922 (Rutland, 1922), 7-11. Early in the depression, political support developed in Congress for increasing funds for the federal program. On Feb. 7, 1921, the U.S. House passed a bill to appropriate $100 million for the program; 58 members voted against the bill. Some opponents said states had large balances in their allotments they had not spent. “House Passes Federal-Aid Road Bill,” Engineering News-Record 86 (Feb. 17, 1921): 318. Congress appropriated $75 million in November 1921 and made all the amount available within the fiscal year, unlike its routine practice of making road appropriations available in parts over several years. The period’s four congressional appropriations for the federal-aid road program and the number of years over which their funds steadily became available in parts are: $75 million in 1916, over five years; $200 million in 1919, over two and one-third years; $75 million in 1921, over one year; and $190 million in 1922, over three years. W. Stull Holt, The Bureau of Public Roads: Its History, Activities, and Organization (Baltimore: Johns Hopkins University Press, 1923), 33; Federal Highway Administration, America’s Highways, 1776-1976: A History of the Federal-Aid Program (Washington, 1976), 108.


2 Robert H. Wiebe, The Search for Order, 1877-1920 (New York: Hill and Wang, 1968). Authority over rural roads was held at local levels into the early 1900s. Seely argues that, though consistent with a trend to centralize authority in many functions in American society, the 1916 law's requirement that states have highway agencies to receive its federal funds "forced wholesale alterations in state highway laws, since only those of California conformed to all" the federal road office's "guidelines in 1916. Eight states had to form highway departments, with three needing constitutional amendments to do so, while nine existing departments benefited from major legal overhauls. Another eighteen states strengthened or reorganized their highway commissions." Seely, 47. Economist Wesley C. Mitchell, in his 1913 study of business cycles of 1889-1911 in the United States and part of Europe, considered scheduling government and railroad purchasing and building as a possible "balance wheel to steady the business mechanism," a proposal he traced to the French and British. Wesley C. Mitchell, Business Cycles (Berkeley: University of California, 1913), 586-88. In 1921, Mitchell favored forming a federal agency to monitor business forecasts and intervene to counter depressions by beginning reserved public works, a proposal Congress rejected, though it had increased funds and given anti-depression authority in 1919 to a smaller effort, the federal-aid road program. Mitchell's statements supporting such an agency are in Senate Committee on Education and Labor, 67th Congress, 2d sess., Relieving Periods of Unemployment by a System of Public Works: Hearing on S. 2749, A Bill to Prepare for Future Cyclical Periods of Depression and Unemployment by Systems of Public Works, December 21 and 22, 1921 (Washington, 1922), 12, 13. Joseph Dorfman notes that Mitchell was "Secretary of Commerce Hoover's leading consultant in arranging for the President's Conference on Unemployment," held in fall 1921. Dorfman, 366-67. Earlier, the French in "the Freycinet plan of 1879, inaugurated as a public works programme to counter the recessionary demands of the late 1870s. " Clive Trebilcock notes, supported building railroads in new areas. Clive Trebilcock, The Industrialization of the Continental Powers, 1780-1914 (London: Longman, 1981), 166. The Freycinet plan brought "progressive ideas to France's backward lands," yet it began as "a way of buoying up the sagging French economy of the late 1870's," according to Eugen Weber. The spending affected many rural areas as, "for the first time, millions flowed into the countryside." The funds provided work on railroads, rivers, canals, and ports and for building and surfacing local roads. Cultural changes "converting peasants to the modern world," came less from the Freycinet construction activity than from the train stations and tracks it left, which "offered steady jobs for steady people." Even in an era before autos, the new systems of local roads, leading to new railroads, increasingly changed rural customs. Road traffic in rural areas, "while rails unfolded, kept shifting to ever-closer railheads, no matter in what direction these might lie." Thus, "traditional orientations were abandoned, traditional hostilities or habits laid aside, in the pursuit of new or at least newly perceived possibilities." The new roads and rail lines "brought the isolated patches of the countryside
out of their autarchy—cultural as well as economic—into the market economy and the modern world" and produced "national integration of unparalleled scope and effectiveness." Eugen Weber, *Peasants into Frenchmen: The Modernization of Rural France, 1870-1914* (Stanford, CA: Stanford University Press, 1976), 208-10. In the United States, early 1900s reformers in the Country Life Movement, many of them urban professionals, overestimated their ability to change rural customs, David B. Danbom argues. "Despite their appreciation of some rural problems, rural people in general were highly defensive about their society and their institutions. This defensiveness is quite understandable in an era in which the nation, its values, and its institutions were becoming increasingly urban and industrial, but Country Lifers seldom perceived it." David B. Danbom, *The Resisted Revolution: Urban America and the Industrialization of Agriculture, 1900-1930* (Ames: Iowa State University Press, 1979), 81. 96.

The highway program, as a structure making funds available to each state and allowing voluntary participation and shared authority, resembled some decentralizing features of another federal program for rural areas. The 1914 program of the Smith-Lever bill offered federal matching funds in allotments "on the basis of rural population to states and counties desiring the services of county farm and home demonstration agents." Danbom, 72-73. Farmers such as those in Illinois gave increasing support in the mid-1920s for state bonds and a state gasoline tax because the measures produced revenue for farm-to-market and county roads, according to Hal S. Barron. Many northern farmers supported roadbuilding as they obtained, through farm groups, "accommodations in taxes and services in roads," before the programs of the New Deal. Earlier, rural "attachment to local control," had "forced compromises that limited the government's power and created the need for still further state involvement in order to overcome those limitations." As roads became a concern at increasingly higher levels of government, federal efforts were sought. Thus, "the battle between rural localism and cosmopolitan priorities helped to create the modern state." Hal S. Barron, *Mixed Harvest: The Second Great Transformation in the Rural North, 1870-1930* (Chapel Hill: University of North Carolina Press, 1997), 41-42. Ibid., 8-9, 32-33; Danbom, 84; Howard Lawrence Preston, *Dirt Roads to Dixie: Accessibility and Modernization in the South, 1885-1935* (Knoxville: University of Tennessee Press, 1991), 20-21. In the widely practiced statute-labor system of the early-1900s South, comparatively few worked. The labor system was "carried out at the county rather than the state level, which made fraud and noncompliance commonplace. Most citizens never spent a day doing road work," and many preferred paying a small yearly fine in cash or obtaining an exemption. Preston, 21. By changes affecting the system of statute labor and local authority for roads in South Carolina by the early 1900s, according to William L. Suttles, "the state began the bold leap from twelfth century mores into the exigencies of the twentieth century." William L. Suttles, "The Struggle for State Control of Highways in South Carolina, 1908-1930" (M.A. thesis, University of South Carolina, Columbia, 1971), 33. Efforts at government centralization and coordination in the period also included establishment of the Federal Reserve Board in 1913 to help coordinate banking and to affect the economy through the supply of credit. Also, the federal income tax, adopted in the Civil War and in 1894, was authorized by constitutional amendment in 1913. John D. Buenker contends early-1900s interest in the income tax resulted from efforts to improve the predictability, productivity, and equity of federal revenue measures, which then were mostly the tariff and excises. John D. Buenker, *The Income Tax and the Progressive Era* (New York: Garland, 1985), 26-28. Sentiment for the tax was stronger in the South and West than in the more-prosperous Northeast. Ibid., 44-45. The amendment, approved in 1909, was ratified in 1913. Ibid., 138-44.

In townships throughout the state of New York, Barron notes, "66 percent of the 1904 road tax was still paid in labor." Barron, 32. By 1870, cash taxes supported road work in larger urban areas of Massachusetts, while its rural areas relied on tax payment in labor. *Massachusetts Board of Agriculture, Annual Report, 1870-71* (Boston, 1871), 74, quoted in Barron, 24. In Iowa, Des Moines served notices on 6,819 men in 1893 to pay the poll tax, and the city paid $1,000 for a collection staff; in response, 3,146 men worked out their tax on the streets, 40 men paid the tax in cash, and 2,982 men remained delinquent in paying the tax that year. *Iowa State Register (Des Moines)*, Dec. 27, 1893. In a study of cities in Iowa by 1896, less than half the men who owed the poll tax paid it Among the cities studied, Dubuque, Cedar Rapids, and Keokuk, "make no effort to collect the tax." Iowa Bureau of Labor Statistics, *Report, 1895-1896* (Des Moines, 1897), 11-15. Mr. Cowrie of Iowa County, statement to Iowa Road Improvement Association and Iowa State Agricultural Society, Jan. 12, 1893, 609-16 in Iowa State Agricultural Society, *Report, 1892* (Des Moines, 1893), 604. Iowa in 1884 allowed consolidating districts to form a township district for roads and in 1894 made mandatory a small cash tax for roads. Otherwise, "no fundamental changes in the general system of road administration were made between 1873 and 1896" in the state's laws. John E. Brindley, *History of Road Legislation in Iowa* (Iowa City: State Historical Society of Iowa, 1912), 206. In the 1890s, every state in the nation relied on statute labor to build and maintain most rural roads, according to Peter...
1920 showed that only 29.9 percent of Americans still lived on farms. The South and Midwest had the highest
population at the beginning of the year. Many farms closed in the depression. For, "from a survey of vacant farm­
houses it appears that the percentage of all inhabitable farmhouses not occupied in the United States increased
from 4.7 per cent in 1920 to 7.3 per cent in 1922. This abandonment of farmhouses was high in various sections of

Wallenstein. In February 1894, Virginia’s Supreme Court ruled against the statute-labor system amid changes in
road work in many parts of the nation. Still, in the early 1900s “Virginia continued unique among American states:
elsewhere, legal challenges to the ancient corvée system were turned aside, and legislation, often slow in coming,
was necessary to put an end to the labor tax.” Over decades, that did occur. “Vermont, for example, outlawed
the labor tax in 1892, and the last of the states had done so by the early 1930s.” The U.S. Supreme Court unanimously
upheld the labor tax as late as 1916. The man who challenged Virginia’s statute-labor law in 1892, William F.
Proffitt, 22, represented some sentiment held in his community, Wallenstein argues. After Proffitt’s refusal to
perform road work, the affected county in 1892 adopted a property tax in cash for roads, and in 1908 Virginia
began sharing road funds with counties that would match them. Proffitt was unsuccessful in 1921 in opposing the
new kind of road work, done for cash, when a route was planned through his family’s farm in Virginia’s Louisa
County. Peter Wallenstein, “The Case of the Laborer from Louisa: Three Central Virginians and the Origins of
the Virginia Highway System,” Magazine of Albemarle County History 49 (1991): 25, 35, 29, 30, 36, 40 Early-
1900s Progressives, seeking labor for good roads in the South, had advocated reforming the practice of leasing
convicts to employers by having them work for the state on highways. Alex Lichtenstein, “Good Roads and Chain
85-89. In the early 1900s, Dewey W. Grantham observes, southern cities as well as counties used chain gangs for
road work. Dewey W. Grantham, Southern Progressivism: The Reconciliation of Progress and Tradition
(Knoxville: University of Tennessee, 1983), 134-35. Preston, 21; Thomas D. Clarke, “Changes in Transportation,”
Press of Mississippi, 1937), 279-280. Much earlier, in 1760-1830 in South Carolina, according to John Hammond
Moore, slaves, not white men, worked on roads of three lowcountry parishes, though in upcountry areas farmers
did more such work. Still, before 1865 in South Carolina little in road tax was paid in cash, and “blacks in all parts
of the state apparently did much of whatever work was done, whites being able to somehow avoid their legal res­
ponsibilities.” Then, “the enhanced power of the freedmen during Reconstruction increased demands for roadwork
by all citizens as required by law,” leading to greater use of the cash tax. “An obvious reservoir of labor—those in
prison—was not tapped to any great extent until after 1900.” John Hammond Moore. 11-13. In post-Reconstruction
Georgia, gangs of misdemeanor prisoners worked on roads first in black belt plantation areas and in growing cities,
where “social control of a black working class cut loose from plantation discipline meshed with commercial
expansion.” Atlanta began the practice in 1876. Lichtenstein, 97-98. In a Georgia region between Macon and
Savannah in the 1870s, county roads were administered by a board whose members represented militia districts.
“In 1905, the yearly per capita road tax in Pulaski County was two dollars, which could be paid off by spending
four days on the road force” formed of the community’s men. “After the turn of the century, however, much of the
work on public roads was performed by the inmates of county chain gangs.” Mark V. Wetherington, The New
South Comes to Wiregrass Georgia, 1860-1910 (Knoxville: University of Tennessee Press, 1994), 68-69. As set­
tlement grew in that wiregrass district’s cutover lands in the late 1800s, smaller, private roads linked farmsteads to
public roads and were “worked—if worked at all—by the members of the households living along them.” Soon, “by
the early 1900s, one of the most significant trends in local road development was the attempt by farmers to have
their privately maintained lanes declared public routes,” shifting “upkeep from their families to the county road
force.” Ibid., 70-71. Also supporting ending the South’s system of leasing convicts to businesses, and putting those
men to work on roads, were southern good-roads advocates, including Populists, and union members objecting to
the system’s injustice and its competition with free labor, Lichtenstein, 87-89, 92, 97-98. Generally, in a 1901
Georgia report, counties that recently had adopted the chain gang cited great improvement in road work over using
only statute labor. Ibid., 98. While funds for the federal Agriculture Department increased in the early 1900s, rural
population declined. “Within little more than a century the farm majority had become a minority. The census of
1920 showed that only 29.9 percent of Americans still lived on farms. The South and Midwest had the highest
percentage of people on farms, but even those regions were experiencing a decreasing farm population.” Gilbert C.
did gain population in parts of the depression, though by late 1922 the economy had improved for some other
sectors more than for agriculture, particularly for producing wheat. Generally, the trend of decline continued in
1922, because of urban wages and low farm income, according to Henry C. Wallace, agriculture secretary. “In
1922 there was a net shift of 1,120,000 persons from farms to city, or about 3.6 per cent of the rural agricultural
population at the beginning of the year.” Many farms closed in the depression. For, “from a survey of vacant farm­
houses it appears that the percentage of all inhabitable farmhouses not occupied in the United States increased
from 4.7 per cent in 1920 to 7.3 per cent in 1922. This abandonment of farmhouses was high in various sections of
the country, but especially so in several sections of the Great Plains and the Pacific Northwest." Henry C. Wallace, "The Wheat Situation," 95-150 in Agriculture Department, Yearbook, 1923 (Washington, 1924), 121-22. Depressions and other market conditions had increasingly affected farming, which by the early 1900s "had become part of metropolitan America," Walter T. K. Nugent contends. "The structural problem of how to reconcile individual, traditional independence and entrepreneurship with a highly interconnected market economy had only been postponed. In 1880 that problem was embryonic. In 1920 it was endemic." Thus, the nation's traditional expansion of agricultural settlement had stopped and, particularly in some areas, reversed. "The counties of the high plains emptied of population after 1915 and through the 1920's about as rapidly as they had filled a few years earlier." Walter T. K. Nugent, "American Farmers and the Market Economy, 1880-1920," 1-17 in Lawrence E. Gelfand and Robert J. Neymeyer, eds., Agricultural Distress in the Midwest Past and Present (Iowa City: University of Iowa Press, 1986), 11-15. While growing numbers of autos raised demand for better roads and increased wear on old roads, rural population trends left fewer men in the countryside for road work. Still, farm residents would continue to need many roads to serve agricultural marketing and rural communities. For, Nugent notes, "the number of farms in the United States, after a two-hundred-year rise, leveled out in about 1915 and held at roughly 6.5 million until the late 1930's before starting to decline." Ibid.

5 Among postwar rulings affecting women and the poll tax were several in 1920-22 in Plains states on issues of financing roads, mentioned on page 90. MacDonald spoke at Omaha, NE, to the American Association of State Highway Officials' seventh annual meeting. Omaha World-Herald, Dec. 8, 1921. By 1920, the auto and the road programs of federal, state, and local governments were changing many rural areas, offering examples of what Danbom describes as "the impact of industrialism on all of the society of which it is a part, even those segments not directly connected to industry." Many influences were making rural people more organized and efficient--an "industrialization" of agriculture, a goal of the early-1900s Country Life Movement. Danbom argues. The Country Lifers proposed new institutions for rural areas, which many farmers considered threats to tradition. Country Lifers sought rural improvements to develop a "society of happy and contented people, of farmers who applied practical intelligence and scientific agriculture in order to bring forth maximum production." Country Lifers, urban reformers concerned with rural conditions, "usually hoped that organization and efficiency would benefit rural people, but their principal purpose was to make the farmer a productive supplement to the increasingly dominant industrial sector of the nation." Country Lifers mistakenly thought reforms they proposed were so clearly better that they would be quickly adopted by rural people. Other influences had greater effect in achieving Country Lifers' goals. World War I "put a premium on agricultural efficiency and organization." Also, "rapid population shifts, changes in communication and transportation, rural materialism, the economic boom of the teens, and the bust of the twenties" weakened rural customs and changed the farm economy. Danbom, viii-viii. The auto and programs to build roads for it were accepted increasingly in rural areas by 1920. Further, using roadbuilding to combat depressions--hiring jobless men and increasing spending--was a large change accepted quickly in many rural areas in 1920-22. Many farmers in some areas protested spending for roads while the economy was slow. Yet many farmers worked on roads then, for wages that were a buffer against depressions for them as well as for men from the nation's urban areas.

6 Early-1900s conservationists favored centralized policymaking, Samuel P. Hays argues. Officials of President Theodore Roosevelt's administration "rarely, if ever, permitted grass-roots groups to decide policy questions," seeking to avoid what they considered the "the risk of 'selling out' the national welfare to 'special interests.'" Indeed, "their entire program emphasized a flow of authority from the top down and minimized the political importance of institutions which reflected the organized sentiment of local communities." Samuel P. Hays, Conservation and the Gospel of Efficiency (New York: Atheneum, 1969), 272. In 1912 and 1916, Congress authorized the federal program to improve rural roads used in delivery of mail. And in 1920-22, many states would rely on counties to help match federal funds. The program's expansion in 1921 itself brought varied readjustments in most states in authority for roadbuilding. Yet in November 1921, changes in federal law would further unsettle relationships in many states, requiring states to designate systems of up to 7 percent of total road mileage for improvement with federal funds and requiring that, within the next three years, states, not counties, control the matching funds in the federal program. The Federal Highway Act of 1921 is reprinted in U.S., Statutes at Large, vol. 42, part 1 (Washington, 1923), 212-19.
The economy's slowing began in late spring 1920 for some sectors and lasted into mid-1922 for many, into 1923 for wheat production. Totals measuring spending of the new highway program's funds were divided by federal officials in mid-1922 into two kinds: federal aid paid to the states for completed work and federal aid obligated to states for work under way by June 1922. That would represent most work done with federal aid in 1920-22. Little work using federal aid had been done in the nation before 1920. And much of the work of the 1922 building season would have been under way by late June. Data are used here to describe projects completed and those under way June 30, 1922, even though the numbers are not exactly comparable in those terms. The two number sets are from the same source and were published together. Yet included in numbers for projects completed are only projects for which final payments of federal aid had been made to the states involved. Numbers for projects under way also include projects of completed construction if federal aid for them had not been completely paid by late June 1922. Thus, some or many projects in a state could have been completed yet listed in these data as under way. Still, the numbers of both groups were subject to the same nationwide payment procedures, which here are presumed to work to equalize the effect on the numbers of including some completed projects among those listed as under way. Advance payment of some federal funds might be made during construction, yet final payment was made upon completion both of construction work and of procedures for inspection, compliance, and acceptance by federal officials. The data likely reflect that process. Even with the problem for purposes of description here, the data still seem useful for indicating a state's kinds of road work and spending for them by mid-1922, the worst period of the depression. The data may underestimate how much a state was able to expand the program's road work by mid-1922, an acceptable problem. Also, their use for the purposes here may imprecisely represent relationships when comparing totals among states, indicating some states built less in a particular kind or in total than was the case, suggesting a need for caution in relying on generalizations from them. Still, the numbers seem a useful, available way to indicate changes in the program's implementation, by comparing projects under way to those completed. Further, comparison of states' road work often is extended beyond that completed by mid-1922 to include projects under way by then. Even in summer and fall 1922, many people were seeking work or extra income because of the depression's effects. The combined periods, 1920 to mid-1922 and the last half of 1922, indicate most clearly how much and for what kinds of road improvements a state began public works quickly using the new program. Data are from Agriculture Department, Report for the Year ending June 30, 1922 (Washington, 1923). Data on work completed are from "Table 6 -- Summary by types of projects completed and final payments made." Ibid., 473-78. Data on work under way by late June 1922 are from "Table 7 -- Summary by types of projects under construction, including projects completed but not completely paid for." Ibid., 479-83. Provision for advance payment during construction is part of the 1921 Federal Highway Act, reprinted in U.S., Statutes at Large, vol. 42, part 1, 212-19.

Data on income-tax returns are available for each state, allowing comparison. Yet returns were required only for incomes of $1,000 or more for individuals, $2,000 or more for couples. In every state, the data omit many people because their incomes were lower than those levels, reducing the capacity of the data and comparisons to reflect conditions. Still, the data reflect trends in states' economies that affected people in general. Indeed, incomes below levels that required returns likely were affected more in the economic declines than those in the data. Also, in an attempt to reflect the proportion of people at those lower incomes, the states' totals are divided by 1920 population, yielding state totals for taxable personal income per capita. For the income figures and for some other data, states' totals are compared in regions and in the nation. In the national maps, forty-eight states are classified in three groups (16 states in each) by their rankings, showing values that were high, near the U.S. median, or low.

Part One

1 Of 48 states' totals for per-capita taxable income 1920, (figure 2, upper left) the average is $200.49 and the median $189.81. Above the average are 21 states, below it 27. Totals ranged from $388 to $46. Of the totals for change from income totals of 1919 to those of 1920, the average is a 19.4% increase, the median a 17.3% increase. In change in states' income totals from 1920 to 1921, the average is a decline of 17.7%, the median a decline of 21.7%. Measuring recovery in totals for 1922, the average value is returning to within 9.9% of 1920 levels, and the median is returning to within 17.2%. The 1922 total was higher than 1920 by 5.6% for New Jersey, one of five states recovering completely; yet 43 states for 1922 had totals for taxable personal income that remained below the 1920 level, including seven states still at least 30% below 1920. Treasury Department, Internal Revenue, Statistics of Income, 1920 (Washington 1922), 22-23. Totals for personal income tax returns are for calendar years and for

Chapter 2

1The formula for allotting federal highway funds to states remained unchanged when Congress appropriated new funds for the program Nov. 9, 1921. “The three factors governing the distribution remain as before—area, population, and mileage of rural delivery and star routes. Dividing the net appropriation into three parts, one-third is to be apportioned in the ratio which these three factors in each state bears to the total for the U.S. “The Federal Highway Act.” Public Roads 4 (December 1921): 17-18.

2The area that here is the North Atlantic region had ten states by 1791, and it added Maine by 1820. Council of State Governments, Book of the States, 1984-85 (Lexington, KY: The Council, 1984), p. 508. Seven North Atlantic states had most 1920 population per square mile in the nation; most states in the region were among the smallest in area and had relatively large populations. Largest U.S. population per square mile was for Rhode Island, 566.4 people, followed by Massachusetts, New Jersey, Connecticut, New York, Pennsylvania, and Maryland. Though in those states population per square mile exceeded 145 people, it was less than 50 in Vermont, New Hampshire, and Maine. Commerce Department, Bureau of the Census, Fourteenth Census of the United States. 1920, vol. 1. Population (Washington, 1921). 31. Average size of area for the region’s states was about one-fourth that for all 48 states. Commerce Department, Bureau of the Census. Financial Statistics of the States, 1919 (Washington, 1920), 58.

3Massachusetts Board of Agriculture, Annual Report, 1870-71 (Boston, 1871), 74, quoted in Hal S. Barron, Mixed Harvest: The Second Great Transformation in the Rural North, 1870-1930 (Chapel Hill: University of North Carolina Press, 1997), 24; Maine State Board of Agriculture, Annual Report, 1870 (Augusta, 1871), 253, quoted in Barron, Mixed Harvest. 24. By 1886, at least 116 of the 167 towns in Connecticut reported using the scraper machine, which Barron notes “improved roads without necessitating centralized administration or higher taxes.” Barron, 26-27. An 1880s New Jersey law let counties issue bonds to finance macadam roads. In 1895, similar powers were granted by legislatures in New York, Michigan, Indiana, and Minnesota; Pennsylvania allowed counties highway commissions and power to issue bonds and levy taxes for roads; New Hampshire, Vermont, and Wisconsin made townships the smallest road districts. Other legislation raised limits on county and township taxes and cut special assessments on land adjoining improved roads. Still, Barron notes, “without outside financing, relatively few counties and even fewer townships undertook the financing and construction of permanent roads.” Barron, 252 n33. Hearings in 1892 in Massachusetts included supporters of state aid to localities. George A. Perkins, chairman, Massachusetts State Highway Commission. “State Highways in Massachusetts,” 505-12 in Agriculture Department, Yearbook, 1894 (Washington, 1895), 505-06.

4Andrew P. Anderson, highway engineer, Bureau of Public Roads, Rural Highway Mileage, Income and Expenditures, 1921 and 1922, Department Bulletin no. 1279 (Washington: U.S. Agriculture Department, March 14, 1925), 20; W. M. Curtiss, Development of Highway Administration and Finance in New York, Cornell University Agricultural Experiment Station Bulletin no. 680 (Ithaca, NY: 1937), 22-28, quoted in Barron, Mixed Harvest, 32-33. Much of New York’s state bond issue in 1912 was to be distributed as state aid to county authorities for building roads. Of the $50 million authorized in the bond issue, $30 million was to go for county roads, the rest for trunk roads. Counties were to receive the funds by a formula of three factors of equal weight: population in the 1910 federal census, mileage of public rural highways, and area. An editor in Iowa said that because New York state was “building a great many roads practically without local aid, the necessity of providing for a proper distribution of funds is quite apparent.” He supported state payments for roads built by “local authorities but under state supervision. This plan has been very successful in Wisconsin and Minnesota.” Editorial “The New York Bond Issue,” Road-Maker 2 (September 1912): 10.

5Preston, 12. Charles Wixom notes that the Office of Roads Inquiry in 1893 had a budget of $10,000 to “conduct tests and experiments on roadbuilding material and to disseminate information on road improvement

6In Connecticut, a square mile of area had an average of 2.9 miles of road, highest in the nation. Ratios exceeded 1 mile of road per square mile in all the region’s states except Maine. Agriculture Department, *Yearbook 1920* (Washington, 1921), 829. In mileage of tracks per square mile of area in 1919, New Jersey ranked first in the nation. Interstate Commerce Commission, Bureau of Statistics, *Statistics of Railways in the United States for the Year ended Dec. 31, 1919* (Washington, 1922), 11. In smaller eastern states, settlement of rural and urban areas close to each other helped preclude contests, more frequent elsewhere, between farmers and town residents over what kinds of roads to improve, argued the federal road program’s chief, Thomas H. MacDonald. In those smaller states, “distance between towns and market points was so short that the farm-to-market plan of improvement when carried to its ultimate development became practically identical with the inter-town or trunk-line plan.” In other parts of the nation, including sections of the Plains, “remoteness of the towns from one another prevented the early harmonizing of the two plans of development.” In some parts of the Midwest, rural settlement was near numerous towns that were “essentially agricultural centers and this fact contributed further strength to the demand for farm-to-market roads as opposed to trunk lines.” The contest over whether to improve farm-to-market roads or main routes was settled more quickly in the smaller eastern states because of settlement patterns and the early growth there of state highway agencies. MacDonald indicated. For, building main routes in a statewide plan “naturally presupposes the existence of such an agency.” The agencies were required in every state to share funds in the federal-aid road program, under legislation of 1916. Thomas H. MacDonald, “The History and Development of Road Building in the United States,” paper read at the Annual Convention of the American Society of Civil Engineers, Oct. 6, 1926, at Philadelphia, PA. ( Mimeographed typescript, Parks Library, Iowa State University, Ames), 40-42. To comply with the 1916 law, eight states formed highway agencies and many others changed their laws and agencies. Seely, 47. In New York, urban residents were 83% of the total, in Massachusetts 95%, and in Rhode Island 97.5%. In Maine and Vermont, population was less than 40% urban. Nine states here ranked among the nation’s top 15 in the urban share of their population. Urban areas were those of at least 2,500 population. Commerce Department, Bureau of the Census, *Abstract of the Fourteenth Census of the United States, 1920* (Washington, 1923), 75.

7For 1919, New York registered 556,511 motor vehicles. Agriculture Department, *Yearbook 1920*, 829. George L. Burton, “Chairman’s Report,” 7-9 in New Jersey State Highway Commission, *Fourth Annual Report, Fiscal Year Ending June 30, 1921* ([Trenton, 1921]), 7-8. To open the paved road from New York, 350 drivers paraded autos from Camden to Atlantic City, where the hotel association and chamber of commerce sponsored ceremonies. “New York-Atlantic City Hard Paved Route Opened,” Engineering News-Record 86 (Oct. 13, 1921): 630. By mid-1921, holiday traffic was heavy at points in New Jersey. “Traffic counts taken on July 2, 3 and 4 at the intersection of Routes 3 and 4 at Absecon, N.J., show a total of 19,592 motor vehicles passing this point Traffic counts taken during the same period on Route 1, at Rahway, NJ, show a total of 35,487 motor vehicles passing. Of the vehicles counted at Absecon, 60 percent were vehicles registered in other states.” “Immense Holiday Traffic in New Jersey,” Good Roads 61 (Aug. 24, 1921): 100. Rhode Island registered only 44,833 motor vehicles in 1919. Agriculture Department, *Yearbook 1920*, 829. The region’s average for motor vehicles per mile of rural road was 7.6, twice the nation’s average of 3.6. In Vermont, New Hampshire, and Maine, averages approached 2 registered vehicles per mile of road. Ibid. Rhode Island, State Board of Public Roads, *Twentieth Annual Report, January 1922* (Providence, 1922), 16. New Hampshire’s governor asked in his 1921 inaugural whether trucks from other states should not meet his state’s limits on size, weight, and load when they used its roads. Good Roads 60 (Jan. 26, 1921): 48. The region’s truck traffic grew quickly in World War I, when “railroads were congested with the movement of war materials and otherwise disorganized.” *Detroit Free Press*, Jan. 8, 1922. New York required auto registration by 1901 and yearly registration in 1910. During 1911-14, registrations doubled; chauffeur’s licenses nearly doubled. Those increases raised funds for building roads. New York state’s fees from auto registration and chauffeur’s licenses totaled $905,179 in 1911 and $1.6 million in 1914. The number of autos grew from 83,969 registered by the state in 1911 to 169,966 in 1914. Chauffeurs’ licenses numbered 35,890 in 1911 and
66,636 in 1914. Totals for the previous 14 years for the state’s receipts from registrations and licenses were announced by Francis M. Hugo, New York secretary of state. “In the early years,” Hugo said, “annual registration was unnecessary, so that the figures up to 1910 do not show the total number of machines in operation; only those registered in each year. When the present law took effect in August, 1910, there was a re-registration of all machines.” New York Times, Jan. 31, 1915, p. 3 (VIII). By 1920, North Atlantic states registered autos in ratios ranging from one for every 13 people (in Delaware and Connecticut) up to one for every 19 people (in populous New York and Pennsylvania). Most states of the Midwest, Plains, or West had less than 14 people per auto. In the South, most states had at least 20 people per auto. Agriculture Department, Yearbook 1920, 829.

9Elsewhere in the region in 1919. Massachusetts ranked 4 in the nation in average number of wage earners. New Jersey ranked 6, Connecticut 9, Maryland 14, Rhode Island 13, Maine 24. The region’s average was 362,574 wage earners per state, compared to an average of 189,289 per state for the 48 states. Census Bureau, Manufactures, 1919, 18. Nine of the North Atlantic states in 1919 had track mileages ranking among the lowest 12 in nation. Yet Pennsylvania had the nation’s third largest mileage, and New York the tenth largest. Interstate Commerce Commission, Statistics of Railways, 11.

9Commerce Department, Bureau of Census, Fourteenth Census of United States, 1920, vol. 5, Agriculture (Washington, 1922), 34-35. When 1920 value of farm implements and machinery is divided by state area in acres, the North Atlantic states ranked among the top in the nation. Pennsylvania ranked 3, New York 5, Delaware 7, New Jersey 8th, Maryland 10, Connecticut 11, Massachusetts 12, Vermont 13, and Rhode Island 14. Ranking lower were New Hampshire, 29, and Maine, 30. Census Bureau, Abstract of the Census, 1920, 600. Farm-equipment values had grown here since 1910, though by less than in states to the west. The nation’s smallest percentage increases were in Rhode Island (35%), New Hampshire (52%), and Massachusetts (57%). Greater increases were those in New York (103%), Vermont (109%), Delaware (112%), Pennsylvania (132%), and Maryland (144%). Ibid. Milton Whitney, chief, Division of Agricultural Soils, USDA, “Soils in their Relation to Crop Production,” 129-64 in Agriculture Department, Yearbook, 1894 (Washington, 1895), 130-31.

10Internal Revenue, Statistics of Income, 1920, 22-23. Totals for personal income tax returns are for calendar years and for incomes of $1,000 and over. Population totals are from Census Bureau, Manufactures, 1919, 18.

11The three states ranking in the middle one-third of states, were New Hampshire at 20th rank, Maine at 26th, and Vermont at 29th. Maine and Vermont in 1920 had the region’s only per-capita taxable personal income totals below the national average of $200. The region’s totals for 1920 per-capita taxable personal income were: $348 New York; $355 Massachusetts; $332 Maryland; $327 Connecticut; $309 New Jersey; $298 Rhode Island; $253 Pennsylvania; $249 Delaware; $226 New Hampshire; $186 Maine, and $168 Vermont. Ibid.

12For 1920, Delaware’s 12-percent decline from 1919 in its total for taxable personal incomes, as listed on federal tax returns, was the nation’s fifth largest. State totals for individual incomes in the federal tax returns rose in 1920 by 30% in Connecticut, 28% each in Vermont and New Hampshire, and at least 20% in Maine, Massachusetts, Rhode Island, Maryland, and Pennsylvania. Ibid. The decline in 1921 from 1920 in New York’s state total for individual incomes was 10%, similar to declines of 12% each in New Jersey, Pennsylvania, and Rhode Island. Declines were by larger proportions in the rest of the region. The region’s largest declines for 1921 were in Connecticut (24%), Maryland (23.5%), and Delaware (21.4%). Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31.

13Totals in 1921 were lower than in 1919 by $39.9 million in Maryland, $19 million in Delaware, and $9 million in Connecticut. Ibid.

14The largest percentage increases for 1922 over 1921 were for Delaware (24%), New Jersey (20%), and Connecticut (17%). The smallest were for Pennsylvania (3.5%) and New Hampshire (3.9%). In the region’s two states that recovered their boom levels of income, New York’s total for 1922 was only 1.9% above that for 1920, and New Jersey’s was higher by 5%. Despite some recovery, income totals for 1922 were below those of 1920 by 20% in Maryland, 15% in New Hampshire, and at least 10% each in Vermont and Connecticut. Ibid.

16Auto Worker (Chicago). December 1920. Federal officials surveyed employment in some areas, though the period's unemployment figures for the nation remained broad estimates.

17A. R. Hirst, president, American Association of State Highway Officials. "The Highway Problem," address at the group's annual meeting, at Louisville, KY, Dec. 8-11, 1919, reprinted in Public Roads 2 (December 1919): 8. When Maine's voters approved road bonds by a margin of nearly five to one in 1919, the state highway commission soon began its plan of construction, though Maine's 1920 economy made building roads difficult. In federal-aid projects in towns throughout Maine, spending increased as economic conditions improved in 1921 and 1922. Maine Highway Commission, Eighth Annual Report, From January 1, 1920, to December 31, 1920 (Augusta, 1921), 3; Maine Highway Commission, Ninth Annual Report, From January 1, 1921 to June 30, 1922 (Augusta, [1922]), 3, 9, 10, 11. The 1920 work in Maryland had less transportation "because of the interference of the Interstate Commerce Commission in road construction," the state highway commission said. In July 1920 the ICC "published an order preventing the use of open-top cars for other than the transportation of coal. For the most part, the same kind of cars are used for road material as for coal" though "some low-sided cars" were not included in the order. "The constant watching of the movement of these cars by the Commission's engineers and the contractors resulted in their being used to the maximum efficiency" for roadbuilding. The reduce shipping, builders used local material. Maryland State Roads Commission, Report, 1920-1923 (Baltimore, 1924), 8-9. Supporting with recent work, the labor journal said. "Pennsylvania leads not only the United States but the world in construction of really durable highways during the 1920 season." National Labor Journal (Pittsburgh), Jan. 21, 1921.

18With free labor becoming more plentiful in northern New Jersey near its two prison camps, the state's highway engineer said he expected little problem in hiring enough men to replace the convicts. "New Jersey May Abandon Use of Convicts in Highway Work." Good Roads 60 (Jan. 5, 1921): 6; Good Roads 60 (Jan 19, 1921): 27-28. In Maryland also. convicts worked for the state highway department, providing 16,522 man-workdays in 1919 at 50 cents a day, some of the more remunerative work available to convicts there, according to American Federation of Labor leader Samuel Gompers. The state also allowed convict work under contract with companies for road and railroad construction, a practice Gompers opposed as competing with free labor. Samuel Gompers, "Contract Prison Labor—The Shame of It," American Federationist 28 (June 1921): 497-98. "Wages of New Jersey Road Laborers Cut." Good Roads 60 (Jan. 19, 1921): 27. New York's highway officials by late 1921 determined that the state's own workforce was better used for small road projects, for it was "cheaper and more satisfactory to do as much heavy work as possible by contract," avoiding housing and equipment costs. H. G. Hotchkiss Jr., "Report of the Second Deputy Commissioner in Charge of Maintenance and Repair, January 1, 1922," 34-46 in New York, Report of the State Commissioner of Highways, 1921 (Albany, 1922), 40-41.

19National Labor Journal (Pittsburgh) Feb. 25 and Jan. 28, 1921; New York Times. Jan. 25, 1921. Labor Herald (Rochester, NY). March 5, 1921, reprinted an editorial from Forbes Magazine favoring public works by cities and states to provide jobs; on April 2, 1921, it reprinted from Pittsburgh's National Labor Journal an editorial urging road work to hire the unemployed; on May 7, 1921, it reported activities of a committee of Rochester's Central Trades and Labor Council in working with other associations and societies for relief for the unemployed, and, the committee said, "in bringing pressure to provide local relief work." Ibid., April 2 and March 7, 1921.


21In July, engineers in the federal Bureau of Public Roads' district offices throughout the nation received directions to adjust the estimates federal offices had approved. Adjustments were to reflect "a generally falling market" for wages and other construction costs. Declining wages and other costs kept reducing advantages of using state labor forces or convicts. Memorandum P. St. J. Wilson, chief engineer, Bureau of Public Roads, to District Engineers, July 12, 1921. Memoranda to District Engineers, June 2, 1920 to April 30, 1921. Box 2, P. St.

“Pennsylvania Urges Use of Local Labor” Good Roads 60 (May 25, 1921): 278. In Massachusetts, labor for farms had been “almost impossible to obtain” in 1920, the state agriculture department reported. Massachusetts Department of Agriculture, “Report of the Division of Information.” 33-42 in Massachusetts Department of Agriculture, Report, Year Ending Nov. 30, 1921 (Boston, [1922]), 39-40.

National Labor Journal (Pittsburgh), Feb. 25, 1921. Road work did stimulate buying in the larger economy, for equipment and road materials as well as for purchases by wage earners.

New York Times, April 11, 1921; Labor (Washington, D.C.) July 16, 1921; New York Times, July 12, 1921. The Labor Day parade was cancelled because of unemployment and lack of funds for uniforms and bands, according to John Sullivan, president of New York City’s Central Trades and Labor Council. Many unions were spending large amounts in benefits for jobless members. New York Times, Sept. 5, 1921. Labor Herald (Rochester, NY), Oct. 29, 1921. Bridgeport’s manufactures were valued as the 34th largest among the nation’s urban areas in 1919, when it had 443 manufacturing establishments; Rochester ranked 21 in value of manufactures and had 1,367 manufacturing establishments. Census Bureau, Manufactures, 1919, 19. New York Times, July 10, 1921, p. 2 (VII); Ibid., March 11, 1922.

“National Labor Journal (Pittsburgh), Feb. 25, 1921. Road work did stimulate buying in the larger economy, for equipment and road materials as well as for purchases by wage earners.

New York Times, April 11, 1921; Labor (Washington, D.C.) July 16, 1921; New York Times, July 12, 1921. The Labor Day parade was cancelled because of unemployment and lack of funds for uniforms and bands, according to John Sullivan, president of New York City’s Central Trades and Labor Council. Many unions were spending large amounts in benefits for jobless members. New York Times, Sept. 5, 1921. Labor Herald (Rochester, NY), Oct. 29, 1921. Bridgeport’s manufactures were valued as the 34th largest among the nation’s urban areas in 1919, when it had 443 manufacturing establishments; Rochester ranked 21 in value of manufactures and had 1,367 manufacturing establishments. Census Bureau, Manufactures, 1919, 19. New York Times, July 10, 1921, p. 2 (VII); Ibid., March 11, 1922.

Continuing convict labor on New York’s roads seemed good for saving the state money and “on account of its benefit in upbuilding the self-respect of the convicts.” Herbert S. Sisson, “Report of the State Commissioner of Highways, January 1, 1922.” 9-22 in New York, Report of the State Commissioner of Highways, 1921 (Albany, 1922), 21-22. A New York official described the 1921 process for a federal-aid project, more lengthy than if only state or county funds were used. “Tentative plans showing the proposed grades, alignment, drainage, pavement types and estimated cost are submitted to the District Engineer of the Bureau of Public Roads for review, field inspection and criticism.” His suggestions of changes are made. Plans are returned to the district engineer, who sends them to the Bureau in Washington, D.C., for review. When approved there, plans are recommended to the Agriculture Secretary for “approval of an agreement to participate in the cost of the work. These submissions, revisions and approvals require an additional period of from sixty to ninety days in the ultimate completion of the plans and estimates preparatory to the advertisement of the contract. All proposals, contracts and tests of materials are submitted” to the Bureau. “The District Engineer and his representatives visit and inspect the work while it is in progress.” Once everything is “found to be in due form and in accordance with the rules, regulations and specifications, payments are ultimately made to the State of the Federal share of the cost of the work performed.” Fred W. Sarr, “Report of the First Deputy in Charge of Construction, January 1, 1922,” 23-33 in New York, Report of the State Commissioner of Highways, 1921 (Albany, 1922), 29-30.


Convicts worked on some Vermont roads in 1918’s labor shortages. S. B. Bates, Vermont state highway commissioner, “Vermont,” in “State Highway Departments and Labor,” Public Roads 1 (May 1919): 43. In 1919, Connecticut’s state highway commissioner, C. J. Bennett, recommended using convicts and interned alien enemies on road projects. Experience in his area suggested “prisoners from the jails and penitentiaries could be used with success, particularly if they are paid a reasonable amount for their services,” if they were kept at camps near the construction, and if their work were considered a social contribution. C. J. Bennett, “Connecticut,” in “State Highway Departments and Labor,” Public Roads 1 (May 1918): 42. Drafting as paid road laborers thousands of unnaturalized residents of the U.S., still citizens of enemy nations, was advocated in 1917 by one editorial writer, who also favored importing prisoners of war from English and French prison camps for road work. “Enemy Aliens To Relieve Labor Shortage,” Good Roads 52 (Oct. 13, 1917): 197.
American rural areas had made and kept up roads by wide use of legal obligation of nearby men to give labor, usually as payment of taxes. In 1900s America, use of wage labor on roads increased, though many communities continued obligations of unpaid, statute labor, a system dating to colonial English practices. Also, American road work was more labor intensive before the 1900s—often using shovels, plows, and farmers' teams of animals—adding importance to specifying a dependable system to supply labor. The necessity of obtaining labor for rural roads was a problem solved in various ways earlier in England, where roads deteriorated when the Romans left. In the manorial system, the local lord directed road work using labor due him. Later, the church sometimes took on road-repair tasks until dissolution of monasteries. New forms of obtaining labor began when Parliament in 1555 gave each parish's inhabitants a duty of repairing roads. Thus, labor and equipment was required of anyone holding land worth fifty pounds or keeping horses or a plow in the parish. Householders and laborers, except servants hired yearly, had to work on the roads or send a replacement. Eight hours' labor on four days yearly was required, raised in 1562 to six days. "The system, unfortunately, did not work well," argues John Copeland. "Many smaller parishes, some of which might have long stretches of important main roads in their area, frequently found that their resources were insufficient to keep the highways in repair." Penalties often failed to get people to fulfill the duty, and results of required labor were criticized as inadequate. Taxation in money for roads, permitted since the 1750s, spread in practice. Parliament in the 1760s and 1770s allowed people liable for statute labor on roads to pay instead in money. John Copeland, Roads and Their Traffic, 1750-1820 (New York: Augustus M. Kelley, 1968), 13-16.

Except for Kentucky's state highway department, active 1821-37, "there was little other evidence of state interest in roads until 1891," when a New Jersey law enabled state activity in road construction. Similar laws soon passed in Massachusetts (1892); California and Connecticut (1895), and Maryland, New York and Vermont (1898). "By 1910, 26 states had established highway construction responsibilities." Wixom, 50. Roy Stone, special agent and engineer, USDA, "Cooperative Road Construction," 487-92 in Agriculture Department, Yearbook, 1895 (Washington, 1896), 490-491.

Congress included funds for the road program in the post office appropriation bill approved Aug. 24, 1912. Fairfield (IA) Daily Journal, Aug. 31, 1912. Also then, Congress established parcel post. Barron, Mixed Harvest, 180-83. Secretary of Agriculture and Postmaster General, Joint Report of the Progress of Post-Road Improvements, August 26, 1913. House Doc. 204. 63rd Congress, 1st sess. (Washington, 1913), 3-5. Delays in forming projects with states in all regions resulted from requirements of varying local laws. Ibid., 13. To the initial federal offer in 1912 of $10,000 for joint work on post roads, Pennsylvania was one of five states in the nation that did not reply; New York and Delaware declined; and Massachusetts, Connecticut, Maine, Maryland, New Hampshire, New Jersey, and Rhode Island failed to meet requirements by the agreed date, April 1913. They resembled most states in the nation; only three states (Alabama, Iowa, and Oregon) accepted the initial offer without changes. The program's offer was termed "a failure" in a report by its directors, the agriculture secretary and the postmaster general. The offer was ended April 1913, replaced by a plan to use the rest of the $500,000 appropriation at four to eight locations the Post Office would select, to gain data on construction in varying topography and climate. For the data Congress sought in the appropriation, federal officials later offered details of work on four post roads—in Maine (in its Cumberland and Sagadahoc counties) and in Alabama, Iowa, and Mississippi. The report recommended appropriating $1 million for fiscal year 1915, to remain available until spent. Ibid., 3-6, 10, 14. It supported requiring approval of spending on projects by federal supervisors, despite many local objections. That reflected a wish to improve results toward a purpose by centralizing authority and giving it to experts, as often urged by Progressives and practiced by railroads and other large businesses. "From correspondence and from the attitude of local officials in many places it appears that there is a disposition frequently to avoid the obvious requirements of the present act with respect to [federal] Government control over the expenditure of joint funds. The allotments have been looked upon not infrequently in the light of a gratuity, the idea of the post road has been lost sight of, and the question has been frequently raised in the field as to why the Government would not give the money to the counties and let them spend it," the report stated. "The history of highway administration in this country is strong...
1920-1923.5-8. Also, the legislature in 1922 authorized a state debt of $1 million to build a direct road of 31 miles again to be financed by funds from federal and county governments. Maryland State Roads Commission, Report $12 million. Sisson, "Report of the State Commissioner of Highways, January 1, 1922," 11. In an era of new sources of funds. New York ended some tolls, further consolidating road systems under state control. To remove some of New York's last bridge tolls, the state highway commission offered to compensate firms controlling tolls for much of the unspent federal aid by late 1921, according to the federal program's chief, Thomas H. MacDonald, in testimony before Subcommittee of the Senate Committee on Post Offices and Post Roads, 67th Cong., 2nd sess., Feb. 23, March 2, 1922, Hearings on H.R. 9859, Post Office Appropriation Bill for Fiscal Year Ending June 30, 1923, Part 2 (Washington, 1922), 168. In New York's 1922 contracts awarded on state and county roads, state funds totaled $9.8 million, federal funds $5.3 million, county funds $4.2 million, and village and town funds $1.2 million. Sisson, "Report of the State Commissioner of Highways, January 1, 1922," 11. In an era of new sources of funds, New York ended some tolls, further consolidating road systems under state control. To remove some of New York's last bridge tolls, the state highway commission offered to compensate firms controlling tolls on 10 Delaware River bridges between New York and Pennsylvania. Firms accepted four of the offers in 1921. Ibid., 22. Maryland issued $3 million in bonds in 1920, and used half the amount to match federal aid. The other half went to counties to match with funds from county bond issues, special assessments, or other revenues. Beginning in 1920, the state allotted funds to counties by road mileage. Thus, counties knew amounts they would receive, matching funds needed, and how much work to plan. In 1922, Maryland issued bonds for $1.5 million, again to be matched by funds from federal and county governments. Maryland State Roads Commission, Report 1920-1923, 5-8. Also, the legislature in 1922 authorized a state debt of $1 million to build a direct road of 31 miles from southern Maryland to Baltimore; work began in September 1922. The $1 million in state funds for the direct

32 By late 1922, Pennsylvania officials had spent the bond funds, together with $13.8 million in federal aid. Of state appropriations in 1919 and 1921 for roads, some amounts “did not become available because of the insufficiency of receipts in the General Fund,” the state highway department reported. The general fund grew with proceeds of a 1-cent gasoline tax approved in 1921. And fees from motor-vehicle registration and licenses provided large amounts for state road work. Pennsylvania State Highway Department, Report, January 1, 1921 to January 1, 1922 ([Harrisburg, 1923]), 7. Half the proceeds of Pennsylvania’s gasoline tax went to the state general fund, half to the county where collected. Large amounts from the motor-vehicles fees—$9.5 million in 1921, $12.6 million in 1922—supported road maintenance in a period of extensive construction. Like New York, Pennsylvania reduced one form of taxes for motorists—tolls on roads and bridges. By late 1922, in buying or condemning routes totaling some 190 miles, Pennsylvania eliminated the state highway system’s toll roads. Ibid., 13, 9. In authorizing the federal-aid program in 1916. Congress prohibited using its funds on toll roads. U.S. Statutes at Large, Vol. 39, Part 1 (Washington, 1917), 356. Pennsylvania’s 1917 plan for public works as needed to counter unemployment was from a bill whose author was Otto T. Mallery, a state Industrial Board member. Mallery, a wartime federal official, during and after the war advocated offsetting unemployment with public works, particularly road work, which he said could expand in many locations and easily create jobs for unskilled labor. Udo Sautter, Three Cheers for the Unemployed: Government and Unemployment before the New Deal (New York: Cambridge University Press, 1991), 109-10; Otto T. Mallery, statement December 1921 in U.S. Senate Committee on Education and Labor, Relieving Periods of Unemployment by a System of Public Works, 11-12. Local governments, including Allegheny County at Pittsburgh, proposed bonds of their own for public works. Yet that county’s voters easily rejected a proposed $27 million in bonds in November 1921. Yet among the ballot options, using bonds for roads won most support, surpassing choices of using such funds for bridges or courthouse remodeling. “Allegheny County Bond Issues Heavily Defeated,” Engineering News-Record 87 (Dec. 15, 1921): 1001; National Labor Journal (Pittsburgh), Nov. 11, 1921. New York’s legislature in 1922 appropriated $6.1 million for matching federal aid, and with the remaining bond funds “we were able to carry out the year’s program” of roadbuilding without seeking other state funds, said the highway commissioner. New York and Massachusetts had been among a few states in the nation in late 1921 with large amounts of federal aid allotted to them that remained unspent. Both states expanded their use of federal funds in 1922. Hotchkiss, 34. In 1922, “on account of the reduction of the amounts still remaining in the second fifty million dollar bond issue, a greater proportion of our construction program has had to be financed with Federal aid,” said New York’s state highway commissioner. Sisson, “Report of the State Commissioner of Highways,” 11, 14. New York, Massachusetts, Ohio, Alabama, and Michigan accounted for much of the unspent federal aid by late 1921, according to the federal program’s chief, Thomas H. MacDonald, in testimony before Subcommittee of the Senate Committee on Post Offices and Post Roads, 67th Cong., 2nd sess., Feb. 23, March 2, 1922, Hearings on H.R. 9859, Post Office Appropriation Bill for Fiscal Year Ending June 30, 1923, Part 2 (Washington, 1922), 168. In New York’s 1922 contracts awarded on state and county roads, state funds totaled $9.8 million, federal funds $5.3 million, county funds $4.2 million, and village and town funds $1.2 million. Sisson, “Report of the State Commissioner of Highways, January 1, 1922,” 11. In an era of new sources of funds, New York ended some tolls, further consolidating road systems under state control. To remove some of New York’s last bridge tolls, the state highway commission offered to compensate firms controlling tolls on 10 Delaware River bridges between New York and Pennsylvania. Firms accepted four of the offers in 1921. Ibid., 22. Maryland issued $3 million in bonds in 1920, and used half the amount to match federal aid. The other half went to counties to match with funds from county bond issues, special assessments, or other revenues. Beginning in 1920, the state allotted funds to counties by road mileage. Thus, counties knew amounts they would receive, matching funds needed, and how much work to plan. In 1922, Maryland issued bonds for $1.5 million, again to be matched by funds from federal and county governments. Maryland State Roads Commission, Report 1920-1923, 5-8. Also, the legislature in 1922 authorized a state debt of $1 million to build a direct road of 31 miles from southern Maryland to Baltimore; work began in September 1922. The $1 million in state funds for the direct
route to Baltimore was to be available at $250,000 a year beginning in 1922. The start of work on the route in September 1922 was marked by a monument by Southern Maryland Society and Merchants and Manufacturers Association of Baltimore. Funds from motor-vehicle fees designated for state road maintenance were less than expected, and so the legislature enacted a 1-cent gasoline tax effective June 1922. Ibid., 10, 12-13. As construction expanded, New Jersey’s funds for its state-aid program in 1921 were only one-fourth the amount needed for work planned by counties. To save funds, the highway department formed a state labor force, whose crews of free and convict labor completed roadbuilding that included some federal-aid projects. Other projects proceeded by contract, for which construction companies hired labor. The legislature rejected a bond bill in 1921, prompting reports of lack of funds for 1922 road work and new efforts for authority to issue highway bonds. Late in 1921, about one-third of New Jersey counties agreed to advance the state money for the its highway system, to be repaid as funds became available. Edward E. Reed, “Assistant State Highway Engineer’s Report,” 17-43 in New Jersey State Highway Commission, Fourth Annual Report, Fiscal Year Ending June 30, 1921 ([Trenton, 1921]), 34-35. Revenues from motor-vehicle fees were distributed to counties for road maintenance and to townships for construction. In 1921, the funds to counties were distributed by formula, like that for federal allotments to states—based on area, road mileage, and population. T. J. Wasser, “Report of the State Highway Engineer of the State of New Jersey to the Chairman and Members of the State Highway Commission of New Jersey for the Fiscal Year Ending June 30, 1921,” 11-16 in New Jersey State Highway Commission, Fourth Annual Report, Fiscal Year Ending June 30, 1921 ([Trenton, 1921]), 14; C. F. Bedwell, “State Construction Engineer’s Report to the State Highway Engineer,” 44-67 in New Jersey State Highway Commission, Fourth Annual Report, Fiscal Year Ending June 30, 1921 ([Trenton, 1921]), 44-45; Good Roads 61 (Oct. 5, 1921): 180; “New Jersey Counties to Advance Funds for Roads Work,” Good Roads 61 (Nov. 16, 1921): 231. A bond bill the legislature passed in March 1922 over the governor’s veto could provide funds only for later years. The $40-million proposal for bonds, endorsed by automotive and good roads associations and the Federation of Agricultural Societies, was put on the ballot in the November 1922 election. By then, state funds for roads were exhausted, and reimbursing county funds for state work awaited approval of the bonds. “New Jersey’s Road Bond Issue,” Engineering News-Record 88 (April 20, 1922): 668. The state Grange’s master—David A. Agans, a Democratic state senator from Hunterdon County—supported the bonds, citing roads’ marketing benefits for farmers. New York Times, Oct. 22, 1922, p. 6 (IX). Despite opposition by the Democrats’ platform and candidate for governor, voters authorized the bonds. Still, the Democratic candidate for governor, who won, agreed to speak at a December dinner of the state’s Good Roads Association to celebrate the bond question’s passage by voters. Ibid., Nov. 26, 1922, p. 9 (IX). Planning proceeded for another project, the first Hudson River tunnel for motor vehicles between New Jersey and New York. Bonds for the large project had been approved by New Jersey voters in November 1920. Work on the tunnel began under contracts awarded by April 1922. By late 1922, a third sale of bonds for the tunnel brought New Jersey’s total to $12 million. Ibid., Dec. 20, 1922. The tunnel, estimated to cost $28.6 million, was a project of New Jersey and New York. Ibid., March 31, 1922. Before New Jersey started a state-aid program in 1891, Kentucky had participated directly in roadbuilding in 1821-37, completing more than 340 miles of road. MacDonald, “History and Development of Road Building,” 32.

33Maine’s voters approved increasing the state’s bonds for roadbuilding in September 1919 by what state highway officials called an “overwhelming majority of about five to one.” Yet how the state would use road funds was unclear to many. Amid the postwar interest in roads, Maine’s highway commission met regularly at points around the state and held hearings on petitions for projects. Still, it said in 1922, “although the Highway Commission has been organized since July, 1913, there seems to be a lack of information in the minds of the public as to just how the Commission functions.” Plans were ready for more projects than could be funded, and so traffic levels were used to set priorities. Where traffic in the commission’s 1922 census was heaviest, near Scarboro and Falmouth, at least 97 per-cent of it was motor vehicles. Maine Highway Commission, Eighth Annual Report, 3. For the commission, its traffic censuses, taken since 1916 to show which road “carried the heavier traffic and consequently is of more importance to the travelling public,” seemed “the only fair means of determining which sections shall receive earliest attention.” Its 1922 census at twenty-four points in Maine, finding at least 80% of traffic was motor vehicles, identified several concentrations, attributable to autos. Where horse-drawn vehicles remained more in use—as much as 18% of traffic near Washington, Waldo, and Hampden—total traffic was small. Maine Highway Commission, Ninth Annual Report, 3, 9, 10, and 11. The Massachusetts legislature in 1921 approved up to $1 million for matching federal aid. Yet it specified that, of the total for state funds, $750,000 would come from motor-vehicle fees. The rest would come from counties for roads built earlier and from the
general fund. The Massachusetts Department of Public Works recommended higher motor-vehicle fees by 1922. Though Vermont also continued roadbuilding without bond issues in 1920-22, its state highway officials suggested in 1922 bonds might be considered for part of costs of permanent improvements on roads. Much of Vermont’s funds for road work came from motor-vehicle fees, which highway officials said were lower than those of half the states. Federal aid was matched in Vermont by state appropriations of $600,000 in 1919 and $400,000 in 1921, by funds from budget surpluses, amounts from the state bridge fund, and “such amounts as the towns agree to pay.”


34Vermont highway officials said that “in administering the Federal Aid law and in making locations of projects, it is reasonable to select those sections of road most in need of improvement.” Ibid., 26. Recently, Rhode Island and a town had shared costs for roadbuilding, a practice state highway officials thought might soon be of use to other towns. Rhode Island, State Board of Public Roads, Twentieth Annual Report, 18; Rhode Island, State Board of Public Roads, Twenty-First Annual Report, January 1923 (Providence, 1923), 19-20. Rhode Island was a traffic center by the late 1800s, and in 1892 its Republican convention supported national aid for road improvements. Dearing, 241. Rhode Island, State Board of Public Roads, Twentieth Annual Report, 7-9. Seeking in 1916 to provide funds for rural areas, Congress blocked federal support of road projects where population exceeded 2,500 except where houses averaged “more than two hundred feet apart.” U.S. Statutes at Large, Vol. 39, Part 1, 356. “In Rhode Island the smallest place having definite boundaries is a township, and most of our townships have a population greater than 2,500,” and so federal-aid projects were possible in a few, sparsely populated areas. For federal-aid projects, “upon January 1, 1922, all but one of our twelve projects was completed. The expenditure of the entire allotment of funds due Rhode Island is involved by the twelve projects referred to.” Ibid., 53. In 1921, though, amendments to federal highway laws did permit “wider range in selection of projects.” Rhode Island, State Board of Public Roads, Twenty-First Annual Report, 55-56. The state had begun its roadbuilding in 1916, “the beginning of a period of almost unprecedented high costs of construction which continued almost to the present time.” Increasing traffic in wartime, amid the state’s dense settlement, nearly demolished state highways, requiring efforts to rebuild. In 1916, “the greater part of our roads were not built to carry the traffic then passing over them,” said state officials. By then, federal aid in the form of war-surplus trucks, distributed to states by the war and agriculture departments, had reduced costs, eliminating horse-drawn vehicles from state crews’ road maintenance. The war-surplus trucks let state crews work over wider areas and haul materials more easily. Rhode Island, State Board of Public Roads, Twentieth Annual Report, 85. The legislature’s 1921 appropriation of $160,000 allowed work on some of those projects, and road work in national forests brought federal funds to the state for others. Motor-vehicle license fees, increased in January 1922, provided $1.7 million during 1921 and 1922 for road maintenance and construction. New Hampshire, State Highway Department, Ninth Biennial Report, 1920-22 (Concord, NH, 1922), 6, 9. Working with programs of the U.S. Forest Service and the Bureau of Public Roads, New Hampshire spent federal funds for bridge and road construction in White Mountain National Forest. E. E. Everett, “Report of the State Highway Commissioner,” 1-14 in New Hampshire, State Highway Department, Ninth Biennial Report, 1920-1922 (Concord, 1922), 9-10, 12-14. A state traffic census in summer 1922 on eighteen routes recorded heavy traffic on, among other roads, Daniel Webster Highway, a route from Mermack to Laconia to Columbia. At a point on the road July 1-7, a busy part of the tourist season, 80,279 autos and 5,000 trucks were counted; nearly half the traffic (35,396 autos and 965 trucks) was from out of state. Similarly, on East Side Road, a main route from Portsmouth to West Ossipee to Colebrook, the census found 38,834 autos and 3,606 trucks (16,632 of the autos and 289 of the trucks were from out of state). New Hampshire, State Highway Department, Ninth Biennial Report, 1920-22, 9, 140-43.

“Good Roads in Delaware,” Good Roads 62 (April 19, 1922): 231. In 1917, Du Pont was president of Boulevard Corporation, formed 1911. The corporation was acquiring right of way for the trunk highway through Delaware and turning it over to the state. Most of the road was completed and in use in 1922, though remaining work was expected to add $500,000 more to costs. The highway would connect points including Milford and Wilmington. Coleman du Pont was a member of Delaware’s highway department 1917-22; Francis V. du Pont began one of several terms as a member in 1922. Delaware State Highway Department, Reports, 1917-28, 19, 42-45. Otto Mallery, statement in U.S. Senate, Committee on Education and Labor, 67th Congress, 2d sess., Relieving Periods of Unemployment by a System of Public Works, 14. Offsetting seasonal unemployment with road work was an urban custom dating to the early 1800s in New York City. Such unemployment was common among sailors, shipbuilders, and construction workers in winter. Public works regularly employed such men in colder months. Yet “even road construction, leveling, and paving, resorted to by the municipal government in an effort to make work for the jobless, came to a halt during the depth of the winter.” Carroll Smith Rosenberg, Religion and the Rise of the American City: The New York City Mission Movement, 1812-1870 (Ithaca: Cornell University Press, 1971), 24-25.

Totals in the region for federal aid, paid for completed projects or due for projects under way by mid-1922, are: Pennsylvania $13.8 million; New York $8.8 million; Massachusetts $3.3 million; Maine $2.8 million; Maryland $2.5 million; New Jersey $2.3 million; Connecticut $1.3 million; New Hampshire $1.2 million; Vermont $879,597; Delaware $735,655; and Rhode Island $637,411. Of the 48 states, only Texas (at $15.2 million) had larger spending than Pennsylvania. Agriculture Department Report 1922.473-83.

Men were working on fewer miles of road in federal-aid projects in Rhode Island, Delaware, Vermont, and Connecticut than in the region’s other states. Mileage completed or under way was largest for Pennsylvania and New York, though the difference in their totals from those of other North Atlantic-region states was smaller than that in totals for spending federal funds. Indeed, for those states and for the region, mileage was comparatively low. Leading in paving with federal aid were Pennsylvania (586 miles), New York (321 miles), Maryland (118 miles), and New Jersey (116 miles). Concrete paving was completed often where traffic was heavy, particularly in Pennsylvania, New York, Maryland, New Jersey, and Massachusetts. Maine, Connecticut, and Delaware also used large portions of their federal aid for paving. The region’s states exceeded the national average for paving mileage. In using federal aid for graveling, New Hampshire had projects completed or under way by mid-1922 for 84 miles, Maine for 53 miles, Vermont for 46 miles, and Maryland for 29 miles, and New Jersey for 3 miles. New York had the region’s largest total, 226 miles, of bituminous macadam work. Paving with asphalt, or bituminous concrete, was put on 191 miles of roads by federal-aid projects in Pennsylvania, Massachusetts, Maryland, Rhode Island, and New Hampshire.

Compared to the concrete projects completed or under way by mid-1922 with federal aid in the region, bituminous macadam projects totaled 506 miles, gravel 215 miles, and bituminous concrete 190 miles. Photos of federal-aid road work in 1920-22 are included in Record Group 30-N, Bureau of Public Roads, Prints: Highway Transport, 1900–1953, General Photographs, National Archives, Washington. Also, photos of road-building by states, including that using federal aid, are part of annual reports of state highway agencies in the period.

Federal aid paid by mid-1922, reimbursing states for the federal share of completed projects, totaled $1.76 million for Massachusetts, $1.68 million for New York, $1.16 million for New Jersey, $906,518 for New Hampshire and $857,281 for Maine. The region’s smallest totals for federal aid received by mid-1922 for completed projects were: Rhode Island $550,080; Delaware $393,655; Vermont $263,964; and Connecticut $163,911. Totals for federal aid paid are from Agriculture Department, Report, 1922, 477-78, 483-84. Most of the federal funds were for projects completed during the depression; little work was done in the federal program before 1920.

In describing federal-aid projects of 1920-22, published reports by state and federal agencies routinely specify spending, mileage, and materials, not number of men employed. Estimates here of number of jobs use figures given by Thomas H. MacDonald, chief of the federal program, before a Senate committee in March 1922. He said it was possible in discussing federal funds “to get at the amount of money that would actually go for labor out of any appropriation. For example, we estimate that from 40 to 50 per cent is labor direct; that is, 40 to 50 per
cent of the appropriation would be paid for labor direct, and at least another 25 per cent would be paid for labor indirectly. We have been putting about $82,000,000 of federal aid under contract each year. At the ratio the states have been cooperating this means, with the state funds, a total of about $191,000,000. Estimating one-half of this as labor directly employed, and that labor is paid $2.75 a day and works 200 days a year, this expenditure will give direct employment to about 210,000 men and indirect employment to a little over 100,000 in addition." Thomas H. MacDonald statement in Senate, Subcommittee of the Committee on Post Offices and Post Roads, 67th Cong., 2nd sess., Feb. 23, March 2, 1922. Hearings on H.R. 9859, Post Office Appropriation Bill for Fiscal Year ending June 30, 1923, Part 2, 176. A similar yet slightly higher ratio, indicating larger employment, results from figures MacDonald mentioned December 1921 before another Senate committee, stating that in federal-aid roadbuilding a $75,000,000 program will employ between 225,000 and 250,000 men for a six-months' period, and will give employment to 100,000 more in an indirect way." Thomas H. MacDonald, statement in Senate Committee on Education and Labor, Relieving Periods of Unemployment by a System of Public Works, 36. If $75 million in spending employs 225,000 men, $333.33 in spending employs a man. Also, other employment would be supported off-site, in producing and shipping equipment and materials. Similarly, MacDonald said in January 1923 of highway spending generally (by all agencies and from all sources) that "easily from 40 to 60 per cent, depending on the type of work, will be used for labor." Spending for highways from all agencies and sources in the U.S., he estimated, was more than $700 million for 1921 and slightly less for 1922. New York Times, Jan. 7, 1923, p. 23 (IX). Estimating jobs in particular states from a nationwide summary indicates general characteristics of the period's roadbuilding. Similarly, statewide summaries of spending, or of kind of road work, allow comparison among states. Yet each road project or job at one was different from what may be suggested by totals or averages. Some men worked less, some more, than the estimated 200 days a year at a roadbuilding site. Many projects began too late or closed too early to complete 200 workdays in a year. The season for road construction in the North Atlantic region was reduced in its northern areas. Maine usually warmed to allow road work mostly after the first of July; in other states in the region also, work began later and stopped earlier than elsewhere. Variations from the region's usual patterns—bicylce rainfall in New York in 1922, for example—further changed road work. Wages for common labor varied often as contractors and officials of states and counties responded to the economy's changes in their area. Though published sometimes as regional averages, wage rates often were lower in remote areas than in those near urban centers. Labor costs might exceed 50% of the total in projects of graveling, in which equipment and materials were less costly than in paving. Federal funds might provide half the cost on one project; on another they might be only 40%, raising employment above that estimated. Still, the estimates indicate relative sizes of such employment likely within the state, region, and nation.

42States and estimates of six-month jobs in federal-aid road work completed by mid-1922 include: Maryland 5,819; Massachusetts 4,507; New York 4,318; New Jersey 2,974; New Hampshire 2,322; Maine 2,195; Rhode Island 1,409; Delaware 1,008; Vermont 676; and Connecticut 420. Figuring from spending by states and the share of spending used for labor in the national average may underestimate because low-cost road work increased the share of spending that went for labor. In Pennsylvania, for example, for that reason or others, the estimate from the spending amount is for six-month jobs for 21,441 men by mid-1922. Yet nearly that many worked in federal-aid projects there in 1921 alone, according to the federal program's chief, speaking of the projects in all the nation's states. In Pennsylvania's federal-aid projects "there were over 20,000 employed this year on road work, and the average State, I should say, had about 5,000," Thomas H. MacDonald told a Senate committee in December 1921. U.S. Senate. Committee on Education and Labor, 67th Congress, 2d sess., Relieving Periods of Unemployment by a System of Public Works, 36.

43Rhode Island, State Board of Public Roads, Twentieth Annual Report, 6-7. The fourteen states' winter road projects, together with construction of other kinds in the nation, would offset much unemployment, said Col. Arthur Woods, spokesman for a committee continuing efforts of President Harding's fall 1921 Conference on Unemployment. "Several hundred thousand more men will be employed on public works this winter than last year, thus making up to that extent discharges from other industries." Fairfield (IA) Daily Ledger-Journal, Jan. 9, 1922. In the region's northern areas, weather particularly limited the period when road projects were possible. Men seeking road work found it increasingly available in Maine by mid-summer, later than in areas farther south. In 1920-22 in Maine, though some road maintenance began in April, construction waited until June or later, for little of either was done before July. Maine Highway Commission, Ninth Annual Report, 3, 9, 10, 11.
Rhode Island, State Board of Public Roads, Twentieth Annual Report 6-7. In early 1922, New York contractors’ interest in roadbuilding showed in high numbers of bidders and low prices in their bids. That likely reflected 1921’s depressed conditions, which were “quite satisfactory from a builder’s viewpoint,” it seemed to a state highway official. Yet later in 1922 prices and wages rose. Costs increased for excavation per cubic yard from 75 cents in the early months to $1, for steel from 3 cents a pound to 4 cents, and for cement from $2.80 a barrel to $3.20. Costs rose also from changes based on recent building experience, the official indicated, from “the added depth of pavement shown to be necessary to sustain the ever increasing traffic.” V. L. Ostrander, “Report of the First Deputy Commissioner in Charge of Construction,” 23-35 in New York, Report of the State Commissioner of Highways, 1922 (Albany, 1923), 27.

For work completed by mid-1922, Pennsylvania’s projects had brought it federal payments of $8.3 million. Yet for projects under way then, it was due federal aid totaling only $5.4 million. Maryland’s completed projects had brought it $2.2 million, though for projects under way it was due only $252,000 in federal aid. In 1922 in Maryland, railroad shipping was better than it had been “for two year previous, but the process of construction was greatly impeded by the acute shortage in labor and road building materials. As a result of this, 163 miles were uncompleted and carried over into the 1923 season.” Maryland State Roads Commission, Report, 1920-1923, 10. Over the two periods, New York’s program greatly expanded. Its completed projects by mid-1922 had brought it only $1.6 million in federal payments, though its work under way then raised the amount of federal aid due it to $7.1 million. Matching for those federal amounts increased the change; total cost of federal-aid projects increased in New York from $3.7 million in those completed to $18 million for those under way. The program also kept expanding elsewhere. Connecticut’s federal-aid projects’ total costs grew by $2.5 million, and Maine’s by $2.3 million. In Vermont and New Jersey, federal-aid construction increased by less than $1 million for each. The shift in activity by mid-1922 shows in declines by then in states besides Pennsylvania. Maryland’s federal-aid projects’ total cost declined by $4.2 million in work under way from work completed, and New Hampshire’s declined by $1.3 million. Rhode Island’s by $1 million, and Delaware and Massachusetts by less than $1 million for each. For the North Atlantic region, costs of federal-aid projects increased from $44.8 million in those completed to $51.6 in those under way. For the forty-eight states, the total also increased, from $240.6 million to $322.8 million. In the Plains, costs tripled, rising from $36.7 million to $98 million. In the South, they rose from $46.2 million to $77.6 million. They declined in two regions: in the West from $32.5 million to $25.5 million; and in the Midwest from $80.2 million to $69.8 million. Agriculture Department, Report, 1922, 473-83. Despite its large decline in spending, Pennsylvania’s program was large enough that in federal aid due for projects under way by mid-1922 it still led 41 other states, and in those federal-aid projects’ total cost it led 44 other states. For the earlier period, for projects completed by mid-1922, Pennsylvania’s federal-aid projects’ total cost ranked second in the nation, trailing only those in Illinois. Federal funds were used in varying proportions for each eligible project. The proportions increased in eligible projects of five states in the region when comparing projects completed by mid-1922 to those under way. The five were Delaware, Maine, Maryland, New Hampshire, and Vermont. Agriculture Department, Report, 1922, 477-78, 483-84. Data on federal-aid road work completed or under way by mid-1922 are discussed in note 7 of chapter 1, page 231.

From work on main routes, concrete projects increased in 1922, forming 62% of highway construction contracted then, slightly above the 1921 share. Main routes opening by late 1922 included Storm King highway from New York City to Albany along the Hudson River’s west shore, a highway from Syracuse to Rochester, and a road through the Adirondacks between Albany and the St. Lawrence River. Hotchkiss, 41-42; Sisson, “Report of the State Commissioner of Highways,” 13; Ostrander, “Report of the First Deputy Commissioner in Charge of Construction,” 34-35.

“Massachusetts Highway Association,” Good Roads 60 (May 25, 1921): 283. States with large amounts of their allotted federal funds not spent by late 1921 included Massachusetts, New York, Ohio, Alabama, and Michigan. MacDonald, Hearings on H.R. 9859. Post Office Appropriation Bill for Fiscal Year ending June 30, 1923, Part 2, 168. In 1922 mileage, said Thomas H. MacDonald, the federal program’s chief, “a number of smaller states, such as Louisiana, Maryland, Massachusetts and Rhode Island, made very substantial increases in proportion to their size.” New York Times, Jan. 7, 1923, p. 23 (EC). By mid-1922, federal-aid work in Massachusetts, measured by federal funds paid or obligated for projects that were completed or under way, ranked third highest in the region. Agriculture Department, Report, 1922, 477-78, 483-84.
Among problems that concerned Vermont officials was auto traffic’s effect on gravel roads in creating a washboard, corrugated surface on straight stretches where high speed was possible. Workers were smoothing surfaces and applying binders—of oil or other substances—to withstand wear. That was part of an effort to allow continued use of gravel on many main routes. Vermont, State Highway Board, First Biennial Report, 15-16, 20-21, 30.

In New Hampshire, “it has become more and more of a problem to maintain the dirt roads through the Notches, keeping them in a passable condition for the extremely heavy traffic during the summer,” highway officials reported in 1922. Thus, difficult curves and steep grades were changed and surfaces widened on roads in the Notches. Yet also, projects did “surface treat, either with tar or asphalt, a considerable mileage of the mountain roads, one section in particular being that from Twin Mountain to Fabyens.” Crews put asphalt on a road at Newington to provide for traffic between Portsmouth and Dover, and they added oil or tar to hold down dust on many miles of gravel roads used by tourists. Also in 1920-22, contractors completed 51 miles of New Hampshire’s system of cross-state roads; most of the construction was “federal aid projects that were authorized in 1920, but not built” then. With such improvements, the Central Road from Concord to Dover soon was “carring a considerable amount of traffic that formerly went over the South Side Road from Manchester to Exeter.” Everett, 10-12.

The transcontinental route, totaling 3,305 miles, still had many unimproved sections, though in 1921 gravel had been put on 1,052 miles, concrete on 521 miles, bituminous macadam on 383 miles, macadam on 287 miles, and brick on 241 miles. New Jersey completed paving of 29-foot-wide reinforced concrete on 7.5 miles, leaving to be replaced on the route there only 15 miles of old macadam surface. Pennsylvania opened in fall 1921 a 25-mile section paved between Gettysburg and Chambersburg, removing a 70-mile detour. New York Times, March 12, 1922, p. 11 (VII). About one-third of traffic on the New Jersey-Philadelphia section of the route was trucks, and one-seventh was large, 5-ton trucks, the state highway department said. Ibid., Feb. 27, 1921, p. 6 (VII). “Plans to connect the Lincoln Highway in New Jersey with the Jersey City entrance” to the vehicular tunnel being built under the Hudson River to New York were being considered by officials of both states in mid-1921. Ibid., June 23, 1921.

The day before work was to begin, one of the contractors said between 1,000 and 1,500 men would work at the project in shifts covering 24 hours a day. Ibid. Besides offering jobs at the building location, the tunnel construction would support jobs elsewhere in production and shipping of such materials as cement, stone, sand, steel, iron, and lumber. Ibid., April 9, 1922, p. 16 (IX); Ibid., Dec. 10, 1922, p. 4 (IX); Detroit Free Press, Jan. 5, 1922. The tunnel was to use funds including those from a bond issue approved in late 1920 by New Jersey voters. The tunnel project’s cost was estimated at $28.6 million, and “it is estimated that the tolls will produce the entire cost of the work in eleven years.” New York Times, March 31, 1922. Construction of the tunnel proceeded by decisions of New York and New Jersey Tunnel Commission, using state appropriations and bonds. The project was a large example of the many smaller projects of states that helped reduce unemployment in the period, though it limited the capacity of both of these states to generate funds for matching federal aid. Designated for a special purpose, the commission resembled Pennsylvania and New Jersey Bridge and Tunnel Commission, which in 1921 was gathering data on farmers’ hauling of produce on its routes. New Jersey Department of Agriculture, Sixth Annual Report (Trenton, September, 1921), 26-27. Cooperation among states and counties also produced commissions to build bridges in the depression in states including South Carolina and Georgia. A large bridge was built in North Dakota over the Missouri River between Bismark and Mandan as a federal-aid project, directed by the state highway department, though using some matching funds from two counties. Work on the Missouri River bridge began in September 1920 and was 80% complete by mid-1922. North Dakota State Highway Commission, Report, July 1, 1920, to June 30, 1922 (Grand Forks, 1922), 2261-62, 2310. The tunnel under the Hudson was one of the period’s larger road projects, costing more than the 1920-22 total in federal-aid projects for many of the states. The depression reduced its cost, for by mid-1923, in an improved economy, officials raised the estimated cost to $35 million, an increase of some $6 million, largely because of rises in labor and material costs. Still, commission officials said they expected the costs could quickly be paid from tolls, citing a 20-percent increase in 1920-22 in traffic crossing the Hudson. At a commission meeting, to show “the possible earning capacity of the tunnel,” a reporter noted, “it was said that if the rates charged for vehicles were the same as those charged by the Erie Railroad Company on its boats [crossing the Hudson] the income, six days a week, would
amount to about $50,000 a day, which would be sufficient to justify an expenditure of many millions in similar
$15 million. Such a project could generate funds to pay much of its costs, yet its changes for traffic required plan-
ing also by officials elsewhere. To plan for handling traffic from the Manhattan-Jersey City tunnel, New Jersey’s
State Highway Commission created an advisory board in mid-1923. Board members would represent both states,
the tunnel commission, three counties near its entrances, and cities of Newark and Jersey City. Traffic had doubled
near the tunnel’s Manhattan entrance since 1919, when the project was first planned, according to a report by the
tunnel’s chief engineer. Ibid., p. 3 (II). The tunnel commission’s annual report to the New York legislature said its
1922 study of traffic crossing the Hudson showed an increase of some 4 million vehicles over the 1914 total. And
it found that horse-drawn vehicles had dropped to 35% of the traffic, down from the 1914 level of 85%. Ibid., May
6, 1923, p. 1 (IX). The tunnel’s estimated traffic at completion was 5.6 million vehicles yearly, its estimated
capacity 15.8 million vehicles yearly. Ibid., Feb. 11, 1923, p. 2 (IX). The tunnel project’s cost, at $29 million,
exceeded totals of 46 states for cost of federal-aid projects completed or under way by mid-1922; only totals for
Texas ($41.9 million) and Pennsylvania ($37 million) were larger. New York’s total was $21.7 million, ranking
7th in the nation; New Jersey’s was $6.3 million, ranking 37th. Agriculture Department, Report, 1922, 477-78,
483-84. “November Election Boost to Good Roads,” The Roadmaker, Excavator and Grader 15 (January 1921):
13. After crossing the Hudson by ferry in the new system, trucks could make some deliveries directly to customers, 
by-passing warehouses. That could reduce repeated handling, a problem the Federal Trade Commission had cited in 
the city’s importing of perishables from New Jersey. From New Jersey terminals, rail cars of produce had been 
brought to New York City on barges. Produce then was unloaded on the docks to await consignees’ trucks or 
horse-drawn wagons. loaded again, taken miles to wholesalers and jobbers, and unloaded again. The commission
noted that “the congestion at the piers and in the streets is so excessive as to add greatly to the cost of cartage in
New York, both on goods entering and goods leaving the city.” Boston terminals were closer to wholesalers, 
though traffic congestion at terminals and the market district produced inefficiencies nearly as great as in New 
E. Boyle, Marketing of Agricultural Products (New York: McGraw-Hill, 1925), 111-12. Showing potential for re-
ducing passenger traffic, trackless trolleys, running on rubber tires and drawing electrical power from lines over-
head, began operating on Staten Island by mid-1921 in conjunction with the municipal bus service there. Labor
Herald (Kansas City, MO). May 20, 1921. Taxicabs were estimated to number at least 14,000 on New York City’s

53 Ibid., Jan. 16, 1921.

54 Ibid., April 29, 1922.

55 The official criticizing the Miller administration’s road work was H. C. Pell, the Democratic State
Committee chairman. In the Miller administration, Pell said, “a saving of a few thousand dollars has been made in
the maintenance of the highways. Several millions will have to be spent in their repair as a result of this.” Ibid.,
April 30, 1922, p. 2 (II). Ibid., Aug. 5, 1920. Smith charged that the highway department had become demoralized
in Miller’s administration. Miller replied in October that he had sought the resignation of Smith’s appointee head-
ing the department because of high overhead in the agency and lack of results in roadbuilding. That change, Miller
said, brought a doubling of highway construction and repair, at less cost in administration and engineering work.
What the statement of roadbuilding figures for the two administrations failed to mention was the effect of the wart-
time and postwar economy in preventing roadbuilding in most states until mid-1920, effecting policies of any
administration. Better roadbuilding conditions aided administrations for much of 1920-22 whether they were at the
state level or in cities and counties. On the expense of a federal program to a state paying much of federal taxes,
Miller said, “it cost the state of New York for every dollar that we received as Federal aid for good roads many

Road bonds from New York's state government, exceeding most states' amounts, totaled $71 million by July 1922. Yet that was only 27 percent of New York's bonded debt then, ranking second to amounts for canal projects yet ahead of amounts for land purchases. New York Times, Jan. 4, 1923.


The bonds' tax exemption, Mellon argued, allowed the wealthy to avoid federal income surtaxes, still in effect from wartime laws enacted in 1917, while being "of relatively little value" to taxpayers owing regular income tax or a small surtax. New York Times, Feb. 1, 1923.

Ibid., Feb. 4, 1923, p. 8 (VIII).

Ibid. Warning that states paying larger shares of federal taxes "will have the greater burden if federal bonds are made taxable," it noted that they already paid larger shares in providing federal revenues for road funds. In noting that large states paid to the federal government a larger proportion in taxes than they received in highway funds, the committee failed to note what some chamber members likely recognized, that commerce of states of the North Atlantic region could benefit from other states' and regions' improvements in roads, as it had from better transportation by water and rail.

Ibid., Jan. 7, 1923, p. 17 (IX).

The three states outside the region that for 1922 exceeded 1920 levels for individual income were, in descending order, North Carolina, Illinois, and California. Nearly recovering in 1922 to 1920 levels in the North Atlantic region was a group led in the region by Delaware, Rhode Island, Pennsylvania, Maine, Massachusetts, and Connecticut. Farther from their 1920 levels were 1922 incomes in Vermont, New Hampshire, and Maryland, though incomes in each had recovered more than in at least one-third of the nation's states. Internal Revenue, Statistics of Income, 1920, 22-23; Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31.

In use of federal funds for roads for all of 1922, Pennsylvania led most states in the nation, completing work then that brought it more than $4 million. New York Times, Jan. 7, 1923, p. 9 (IX). Indeed, Pennsylvania ranked second among the 48 states in the cost of federal-aid projects completed or under way by mid-1922. Its total ($37.3 million) was exceeded only by that of Texas ($41.9 million). Cost of those projects included amounts paid by federal and state or local governments. Agriculture Department, Report, 1922, 477-78, 483-84. Pennsylvania's plan for expanding various kinds of public works in slow economic periods had been adopted as law in mid-1917, based largely on proposals by state official Otto T. Mallery. The legislature, Udo Sautter notes, repealed the law in 1923. Sautter, "Government and Unemployment," 71. Among states taking action similar to that in the Pennsylvania plan, North Carolina in 1921 increased roadbuilding and construction at state institutions in 1921 to stimulate its economy. Cecil Kenneth Brown, 105-07, 111, 113, 115.

Chapter 3

In drainage as in roadbuilding, the South had been preparing to expand its work and often chose to do so through local, special-purpose districts. In nine southeastern states drainage of swamps or farm or timber lands
began in 1909, when such legislation was adopted in North Carolina. By 1921, the nine states had laws on acquiring land, financing, and building projects by drainage districts, though two states had resolved legal problems only recently. Bonds issued by districts were the usual way of financing southeastern drainage projects, though Florida provided state funds. "Drainage Development in the Southeast," Engineering News-Record 86 (Jan. 6, 1921): 36.

"Before 1916, the statute labor system was the most widely used method of building and maintaining roads in the South," Howard Lawrence Preston notes. The system had lasted since the colonial period, and "as late as 1912, every southern state" used it. Fines for not working were small, and Tennessee and other states allowed residents to hire substitutes. Preston, 21. Mississippi "seldom used convicts to build and maintain its public roads," Thomas D. Clarke argues. It relied on the statute-labor system, in which locally influential men often were not asked to work. Supplying "teams, wagons, scoops, plows, and drags entitled owners to generous concessions." Clarke, 279-280. For early Southern Carolina, John Hammond Moore cites records for 1760-1839 of three lowcountry parishes as showing "that frequently only slaves, not white men, were summoned" for work on roads, despite the universal obligation for work then under the statute-labor system. Later, "generations of South Carolinians struggled to avoid" road duty, "and usually succeeded." John Hammond Moore, 11-13.

Preston, 22-23. The convict road gang in North Carolina and other southern states was considered a Progressive reform of abuses of the leasing system when it originated, and it continued in the South in the 1920s, Alex Lichtenstein argues. In Georgia, organized labor had opposed the lease system as competing with free labor, yet the lease system was ended only after the good roads movement offered an alternative use for convict labor. Lichtenstein, 85-89. Mississippi leased convicts to plantations and railroad contractors until ending its system in 1906. Under Louisiana laws in effect in 1910, state aid in the form of convict labor was provided to parishes, together with aid to them in cash, in work by road outfits, and in work by state road crews. Later, parishes received revenue from vehicle fees, from which largely they matched federal funds in Louisiana 1917-20. H. H. Truxillo, "The Financing of Public Highways," Engineering and Contracting 57 (June 7, 1922): 539. Tennessee, Louisiana, Georgia, Texas, and Arkansas stopped convict leasing by 1914, yet Alabama continued leasing, particularly to operators of coal mines near Birmingham. In 1919, an Alabama law set the end of leasing at January 1923, though the legislature in 1921 extended it to January 1924. Robert David Ward and William Warren Rogers, Convicts, Coal, and the Banner Mine Tragedy (Tuscaloosa: University of Alabama Press, 1987), 77, 88-89, 119. Jesse Steiner and Roy M. Brown, The North Carolina Chain Gang: A Study of County Convict Road Work (Chapel Hill: University of North Carolina Press, 1927), 3-4. Florida highway officials set the value of convict labor during 1921 and 1922 at a total of "upwards of three quarters of a million dollars." Florida State Road Department, Fourth Biennial Report, Jan. 1, 1921 to Dec. 31, 1922 (Tallahassee, [1923]), 17. A higher estimate of the value of Florida convict’s road work, at $1 million for 1921, occurs in "Road Funds in Florida" Good Roads 60 (June 22, 1921): 325. Convicts’ work on Virginia roads 1918-23 was estimated to be worth $1.85 million to the state. H. G. Shirley, Virginia State Highway Commissioner, "Report of the Chairman of the Virginia State Highway Commission," 19-101 in Virginia State Highway Commission, Fifteenth and Sixteenth Reports, Biennium Ending September 30, 1922 (Richmond, 1924), 32. The depression of the 1890s had thwarted efforts to end Alabama’s convict leasing system, which had saved the state the costs of providing a prison system and under which state prisoners worked in mines, together with county prisoners. A legislative committee reported in 1896 that convicts were 13% of coal miners in Alabama and 26% of those in Jefferson County (Birmingham area), levels the committee called an unfair imposition on free labor. In 1911, a bill to put convicts to work on roads instead of leasing them to mines failed to pass. Convict leasing brought revenues to Alabama’s state and county governments and was a "perpetual political issue." Ward and Rogers, 39-41, 83, 119-22, 77, 88-89. Convict leasing was ended in 1923 by Florida, and "the growing use of prison labor on public roads made the change easier." Charlton W. Tebana, A History of Florida (Coral Gables: University of Miami Press, 1971), 380. In southern cities’ convictions of unemployed men, particularly blacks, for vagrancy or other small offenses, "peonage, a predominantly rural method of race and labor control, had an urban variant as well," David R. Goldfield argues. Employers seeking laborers posted the bail or paid the fines, often high, for men held on vagrancy or other minor charges, obligating the men to work off the debt. "In Montgomery during the 1880s, roughly 90% of the cases before the city court involved blacks arrested for petty offenses and for whom punishment was forced labor on the chain gang." David R. Goldfield, Cotton Fields and Skyscrapers: Southern City and Region, 1607-1980 (Baton Rouge: Louisiana State University Press, 1982), 109. Dewey W. Grantham observes that southern cities as well as counties used chain gangs for road work. Birmingham’s early 1900s chain gang, mostly blacks, "cleaned and repaired the streets ten hours a day," saving
prices would be months away. Only four southern states ranked among the lower half of the 48 states in population per square mile. At higher levels were Alabama and Georgia, each with about 40 people per square mile. And the

As prices for staples fell in autumn 1920, the effect in the region was rapid. In many southern counties, most rural residents, and people in towns and cities where farming was the economic base, realized by late 1920 that many incomes were lower, debts from 1920 planting would not soon be repaid, and better crop prices would be months away. Only four southern states ranked among the lower half of the 48 states in population per square mile. And the
six remaining southern states had from 50 to 60 people per square mile, ranking them lower than only four other
states outside the industrialized, urbanized North Atlantic region, where most states had more than 100 people per
square mile. The region’s four states with least population per square mile were Louisiana (39.6 people), Missis-
nippi and Arkansas (each with at least 30 people), and Florida (17.7 people). Census Bureau, Census. 1920. vol. 1,
Population, 31. Some southerners did work in factories and businesses, though. With 18% of the nation’s area, the
South had 12% of its wage earners in 1919. In a depression, much of the South would have few families with
incomes from manufacturing or commerce to offset losses from farming. Many men working on southern roads
soon after 1920 likely would be drawn from farms, though in particular areas men laid off at southern plants or
commercial businesses might be numerous on road crews. Much less than in the North Atlantic and Midwest
would roads in the South need to be made usable for large trucks hauling manufactured goods in shipments
concentrated at factories. More often, roads in the South would need to serve distribution of goods from many
small urban and rural stores, usually by local travel in autos or wagons. The South had far fewer wage earners than
the North Atlantic or Midwest regions, each of which it surpassed in area. Indeed, the North Atlantic region, small-
est in area, had nearly half the national total for 1919 wage earners. Dividing the 1919 totals for wage earners by
regional area shows such work roles in 1920 were concentrated in the North Atlantic region, with the Midwest a
distant second. The South ranked third with 25 wage earners per square mile, less than half the level of the Mid-
west (55) and far from that of the North Atlantic region (496). State totals for average number wage earners 1919
are from Census Bureau, Manufactures, 1919, 18.

*Improved land in farms was 54% of state area for Kentucky, 41% for Tennessee, 37% for Virginia, 36% for
West Virginia, 35% for Georgia, 32% for South Carolina, 31% for Mississippi, 30% for Alabama. Lowest shares
were in Arkansas (27%), North Carolina (26%), Louisiana (19%), and Florida (6%). In area, Kentucky led the
region in 1920 with 13.5 million acres improved in farms; Georgia had 13 million and Tennessee 11 million. Five
states had fewer than 8 million acres—South Carolina, West Virginia, Louisiana, and Florida. State totals for area
and improved land in farms are from Census Bureau, Census. 1920, vol. 5, Agriculture, 35.

6The South’s autos totaled 904,641 in 1919. That year, North Carolina residents’ increase in auto ownership
raised the state’s registrations to 109,017, second largest in the South. Georgia’s total—137,000 registered
autos—led the region. In each southern state, residents had bought at least 20% more autos than they operated in
1918 except in two—Arkansas and Florida—whose totals were among the region’s lowest. Arkansas residents in
1919 registered 49,450 autos, slightly fewer than those of West Virginia or Louisiana. Florida’s 1919 total of
55,400 had increased only 2% that year. State totals for autos registered 1919 and their increase over 1918 are from
Agriculture Department, Yearbook 1920, 829. In Mississippi, several military bases were established, increasing
use of roads. Clarke, 286-87. In Tennessee, the war “greatly increased the pace of industrialization,” adding to
textiles, lumber, and iron and steel industries. The federal government in the war “sponsored four wood chemical
plants in Tennessee, two explosives factories, and an aluminum smelter.” They remained in use after the war, the
explores plant switching to rayon production. The wartime demand also stimulated local industries with markets
particularly for east Tennessee minerals and lumber. Lee, 3.

7State totals for farms operated by tenants as percentage of all farms 1920, are from Census Bureau, Census.
1920, vol. 6, Agriculture, Pt. 1, 132. Ratios for autos to population were one to 29 people for Tennessee and for
West Virginia, and one to 27 for Kentucky. Florida had an auto for every 17 people, the South’s best ratio, influ-
enced by small population. Ownership resembled Florida’s levels in an area leading there from the North Atlantic
region—in Georgia (an auto for 22 people), North Carolina, (one for 23), and South Carolina and Virginia (each at
one for 24). Autos were in smaller proportion in Mississippi (an auto for every 34 people), Arkansas (one for 36),
Louisiana (one for 37), and Alabama (one for 41). State totals for autos registered 1919 and for population per
motor car are from Agriculture Department, Yearbook 1920, 829. State totals for population 1920 are from Census
Bureau, Manufactures, 1919, 18. The five states with most autos in ratio to population had the South’s highest
percentages of farms on which autos were reported in 1920: on 15% to 16% of farms in Florida, Georgia, the
Carolinas, and Virginia. Also, the region’s four states with least autos in relation to population had them on its
smallest percentages of farms: on 7% of farms in Louisiana, 6.6% in Arkansas, 6.2% in Alabama, and 5.5% in
Mississippi. In West Virginia, 12% of farms had autos in 1920, in Kentucky 11%, and Tennesse 9%. State totals
for farms reporting autos as percentage of all farms, 1920, are from Census Bureau, Census. 1920, vol. 6, Agricul-
ture, Pt. 1, 50. Nearly half of Louisiana’s autos were owned in late 1922 in a few urban parishes, greatly concen-
trating the area needing auto highways. Thus, 29% of motor vehicles registered in the state's 64 parishes as of December 1922 were in Orleans Parish (the New Orleans area), whose total was 30,023 vehicles. In urban Caddo Parish (the Shreveport area), 10,724 vehicles (10% of the state total) were registered. Thus, 48 percent of Louisiana's registrations were in those two urban parishes and those of East Baton Rouge (4,678 vehicles or 5% of the total) and Rapides (Alexandria area, with 4,473 vehicles or 4%). Louisiana Highway Commission, Biennial Report, April 20, 1922 to April 20, 1924 (Baton Rouge, 1924), 68-69. Autos were particularly scarce in some mountain areas of Kentucky. No autos were reported in tax assessment for 1921 in Kentucky's Knott, Leslie, or Clay counties, according to the state tax commission. Six other counties, with no trucks, had few autos: Owsley 2; Jackson 3; Magoffin 4; Breathitt 6; Powell 62; and Rockcastle 103. Davenport (IA) Democrat, Jan. 13, 1922.

Figures are mileage of all rural roads surfaced, whether by macadam, bituminous macadam, gravel, sand-clay, brick, Portland cement concrete, or miscellaneous other forms of surfacing. Anderson, 20. The nation's total for surfaced road mileage also had risen by 1914, though by only 67%. Even in 1914, though, the South had only 60,215 miles of rural road with any of the kinds of surfacing. Surfacing ranged in 1914 from the 12,403 miles in Kentucky to the region's low levels in Arkansas at 1,098 miles and West Virginia at 1,065 miles. Five other states in 1914 each had less than 4,000 surfaced miles—Virginia, South Carolina, Florida, Mississippi, and Louisiana. Ibid. MacDonald, "History and Development of Road Building," 34; Dearing, 54-55. Staffs of highway departments in the South varied in size. Totals reported in mid-1922 for their administrative, clerical, and engineering employees are: North Carolina 875; Florida 358: Kentucky 350; Louisiana 325; Tennessee 241; Georgia 170; Alabama 79; South Carolina 36; West Virginia 27; Arkansas 22; and Mississippi none. Arkansas Department of State Lands, Highways and Improvements, Fifth Biennial Report, For Period Ending June 30, 1922 (Little Rock, 1922), 84. No totals were reported for Virginia. The totals made the departments among the larger agencies then in many southern governments. In debate on the Mississippi commission in 1920, "adequate appropriations were made too late in the legislative session for the employment of personnel for the calendar year 1920." Clarke, 292-93. Despite the late appropriation, the agency added enough staff "to function smoothly" by early fall 1920. Mississippi State Highway Commission, Third Biennial Report, 1921 (Jackson, 1921), 3. In the war era, Mississippi agriculture encountered changes because of the boll weevil, which led farmers to cut cotton production. Use of transportation facilities grew quickly because lumbering activity increased from rising world demand, and several military bases were established in the state. Local governments were unready for complex tasks of surveying, building, and maintaining modern road systems. Further, "the tax structure, or the lack of one, was as much at fault as any other fact." Clarke, 286-87. Improved land in farming in the 12 southern states was 30% of their area in 1920. Also a factor in having the region's leading mileage of rural roads, Georgia was the South's largest state. The South's rural roads in 1920 totaled some 553,000 miles. Mileage of rural roads in 1920 indicates states where many projects would start in 1920-22 as construction conditions improved. Where rural roads reached great mileage—as in Georgia's 81,000 miles, the South's largest—farming likely was developed in much of the state. With 25,000 more miles of rural roads than any other state in the region in 1920, Georgia would receive by mid-1922 the South's largest amount of federal aid by completing road projects. Florida, with 6,000 fewer miles of rural roads than any other southern state, would receive least in the region. A new program to engineer roads and help pay to build them was often of little immediate use where population was small, in the undeveloped areas that remained by 1920 in much of the rural South. Census Bureau, Census, 1920, vol. 5, Agriculture. 35. States' mileage of rural roads in 1920 are from Agriculture Department, Yearbook 1920, 829.

Cecil Kenneth Brown, 53-54. Brown's preface is dated March 1930; his later chapters discuss the state's highway construction using bonds during 1921-29. Ibid., x, vii-viii. Howard Lawrence Preston argues that between the 1890s, when "some southern congressmen, Populists with ties to farmers, sponsored legislation in Congress for road improvements," and the early-1900s laws for federal funds for roads, the South kept up its roads using statute labor. Local men worked a day or two yearly on roads nearby with their farm equipment. Begun in the colonial era, "this practice spanned two centuries, and as late as 1912, every southern state used the method," some allowing hiring of substitutes. Farmers supported the system, under which most paid no road taxes. Though "before 1916 the statute labor system was the most widely used method of building and maintaining roads in the South," most people evaded such labor by paying a small yearly fine or obtaining exemption. Though many southern farmers favored good roads, the need to raise taxes meant that support "rarely got beyond the rhetorical stage." In supporting rural free delivery of mail, many southern farmers believed they were "endorsing the idea of good roads that essentially required the federal government, and not farmers, to underwrite the cost of road construction."

...
Lack of progress in improving southern roads in the 1920s and early 1930s and "widespread acceptance and extensive use of motor vehicles" among southerners produced in the 1930s "an enormous swell of support for road improvements in the southern states." Preston, 20-21. Even by 1920, the spread of autos, in areas in and out of the South, increased support among southerners for better roads as part of economic development. For, several main routes in the South were improved in 1920-22 with support based partly on the chance of bringing commerce of road travelers to a locality. The chance of that increased also because many governments agreed on better roads as an improvement needed at the close of the war and its economic restrictions. Every state had federal funds available to help build new projects. Earlier road work to improve commerce and travel had included that on the main routes designated as national trails by associations of promoters. Counties often competed to be included on the trails and sometimes cooperated in a project of use to several of them. Thus, in 1919, a year before the depression began, counties joined efforts at an auction in Alabama. "Several counties and individuals forming a pool" paid $50,000 at a sale of roosters at Demopolis to raise contributions to help bridge the Tombigbee River. The bridge would complete a link in the Dixie highway. The counties' pool of funds bought a rooster that was named "Woodrow" and had been contributed by President Wilson. Legislators and two brass bands were part of the activities, and first-day sales of many roosters totaled more than $80,000, New York Times, Aug. 15, 1919.

"Internal Revenue, Statistics of Income, 1920, 22-23; Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Totals for personal income from tax returns are for calendar years and for incomes of $1,000 and over. Population rankings are from Census Bureau, Manufactures, 1919, 18.

Per-capita taxable income for 1920 was at middle levels in the region for Georgia ($79), Tennessee ($91), Kentucky ($101). At higher levels were Virginia ($118), Louisiana ($131) and, partly from small population, Florida ($145). In contrast to levels in the South, the nation's top ten states in per-capita taxable income had totals above $283.

In the boom in the South, income totals declined in 1920 from 1919 in three states—Arkansas by 4%, Mississippi by 17%, and South Carolina by 23%. Ibid.

The smallest declines in the region in 1921 were in Florida (15%) and Louisiana (16%); only ten states in the nation fared better. Affected by the depression and coal miners’ strikes, West Virginia's 1921 total fell 28% from that for 1920, and Alabama's fell 25%. Ibid. The coal strike affected miners including those in Alabama's Birmingham area. Ottumwa (IA) Courier, April 22, 1921. In early 1922, a federal appropriation was sought for relief of coal miners unemployed in Kentucky, West Virginia, Alabama, Ohio and Pennsylvania. Labor Herald (Rochester, NY), Feb. 4, 1922. North Carolina was one of five of the nation's states whose residents received more income in 1922 than in 1920. Florida's residents in 1922 received only 6% less than in 1920, and Mississippi's only 8% less. Yet the 1920-22 change was a decline of 31% in West Virginia, 33% in South Carolina. Internal Revenue, Statistics of Income, 1920, 22-23; Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Totals for personal income from tax returns are for calendar years and for incomes of $1,000 and over. Population rankings are from Census Bureau, Manufactures, 1919, 18.

Amid the 1922 recovery, some southern states at least briefly surpassed their earlier national rankings. True, most southern states (all except Florida and West Virginia) ranked again in 1922 in the lowest third of states by per-capita taxable income. Yet seven southern states in 1922 improved their rankings, producing totals for per-capita taxable income that ranked higher among forty-eight states than they had in 1920. The largest rise in rank was for Florida, from 36th largest total for such income in 1920 to 30th in 1922; others ranking higher were Louisiana, Virginia, Kentucky, Tennessee, Georgia, and North Carolina. Those southern states ranked higher by 1922 partly from declines by several states of the Midwest, Plains, and West, changes that raised rankings also for many North Atlantic states. Still, the four poorest states in the South and in the nation—Arkansas, Alabama, South Carolina, and Mississippi—changed little in ranking during depression and recovery through 1922. Ibid.

Since the previous depression for cotton, in 1914, farmers had experienced a period of some of the best prices in the previous 50 years. Clemson Agricultural College, Annual Report on the Demonstration and Extension Work in the State of South Carolina for 1920 (Clemson College, SC, 1921), 9; Clemson Agricultural College of South Carolina, Annual Report on the Demonstration and Extension Work of 1914 (Clemson College, SC, 1915),
53. Operators in the Kentucky cattle-feeding industry began what would be a “very disastrous” year in 1921. After four years of prosperity, its cattle prices were near 10-year lows. P. S. Caywood, “Feeding Cattle in Kentucky,” 165-67 in Kentucky Bureau of Agriculture, Labor and Statistics, Twenty-Fourth Biennial Report, 1920-21 (Frankfort, [1921]), 165-67. Even in the boom, Georgia farmers’ efforts to pay enough in wages to keep farm laborers from seeking urban jobs were limited by produce prices. Though more farm laborers were available by late 1920, produce prices seemed to be “abnormally low when compared to the cost of production.” J. J. Brown, Georgia agriculture commissioner, in Georgia Department of Agriculture, Annual Report, 1919. Quarterly Bulletin no. 83 (Atlanta: April-June, 1920), 9; J. J. Brown, in Georgia Department of Agriculture, Annual Report, 1920. Quarterly Bulletin no. 86 (Atlanta: January-March, 1921), 7; Tucson Citizen, Dec. 19, 1920. In 1921, Tennessee farmers would plant little more than half their usual cotton acreage. “Crop Report for June, 1921.” Tennessee Agriculture 5 (July 1921): 1. A Louisiana cane planter at New Iberia, feeding silage to cattle, marketed milk and butter to counter low 1921 prices in other produce. To sell a milk surplus, Louisiana dairy associations increased advertising on milk’s food value. Progressive Farmer, Mississippi Valley Edition, July 23 and Dec. 31, 1921. Thousands were reported jobless from Arkansas’s lumber industry. El Paso (TX) Morning Times, Dec. 4, 1920. Lumbermen’s wages had been cut by a fourth in central Florida. Auto Worker (Chicago), December 1920. Alabama coal miners, and farmers who often worked in the mines to add income, were unemployed in early 1921 during a strike. United Mine Workers Journal (Indianapolis), April 1, 1921; Alabama State Highway Commission, Ninth Annual Report, October 1, 1919 to October 1, 1920 (Montgomery, 1920), 75-77, 81-83. The strike in Alabama by United Mine Workers members was opposed by Gov. Thomas E. Kilby, who attributed it to “the fact that from 70 per cent to 80 per cent of the miners are negroes” and that “the Southern negro is easily misled.” The union also included “a good many men who are farmers by trade, but who usually work in the mines during the rush season when work on the farms is dull,” said Victor H. Hanson, publisher of Birmingham News, in a statement to the governor’s commission on the strike. West Virginia miners also were out in the strike, unresolved during much of the depression. United Mine Workers Journal (Indianapolis), April 1, 1921. By early 1922, West Virginia’s jobless would include six hundred miners and their families near Crown Hill receiving food from the Red Cross. Detroit Free Press, Jan. 2, 1922. Owners of some large, remote farms recently abandoned by black tenants in middle sections of Georgia, Alabama, and Mississippi also were offsetting the depression’s effects, benefiting from rising land prices as autos made acreages accessible farther from railroads. New York Times, Jan. 9, 1921. At one of the South’s new automobile tourist camps. Desoto Park in Tampa, Florida, so many people gathered for free accommodations in winter 1920-21 that it closed to out-of-state visitors in spring. “Floridians were among the first southerners to actively recruit tourists.” Tampa had opened the park in 1919 “to motorists who had come south for the winter. Soon autocamps sprang up throughout Florida and in other southern states along main routes to Florida recommended by the Automobile Club of America” by 1918. “The number of tourists coming into the South increased sharply following World War I.” In 1921, “one of the most active automobile clubs in the South, the Chattanooga Automobile Club, answered approximately 8,000 inquiries from tourists requesting route information.” Howard L. Preston, “Tourism, Automobile.” 1245-47 in Charles Reagan Wilson, William Ferris, Ann J. Abadie and Mary L. Hart, eds., Encyclopedia of Southern Culture (Chapel Hill: University of North Carolina Press, 1989), 1246. Economic benefits of federal activities were part of wartime experience in Florida and other southern areas. Florida in 1917-18 hosted “American soldiers, especially aviators, in several training camps.” Paul S. George, ed., A Guide to the History of Florida (Westport, CT: Greenwood Press, 1989), 263.

South Carolina was one of seven southern states where cotton led in 1919 crop value. Corn was the leading crop in 1919 values in four upper-South states; oranges led in Florida. Corn was second in value in six of the seven southern states where cotton led. Tobacco was second in value in North Carolina, Virginia, and Kentucky. Census Bureau, Census, 1920, vol. 5, Agriculture, 705-06. With low 1921 prices and in many counties boll weevil damage, cotton as well as corn and tobacco brought South Carolina’s farmers little more than half their 1920 amounts. Crop prices and acreage for South Carolina are from South Carolina Commissioner of Agriculture, Commerce and Industries, Yearbook and Eighteenth Annual Report, 1921 (Columbia, 1922). 47. Ibid., 44-45, 67. South Carolina farmers cut acreage in cotton 13 percent and tobacco 20 percent in 1921 and raised it for corn 10 percent and for other food items including potatoes, and peanuts. Acreages for 1920 and 1921: cotton 2,964,000 and 2,593,000; tobacco 100,000 and 80,000; corn 1,830,000 and 2,022,000. Ibid., 47. Though acknowledging the effect of declining prices, the South Carolina’s agriculture commissioner traced some significance in the depression to a low-status group of small farmers. Commissioner B. Harris urged that the nation close “all immigration for a period of five years. The North would then absorb a lot of the negro population of the South and our farms would get down
to a more business basis. It is the irresponsible negrocropper who makes it so difficult to handle the cotton crop situation." Harris noted also that "the woman farmer is a factor in the progress of the state," operating 6% of its farms, which represented 4% both of acreage and of farm value. Ibid., 59. Perhaps, for some, using tractors and autos offered chances of reducing labor in southern farming, and having fewer small growers might seem to promise higher prices for those remaining. More certainly, sharecropping set a minimum of laborer-subistence costs below which the landowner could not easily cut production expenses in a depression, when financing the subsistence "furnish" on credit would be harder for him. A brief depression's low crop values and relatively high credit costs would keep southern sharecropping even more than usually from running on a business basis. Quickly changing some acreage from cotton or tobacco to corn could help farmers, including large landowners, cut subsistence costs. Likely, such costs raised large landowners' interest in off-farm ways of adding income. Some poor blacks and whites might gain road work for wages, aided by landowner interest in sharecropper subsistence.

Cotton prices were influenced largely in the period by decline in demand from wartime levels, during which the number of southern producers had not prevented prosperity. International production also influenced price levels for American cotton. Credit extended by planters for the "furnish," secured by cotton to be produced in a year, would quickly become more costly as cotton's value declined, as it did in late 1920. Changing credit costs, a problem also in the late 1920s and early 1930s, affected many planters and their tenants in 1920-22. Of the later period, Gilbert Fite notes that a depression added to problems already present for years in southern agriculture. Many planters and smaller landlords were unable to provide credit as in the past and reduced or stopped it; many large landholders lost farms through foreclosure by 1931. "Thousands of tenants were thus set adrift during the Depression well before passage of the AAA and the acreage reduction plan" of the early New Deal. Gilbert C. Fite. Cotton Fields No More: Southern Agriculture, 1865-1980 (Lexington: University Press of Kentucky, 1984), 122, 135. By the mid-1920s, planters in central Georgia increasingly offered tenants the furnish in cash, instead of credit at the planter's store, chiefly because autos and better roads gave tenants easier mobility, according to Jack Temple Kirby. "Largely in order to hold their laborers, planters of Greene and Macon counties adopted cash furnishing almost wholesale by the mid 1920s, virtually abandoning their traditional credit system and the controls (not to mention profits) which went with them." Kirby contends that though a black tenant of central Alabama recalled cash furnish being used by 1913, in the South "most landlords did not begin the practice until after World War I." Jack Temple Kirby, "The Transformation of Southern Plantations, c. 1920-1960," Agricultural History 57 (July 1983): 260. In store credits or borrowed cash, though, the furnish would have cost planters more in a depression. Rural southerners who traveled to work in early 1900s included subsistence farmers from southeastern Kentucky going to Ohio and Michigan vegetable fields; small owners and tenants from other southern states going to Florida or to berry production in Louisiana; and blacks from Virginia and North Carolina going yearly to the North Atlantic region. Harry Schwartz, Seasonal Farm Labor in the United States: With Special Reference to Hired Workers in Fruit and Vegetable and Sugar-Beet Production (New York: Columbia University Press, 1945), 43-48. "Children of transient farm families from Kentucky, West Virginia and Tennessee," who usually did "a considerable portion of the weeding" in onion fields of northern Ohio were to be affected by a state ruling by mid-1922 that, if under age 14, they could not work more than four hours daily or 24 hours weekly. Ohio Farmer, July 1, 1922.

17Georgia's activity seemed to some officials largely caused by the war and likely to be brief. "It must be fully realized that the accumulation of Federal Aid during the war period, as met by county funds, has been the backbone of the highway work in Georgia," state highway officials reported in May 1921. State funds were only 16 percent of its two-year building program. Thus, "with the completion of this work a much more limited program must prevail." Georgia State Highway Board, "Report," 9, 11-12. Virginia's roadbuilding of early 1921 was still slowed by lack of engineers to complete plans and field surveys for projects. G. P. Coleman, highway commissioner, in Virginia State Highway Commissioner. Fourteenth Report, for Two Years Ending Sept. 30, 1921 (Richmond, 1921), 7, 9, 6. By February 1921, rising unemployment in Newport News, Virginia, led city officials to plan relief. The city manager said work on sewer improvements would be available to every man who had been in the city for at least a minimum of time or had lost a job there. Officials of Newport News tried to respond to unemployment in two ways, likely prompting some jobless men to leave the area in late winter. The city manager, promising "jobs to all who applied," said a newspaper, offered unemployed men the choice of work on the sewer projects or jail. New York Times, Feb. 2, 1921. The postwar economy shifted in a few months for Virginia's farmers and potential farm laborers. In fall 1920, with the nation's economy still drawing much of the available labor away from farms, growing conditions had been exceptional for Virginia crops. Indeed, a state official said in
1921, "suggestions were made to presidents of the male colleges in the state last fall when farm labor was scarce and there was such a large crop to harvest." Some students were recruited "to help farmers nearby to save their crops." Yet prices fell near harvest time for many crops and remained low, leading to what the state's agriculture commissioner termed "the disastrous year in farm prices." By late summer 1921, he said, "many farmers have lost all, and all farmers have lost heavily." In the depression, "the purchasing power of our principal crops is but little more than half what it was on an average for the five pre-war years." J. H. Meek, "Report of the Division of Markets for the Fiscal Year October 1, 1920 to September 30, 1921," 59-69 in Virginia Department of Agriculture and Immigration, Year Book, 1922 (Richmond, 1922), 65; G. W. Koiner, commissioner of Agriculture and Immigration, in Virginia Department of Agriculture and Immigration, Year Book, 1922 (Richmond, 1922), 3. In Alabama in 1920, little federal-aid road work started because of the boom's high prices and wages, lack of railcars, and meager success in selling state road bonds in a flooded bond market. High prices reduced the mileage of road work possible, Alabama's highway commission reported. Much road work amid the boom's high wages, said the state highway engineer, would have created "a more serious labor situation." For, "once a contractor enters into the work," obligating himself to complete a contract in a certain period, "he is compelled to have labor regardless of price. This would not have been very pleasing to the farmer who already had difficulty in keeping labor on the farm." By fall 1920, farmers' conditions worsened as produce prices fell. Soon contractors and farmers had available to them plenty of labor and at lower wages as depression replaced boom in much of the nation. Still, farmers' customary arrangements with local labor weakened on arrival of contractors hiring for road work, particularly as farmers tried to cut production costs. W. S. Keller, State Highway Engineer, "Report," 3-7 in Alabama State Highway Commission, Ninth Annual Report, October 1, 1919, to October 1, 1920 (Montgomery, 1920), 5-6.

11Labor Review (Augusta, GA), Feb. 19, 1921. "Alabama's taxing system is outworn and top-heavy," the Birmingham journal argued. "Alabama has hundreds of thousands of acres of idle, unproductive land from which she draws but a tithe of the value under the present system of taxation." Such low taxation, it said, raised taxes on others—"the business man, the merchant, the operator, the home builder, the farmer, and all other classes of industrious men." Good roads would particularly benefit farmers, "who need to get their produce to market." Labor Advocate (Birmingham, AL), Feb. 26, 1921. In April, the Salvation Army and locals of the United Mine Workers asked Alabama Gov. Thomas E. Kilby to help find aid for miners in north Alabama coal fields. Ottumwa (IA) Courier, April 22, 1921. Idaho Falls (ID) Daily Post, June 18, 1921. Many remained unemployed in Birmingham in early summer, amid a shortage of local tax revenues. More than 200 people, an estimated 90% of them black and 75% of them male, applied for jobs one June day at City Hall's employment bureau. More than 1,000 people had registered at the office in the past three weeks; its officials said plenty of potential farm laborers were available. Birmingham (AL) Age-Herald, June 26, 1921. The city's relief department lacked enough autos for staff to use to investigate relief requests and deliver supplies. Other relief efforts were delegated to a campaign for contributions by business and community groups, aided by the Red Cross; fund-raising included efforts by firemen, men's and women's clubs, church groups, a black Elks lodge, and, in stores and plants, teams of four-minute speakers. Ibid., July 2 and 6, 1921. Many steel mills ran at reduced levels, though some demand remained for exporting items including pipe and rails. Ibid., July 6, 1921. During the area's high unemployment, road bonds' fundraising power had limits. Jefferson County had been unable to sell part of a $5-million bond issue for roads voters had approved in February 1920. County officials were considering a new election to authorize selling $3 million of the bonds at 6% interest, making more attractive the bonds that had remained unsold at 5% in the depression's market. Ibid., July 3, 1921. The county lacked revenues from local taxes. It borrowed to pay county employees for June 1921, for its tax assessments on 40 corporations had been set aside by the state tax commission during litigation over the commission's right to examine a corporation's books. Ibid., June 30, 1921. County funds due the city for a share of the teachers' salaries was lacking, and so Birmingham borrowed $100,000. Ibid., July 1, 1921. Federal-aid road work had been limited by the state's lack of matching funds since courts overruled a $25 million bond issue voters had approved. To secure federal funds until they could be matched, W. S. Keller, state highway engineer, was reported to have "said project agreements had been signed and delivered to the federal bureau of public roads whereby every penny set apart for Alabama by the federal government would be held in the federal treasury until such time as the state can begin work provided there is no unusual delay in obtaining" the state's funds for matching. Ibid., July 2, 1921. Project agreements had to be delivered to the Agriculture Department by July 1. Ibid., June 19, 1921, p. 7 (A). Alabama's Supreme Court, sustaining its interpretation of the state constitution as nullifying the state's attempt to issue bonds for roads, ruled in June 1921 that voters further had not legally ratified a proposed amendment exempting ex-service men from poll taxes. Thus, some 20,000 men could
not vote until they paid poll taxes. Ibid., July 1, 1921. Alabama had $1.3 million in federal allotment waiting to be matched; it had matching available for $568,182 in other federal aid for road projects under way or soon to begin. Ibid., July 5, 1921. Federal aid of $300,000 was to help build at least 16 miles of surfacing in 1921 in Sumter County, which put up $75,000 with an equal amount from the state as matching. Contractors for the work, to begin mid-July 1921, were from Birmingham and Tuscaloosa. Besides that project, Sumter County was improving county roads “with its outfit of 20 mules and machinery, 20 convicts and a few hired hands.” Ibid. Nearby, Pickens County had become the seventh in the state to approve road bonds recently; the seven included urban centers and rural areas with comparatively large tax bases. In Pickens, the bonds would help build a road “from the Tuscaloosa to the Sumter county line, thus connecting three prosperous counties. The other counties giving large majorities for road bonds were Montgomery, Madison, Tuscaloosa, Dale, Colbert and Mobile.” Ibid., June 29, 1921. Some county roads were worked by the Jefferson County Farm’s prisoners. Its 107 men were working on 135 miles of road in early summer 1921, traveling to work in trucks daily and returning at night; the farm’s white women prisoners made the men’s uniforms in a tailoring department, and its black women prisoners operated a laundry for items from Hillman hospital, the almshouse, jail, and juvenile court. Women prisoners operated a cannery at the farm. Ibid., July 4, 1921. Coal mines in the Blocton district reached what a newspaper termed their “lowest point of production in several years, “having operated only a few days since a November 1920 strike. Men and mules from one company’s mines were working for a contractor building a lumber company’s railway into Tuscaloosa. Ibid., June 23, 1921. The AF of L convention adopted a resolution, offered by International Association of Machinists delegates, that state federations and cities’ central labor unions “be instructed to request state, county and municipal governments to immediately make provision to carry on such public works as they now have under consideration.” The resolution was adopted June 22, 1921. American Federation of Labor, Proceedings, 41st Annual Convention, American Federation of Labor, Held at Denver, Colorado, June 13-25, 1921 (Washington: American Federation of Labor, 1921), 376. The resolution was noted in labor journals including United Mine Workers Journal (Indianapolis), Aug. 15, 1921. By early 1922, Samuel Gompers. American Federation of Labor president, would urge expanding public works, including roadbuilding, as some had proposed in fall 1921 at President Harding’s Washington Conference on Unemployment. New York Times, Jan. 3, 1922. Proposals to shift taxes onto landholders interested the labor journal in Virginia. In July 1921, it contended that jobs would increase locally if Richmond’s taxes were cut for industry and raised for land. Construction of houses, not roads, seemed a way to stimulate the city’s economy. Much nearby acreage was “being monopolized or held by speculators for an extortionate price.” Richmond Labor Journal said. If Richmond’s city council would “reduce the taxes falling upon building operations and industry in general, and increase those falling upon land values, a great impetus will be given the erection of houses, industry will take on new life, and thousands will be given employment and business generally greatly improved.” Local efforts to counter the effects of depressions had been frequent in American cities earlier, as they were also in 1920-22. Roadbuilding of the federal-aid program in rural areas resembled the street repair and other public works that cities had increased as needed for employment in the late 1800s and early 1900s. Richmond (VA) Labor Journal, July 22, 1921. Plans for public works from state bonds brought objections from the Richmond labor journal. Road work was not needed enough in Virginia to justify the state’s proposed sale of bonds, the journal said before a fall 1921 referendum. It suggested simply putting more people to work, on farms and at coal mines and lumber camps. “Are there not hundreds of millions of acres of idle farm lands and two million idle workers who would be glad of an opportunity to employ their labor upon such land?” asked the journal. “The only thing necessary to solve the unemployment problem is to bring labor, the active factor in production, into touch with land, the passive factor in production.” Ibid., July 22, July 29, and Oct. 14, 1921. Several labor newspapers varied in opinion on bonds; one in Georgia endorsed proposals to issue state bonds for roadbuilding. Labor Review (Augusta, GA). April 29 and May 19, 1922.

Little news on roads appeared in Houston (TX) Labor Review, Jan. 1, 1921-July, 22, 1922, or in the Richmond journal, though in fall 1921, when Congress was debating a federal-aid appropriation, the Richmond journal published a series of columns on alternatives to the federal-state program. Black residents of Houston were urged to vote against issuing county road bonds, in a front-page article that closed with the designation “Political Advertisement” yet ran under the banner headline “$6,000,000 Bond Issue Opposed.” Houston (TX) Informer, Nov. 6, 1922. Port bonds of $4 million were supported in Ibid., Dec. 30, 1922. Norfolk (VA) Journal and Guide, Feb. 4 and 18, 1922. An exception to the absence of news on roads was an article describing 1922 plans for roadbuilding near Ponca City, OK, using revenues from taxing oil production, reducing the need for tax on land. Oklahoma City Black Dispatch, Feb. 9, 1922. In black population growth in California, begun before the war,
many blacks found work in Los Angeles County, in the Imperial Valley's corn and cotton production, and at Pacific ports. By early 1920, said a black political leader in Los Angeles, "more than a thousand" blacks worked as stevedores in the San Francisco area. California Eagle (Los Angeles), Feb. 21, 1920

20 Richmond (VA) Labor Journal, Jan. 20, 1922.

Two years later, in fall 1923, Virginia was operating 24 convict road camps: the average number of convicts for the previous 12 months had been 1,100. Convict road "camps have been placed in the localities where labor was scarce and wages high and at other points where by letting the work to contract it would interfere with local farming operations." The camps were to be continued past 1923, to reduce the state's roadbuilding costs and to benefit convicts by allowing work outdoors. Convicts prepared road materials at the quarry at Culpeper. H. G. Shirley, in Virginia State Highway Commission, Fifteenth and Sixteenth Reports, Biennium Ending September 30, 1923 (Richmond, 1924), 16, 30-32. Florida used labor of convicts by 1920, when its State Road Department operated 24 road camps. At them during 1920, the number of convicts averaged 637 men. Many men at the camps were near the end of their sentences, for in two years ending December 1920, 228 were discharged, 97 escaped, 54 were recaptured, 90 were returned to the state prison farm, and six died. The convicts' work in that period included sand-clay construction in federal-aid road projects. Costs of operating the camps was $1.17 per man per calendar day. Florida State Road Department. Third Biennial Report, Oct. 1, 1918 to Dec. 31, 1920 (Tallahassee, 1921), 64, 20-21. Costs declined in the depression, so that for 1921 and 1922 they averaged 85 cents per man per calendar day, from which the department paid costs of housing, food, clothing, and guards. Most convicts in the department's road work in the depression were black. For 1921 and 1922 its State Convict Road Force employed an average of "226 white prisoners and 854 colored prisoners." Florida State Road Department. Fourth Biennial Report, Jan. 1, 1921 to Dec. 31, 1922, 17. Work on roads would remain an alternative use for convicts once Florida ended the practice of leasing them to employers, as it would in 1923. A Kentucky law adopted by early 1922 ended convict road work except for stone quarrying in stockades. Proponents of the bill claimed that, despite costs of guarding convicts, escapes from road camps had been numerous. They also contended, a journal reported, that in convict labor "a fair day's work was not given by a prisoner." "Kentucky Abandons Use of Convicts." Good Roads, 62 (April 19, 1922): 232; "Convict Labor." Good Roads, 62 (April 19, 1922): 227; Tebeau, 380. As the depression eased in 1922 and interest in better roads remained during the later 1920s, without the need for reducing unemployment among free laborers the South kept using convict labor on roads. Indeed, during the 1920s, according to Alex Lichtenstein, "the road gang became the preeminent penal institution of the South." Lichtenstein, 85.

22 Virginia State Highway Commissioner, Fourteenth Report, for Two Years Ending Sept. 30, 1921 (Richmond, 1921), 6. At least two, contrasting patterns may apply to the South's postwar roadbuilding, reflecting earlier development of wealth in some rural areas and 1920s effort to provide for increasing traffic, particularly in urban areas. A Georgia official said paving was thought needed in 1922 "in several sections of Georgia especially around large commercial and industrial centers. Over the arteries leading to these centers passes the traffic to and from the surrounding agricultural counties." Yet "generally speaking, the counties surrounding the large commercial and industrial centers are weak financially," said Georgia's state highway engineer, who thus suggested giving greater spending authority to the state highway department instead of keeping it in counties. W. R. Neel, Georgia State Highway Engineer, "Report, 1923," 9-104 in Georgia State Highway Department, Report, January 1, 1923 (Atlanta, 1923), 10-11. Earlier, Birmingham's growth, beginning in the 1880s when furnaces and mines in several towns had been connected by railroads, was limited by undeveloped farming nearby, Lawrence E. Larsen notes. "Hinterland agricultural connections were of crucial importance, and as long as the farm lands around Birmingham remained depressed, the city was bound to have problems sustaining the rapid growth needed to make it an important center." Also, the South's "fragile economy" had less need for new cities then. "After the mills were built and staffed, Birmingham, like the new industrial towns" in the southern "piedmont, faced competition from already existing cities that had long-established local agricultural connections." Lawrence E. Larsen, The Rise of the Urban South (Lexington: University Press of Kentucky, 1985), 158-59. In other parts of the South, wealthy counties, which led in roadbuilding under the region's postwar county-matching systems, included many that were largely agricultural. The effect of large landowning may have been similar to that in the late 1800s, when efforts in South Carolina to improve roads, often by using convict labor, came from "a prestigious Aiken County group, the Beech Island Farmer's Club." In 1894, the legislature "enacted a new system of county government that answered,
in part, the pleas of the Aiken County farmers." The law "established the elective post of county supervisor," part of a county commission replacing several township boards, and gave the supervisor authority to adopt a contract system for road work and to receive a cash tax instead of road duty; it also led to a larger chain-gang system for road work. John Hammond Moore, 33-34. Aiken County in South Carolina also was among the nation's few locations of pre-war federal-aid road work, though the project involved Rep. James F. Byrnes in a dispute in that section of his district, partly over the route. The construction from 1913-15 on about 27 miles of community roads "reduced hauling costs and increased the value of farmland," though those roads had little auto traffic, and many "questioned why the money had not been spent on the much more important Aiken-Augusta highway." Ibid., 44-45. Nearby, roads were an interest of large landowners in Georgia. In the late 1800s, Alex Lichtenstein notes, the first Georgia counties to use convict labor to improve roads "cut a swath through the blackbelt plantation districts," and "almost all the counties of the Tenth Congressional District, which encompassed the eastern edge of the blackbelt and was the stronghold of Georgia Populism, had established chain gangs before 1900. The Populists had opposed convict leasing and supported good roads." Road work by chain gangs increasingly was considered an alternative to leasing convicts to private employers for other kinds of tasks. Lichtenstein, 97-98.

Across a range of weather, winter highway work was occurring in the United States, "in line with experience in Canada, where much outdoor work on public projects has been done in winter to help the jobless," according to Col. Arthur Woods, chairman of the standing committee of the President's Conference on Unemployment. Fairfield (IA) Daily Ledger-Journal, Jan. 9, 1922.

A study of bonds that defined the South as 16 states (the 12 here and Delaware, Maryland, Texas, and Oklahoma) noted that for 1921 "in all other groups of States the property taxes exceeded the revenues raised by bond issues." T. Warren Allen and others, "Highways and Highway Transportation," 97-184 in Agriculture Department, Yearbook, 1924 (Washington, 1925), 147; Labor Review (Augusta, GA), Jan. 21, April 29, and May 19, 1922; Square Deal (Richmond, VA), April 22, May 13, 1921; Richmond (VA) Labor Journal, Oct. 8, and Nov. 4, 1921. The journal reprinted a cartoon from Richmond's Southern Progress magazine depicting a bond speculator as a "Land Grabber" for a "Farm Sold For Taxes." Richmond (VA) Labor Journal, July 29, 1921. In November 1920, Virginia voters approved a constitutional amendment to authorize issuing $50 million in road bonds. A journal soon reported that in Virginia "it is planned to issue the bonds during the next five or six years for the building of a state highway system." "Highway Development in the United States," Good Roads 60 (Jan. 26, 1921): 40. From 1920 to 1929, financing was the chief concern of southern states about roadbuilding. Construction continued during the decade, and "the only substantial disagreement was between the proponents of bond issues and of pay-as-you-go plans, and in most states the impatient advocates of deficit financing won out." George B. Tindall, The Emergence of the New South, 1913-1945, vol. 10, Wendell Holmes Stephenson and E. Merton Coulter, eds., A History of the South (Baton Rouge: Louisiana State University Press, 1967), 257. Funds were lacking for Virginia road work in late 1921. "It is exceedingly unfortunate that moneys are not now available," said highway commissioner G. P. Coleman. Many contractors were completing projects and would soon need to lay off workers, adding to unemployment. Yet the highway department could not "extend its construction at the present time as the appropriations have been exhausted, and it is now necessary for us to wait on new appropriations from the next General Assembly," Coleman said. He recommended authorizing "from six to seven millions of bonds in 1922, and a similar amount in 1923." G. P. Coleman, Virginia State Highway Commissioner, Fourteenth Report, Biennium ending
September 30, 1921 (Richmond, 1921), 7-8. Elements of southern roadbuilding in 1920-22 would resemble some efforts from much earlier. Events in 1700s Georgia show a need for labor and revenue to build roads as the economy developed, argues Milton Sydney Heath. Locations of much of that labor and revenue were cities or areas of rural wealth and population. The required labor of local men was used to build roads in mid-1700s Georgia. In payment of a state tax then, working on internal improvements was a duty for all Georgia males, white or black, age 16 to 60. City residents paid the tax in cash if they did not work it out. Indeed, Savannah had men enough for work not only on its streets but also on rural roads. Besides working out their own tax on the roads, black men were sent to work in place of their owners. Complaining about bad roads was frequent near 1800, seemingly "from the rise and spread of cotton culture and the growth of trade, because it was especially marked in Augusta and its vicinity." In 1799, Augusta levied a poll tax for road repairs, and later it extended taxation for that to property and lumber deliveries at city wharves. In the 1820s, roads were feeding most freight in the state to wharves for transport on water. Milton Sydney Heath, Constructive Liberalism: The Role of the State in Economic Development in Georgia to 1860 (Cambridge, MA: Harvard University Press, 1954), 53-54, 239. Centralized boards for internal improvements formed in several states to aid travel and trade by building canals. The boards appeared in Virginia in 1816, the Carolinas in 1819, and Georgia in 1825. Yet in Georgia, rivals believing the board favored Savannah and "fear of the authority of a central state board" led the legislature to abolish the state's Board of Public Works after a year. River projects by Georgia to 1828 produced few results, leaving the state after thirteen years of such work possessing tools and about eighty slaves. In 1829, Georgia began a five-year program to build market roads, which, when turned over to counties without provisions for upkeep, soon deteriorated. By 1834, interest had moved from roads to railroads, as "city governments and local groups of citizens already were organizing railroad companies and a strong movement was gaining headway in favor of a state-constructed central railroad." Companies to build roads with plank surfacing were numerous into the mid-1850s, then declined amid railroads' competition. Railroad construction acquainted many Georgians with public works more costly than before. Ibid., 245, 248-49, 252-53. In the depression of 1837-44, investment in building Georgia railroads expanded, aiding the economy, Heath argues. The $8.5 million investment in those eight years "was equivalent to the entire commercial banking capital of the state at the beginning of the depression and to several times the amount that had been invested in all other forms of internal improvements over the previous fifty years." The investment "represented a net addition to state income, resulting from the employment of otherwise unemployed labor and capital resources." Heath contends that "public investment was a primary activating factor" in the expansion, and that "the railroad construction program which it supported was an important countercyclical influence. There is much evidence that Georgia weathered the depression better than most Southern states." Governments borrowed private funds for the depression-era work. "Apparently all of the city and one-third of the state advances were borrowed from the banks. The city loans were obtained from local banks." Ibid., 275-76.

27William Harrison, president, and Lewis Bowen, secretary, Alabama Federation of Labor, open letter to members, Labor Advocate (Birmingham, AL), Jan. 28, 1922. Earlier, Alabamians had voted 10 to 1 favoring a constitutional amendment on state road bonds, later blocked by a legal challenge. The Age-Herald said better roads were needed also by consolidated schools, rural churches and other groups, and farmers. Birmingham (AL) Age-Herald, Jan. 29, 1922. On Feb. 3, 1921, Alabama Supreme Court ruled unconstitutional the earlier measure presenting to the state's voters the proposed amendment. "Alabama $25,000,000 Bond Issue Unconstitutional," Good Roads 60 (Feb. 23, 1921): 115. Another account noted that "Alabama's state highway engineer, W. S. Keller, said of the [bond campaign] effort, and of objections that supporters misled when saying the amount was needed to match Federal money by 50-50 proportion, that 'amending state constitutions is no easy matter and we certainly do not relish the work of campaigning for an amendment every time the government apportions a sum of money to Alabama.' Of the allegations that supporters misled during the campaign on bonds, Keller said that details on the circulars noted that the bonds would provide for matching federal money as it was offered, and that $6 million in federal money already had been appropriated for Alabama. "Deceptive Highway Propaganda," Engineering News-Record 86 (May 26, 1921): 909.

28Before the war, many of North Carolina's "counties went on issuing forty-year bonds to build roads to wear out in two years for want of maintenance." Despite frequent bond issues and few lasting results, "prior to 1927 few of the counties had made any provision whatsoever for the payment of the principal." Measures to require counties to set taxes for road maintenance failed in North Carolina's legislature in 1917 and 1919. Cecil Kenneth Brown, 49-51. In January 1921, voters of Guilford County approved issuing road bonds of $2 million, a proposition the
county Farm Bureau supported. "It was feared that considerable opposition would come from the rural sections because the county commissioners had previously refused to agree that half of the proceeds of the bonds would be used for improving clay roads of the county." "Guilford County, North Carolina, Passes $2,000,000 Bond Issue," Good Roads 60 (Jan. 26, 1921): 42. In 1920, counties approved bonds in these southern states and amounts: South Carolina $11.7 million; Alabama $5.45 million; West Virginia about $5 million; Tennessee $2.5 million; Florida about $2 million; Kentucky $50,000. And in Louisiana, parishes issued road bonds totaling $14 million during 1918-1920. "Highway Development in the United States," Good Roads 60 (Jan. 26, 1921): 33-36, 40-41. By late 1920 in South Carolina, the depression "curtailed county income. Cotton, which sold for 40c a pound in 1919, plummeted to 11c in December 1920." John Hammond Moore, 57.

29 A problem in the federal program by early 1921 was that about one-third of the nation's states lacked state funds to match federal allotments for roads, said Thomas H. MacDonald, the federal program's chief. Efforts to raise state funds in "some of these have been limited, through constitutional inhibitions upon their power to raise revenues for internal improvements." Thus, they relied on counties or districts to match federal allotments, which had provided for "great progress," largely because of significant location of such districts or counties for road travel. Yet to develop road systems for states and the nation, construction "must go forward in the communities which can ill afford the luxury of main line highways no matter how badly they are needed," MacDonald said. "Only from state and federal funds can the development of such systems be assured." Thomas H. MacDonald, "Our National Highway Problems," Good Roads 60 (Feb. 16, 1921): 97-99, 105-06. In Louisiana's urbanizing Lake Charles area, Calcasieu Parish obtained authority for bonds up to $2.1 million by 1921 for work on its road system. Farm land under cultivation there was reported to have grown more than 60% in the previous two years. The parish planned 200 miles of paving, together with building a long bridge of concrete and steel at the lake. An account of the work cited local efforts to make Lake Charles a trade center in a growing agricultural region, not an intent to hire men in the depression, though the goals would be compatible in roadbuilding. The parish had increased its "cultivated farm area from eighty to one hundred and thirty-five thousand acres in the past two years, which acreage is exclusive of pasture lands." Houston (TX) Labor Review, June 4, 1921. Some county bond sales were initially transacted locally. Spartanburg County, South Carolina, in July 1921 sold $192,000 in road bonds to local banks instead of to four other bidders; the banks resold the bonds to a Chicago firm. Labor Review (Augusta, GA), July 9, 1921. In such urban counties, bond sales were frequent in South Carolina beginning in 1920, according to John Hammond Moore. Near Spartanburg, the upcountry counties of Greenville and Pickens became the state's first to connect county seats with an improved road, this one surfaced with topsoil. At two urban centers in the Midlands, voters of Sumter County approved bonds for $2.5 million, and those of Richland County for $2 million. Also that year, South Carolina's highway commission was considering ways it might issue bonds. With the growing interest in financing road work, "the year 1920 represents a turning point of sorts in the history of South Carolina highways," Moore argues. After activity in several urban areas, "soon other counties were climbing on the bandwagon." John Hammond Moore, 52. By late 1922, voters in several West Virginia counties authorized bond issues for paving; other bonds for paving were approved in some road districts in those counties. Engineering News-Record 89 (Nov. 23, 1922): 903. When South Carolina imposed a 2-cent gasoline tax in 1922, its revenue was to be divided equally between the state's general fund and the counties, based on their assessed value of property—adding an advantage for wealthier counties. Disparity of wealth among counties shows in South Carolina's payments of gasoline-tax revenues for a brief period, September to November in 1922, William L. Suttles notes. The five wealthiest counties received 35% of the total, the five poorest counties less than 4%. "The richest county received fourteen times as much as the poorest county." Suttles, 28. Changes in federal highway law in November 1921 included those requiring states to designate a system of up to 7 percent of its roads to be improved with federal aid and requiring that, within 3 years, states, not counties, control funds in the federal program.

30 "Alabama To Vote on Bond Issue," Good Roads 61 (Dec. 28, 1921): 296; "Alabama to Vote Again on $25,000,000 Road Bonds," Engineering News-Record 87 (Dec. 15, 1921): 996. Jefferson County (the Birmingham area), voters had favored state bonds in the referendum by 16 to 1. In the second vote, in January 1922, the county's voters supported the state bond question again and approved $3 million in county road bonds. The first referendum on issuing $25 million in state bonds was in February 1920. In the 1922 referendum, throughout the state "practically all cities and towns gave an overwhelming majority." Birmingham (AL) Age-Herald, Feb. 1, 1922. Columbiana (AL) Peoples Advocate, March 9, 1922. Urging Georgia to create a state fund, state highway board noted results state and federal aid could have in a small county thus relieved of duties of matching with local
funds. That condition, it seemed to indicate, would be unfair to the many larger counties who, under the earlier system, had built roads by taxing local wealth. If freed to use such county funds for other purposes and able to use convicts to build the roads, "the small counties would not only get Federal Aid roads, but will be paid to construct their own roads." Using convicts in a county would have allowed improvements while requiring less in new taxes in a depression. Yet several southern states' use of convict labor reduced the number of road jobs for wages created in a depression. Georgia State Highway Board, "Report, 1923," 1-8 in Georgia State Highway Department, Fifth Annual Report, January 1, 1923 (Atlanta, 1923), 2-3. In North Carolina, for example, forty convicts assigned to a construction contractor were crushing rock in mid-1921 at a quarry at Pinrose for road-building near Brevard. "Convicts Work on Roads in North Carolina," Good Roads 60 (June 8, 1921): 307. Wealthier counties had had advantages in road work even before the federal program; before 1916, such urban counties in Alabama as Montgomery, Mobile, and Jefferson had improved roads by issuing bonds. R. P. Boyd, "Outline History of State Highway Department from 1911 to 1922," 51-60 in Alabama State Highway Commission, Eleventh Annual Report, October 1, 1921, to October 1, 1922 (Montgomery, 1923), 51-52; Boyd, 55; Alabama State Highway Commission, Tenth Annual Report, 3; "What One State Highway Department Has To Do," Engineering News-Record 89 (Aug. 3, 1922): 178. Seven of the seventeen Georgia counties that had started no federal-aid construction by late 1922 were new counties. The seven new counties were Atkinson, Brantley, Lanier, Lamar, Long, Seminole, and Treutlen. Other counties in the group of seventeen were Berrien, Crawford, Crisp, Putnam, Jeff Davis, Johnson, Jones, Marion, Rockdale, Turner. They were to receive federal funds as soon as they requested them and could provide matching funds. Federal-aid projects had been completed in areas later included in forming Lamar and Seminole counties. Georgia State Highway Board, "Report, 1923," 2. In North Carolina, some earlier leaders of Good Roads efforts wanted to enact a state property tax pledged to repay the new bonds, yet many counties in 1921 already had high property taxes, besides large debt and small income. Thus, revenues from vehicle fees and a gasoline tax were pledged for the bonds. After the legislature adopted the plan in early 1921, roadbuilding began slowly while state highway officials organized for a large program and completed engineering plans. Borrowing started by June 1921 and, while interest rates declined, continued in fall. By spring 1922, contractors' crews were building an estimated million dollars a day of roads. By late 1922, bonds were issued for most of the authorized amount. The 1921-22 program for new roads and for construction at state institutions, Cecil Kenneth Brown argued in 1930, "did much to lift North Carolina back to prosperity." When the North Carolina road bill was introduced in the House, Gov. Cameron Morrison called also for large appropriations for construction and equipment at state colleges and other institutions. Opponents of such borrowing and spending were told that in a depression such activity would benefit the state. Republican and Democratic leaders supported the proposal, which legislators passed in February 1921 by wide margins. When the plan to issue bonds for roads and increase spending for construction at state institutions had been presented in 1921 in the legislature, "objectors were thundered down with loud assertions no better time could be found than depression for launching such a program. Instead of ruining the state, it would prove to be her salvation." Cecil Kenneth Brown, 105-07, 111, 113, 115. Brown, writing while economic depression spread in much of the nation in 1929 and 1930, considered the legislature's 1921 action helpful to the state, though caused partly by the postwar boom's acquainting people with large projects and high prices. "There was depression in North Carolina in industry and agriculture in 1921. Beyond doubt a better season for undertaking a vast program of building could not have been selected. The program did much to lift North Carolina back to prosperity. But there was no conscious choice of the time. Rather it was an accident that the great period of building" by the state "began in depression. In the preceding days of riot of profits and prices the movement gained its strength. Its momentum carried it over in spite of the depression in business. But however the timing came about, it was most fortunate." The measure passed in February by votes of 102 to 14 in the House and 32 to 6 in the Senate. And "popular approval was enthusiastic and widespread." A member of the state highway commission, W. A. McGirt, later said timing of the action and economic conditions was more than accidental. Ibid., 122-23.

31In 1920, South Carolina's legislature approved its first state tax for roads, yet it was a tax on property, and its revenues were retained by counties for building roads and bridges that the state would maintain. John Ham­mond Moore, 56-59, 48. For a long-distance route along the East Coast, several of the state's eastern counties in 1920 formed agencies combining efforts in building bridges, seeking to improve local economies' chances to prosper from the route. In 1920, eastern counties of Florence, Marion, Charleston, Dillon, and Berkeley formed Pee Dee Bridge Commission; nearby counties of Charleston, Berkeley, and Williamsburg formed Santee Bridge District. Similar cooperation by the state's urbanizing north-western counties, on a Richmond-Atlanta route,
improved their roads with funds from local bonds. Ibid., 49, 60-61. Other South Carolina counties jointly built large bridges, including one over the Savannah River, constructed by cooperating with Georgia. Suttles, 22.

Though a form of local government, the districts of Arkansas road work often were unresponsive to interests of many residents. In 1921 a new governor, Thomas C. McRae, objected to the road-district laws, though a ruling by the court upheld them. Federal officials had sent representatives to investigate roadbuilding in the state and recommended reducing taxes on farm land and making road districts responsible to a state agency. New York Times, March 26, March 28, and May 8, 1921; “Bureau of Public Roads To Investigate Arkansas Road Situation,” Good Roads 60 (April 6, 1921): 196, 201. The legislature reduced state funds for roads in 1921; after having raised them to $1.1 million in 1919 it cut them in 1921 to $800,000. R. Murray Havens, “History of Financing of Public Highways in Arkansas” (Master’s thesis, University of Kansas, 1933), 54. Before and after 1920, Arkansas attempted roadbuilding as managed directly by local interests and their representatives in the legislature. That method, using districts, led the legislature in 1919 to pass 133 acts creating road districts and 44 acts modifying existing ones. During 1913-20 the legislature passed 504 special acts on road districts, 312 of which created new districts and 192 amended earlier acts. Havens, 45-47. Problems with local road districts in Arkansas were apparent before 1920, yet with their designation as the roadbuilding agencies of the federal-aid program in the state “the inefficient and unwise road construction activities of the districts were greatly accelerated.” Havens, 43-44. Federal officials said in spring 1921 the state highway department lacked the capacity to manage as large a program as was planned in the state; of 133 projects considered from the districts, federal officials refused to approve engineering in 33. Havens, 61-62. Taxpayers opposed road work in several Arkansas districts, particularly in early 1921. A group in Craighead County asked road-district commissioners to suspend work, unsuccessfully sought their resignations, and filed a suit to stop the work; at a hearing on the case, some taxpayers entered the court, presented the commissioners with resignations, and waited with guns drawn until they signed. A leader of the Craighead County group, a relative of U.S. Sen. Thaddeus H. Caraway, was fined $500 and sentenced to six months in jail for contempt of court, though a proclamation by the governor relieved him of the fine and sentence. New York Times, March 28, 1921. In Yell County, taxpayers changed their district’s roadbuilding plans. Tax assessments were not published by a road district in Poinsett County, giving taxpayers no chance of appeal; taxpayers signed petitions and narrowly failed to get the district’s authorizing legislation repealed. About 1,000 people in Benton County, members of some 25 taxpayers’ groups, demanded a grand jury investigation of their area’s road work. Ibid. In Pulaski County, taxpayers formed a group to investigate roads, and a grand jury recommended removal of a road district’s commissioners. Ibid., April 2 and May 27, 1921. Road work continued in 1922, and farmers in June appealed to President Harding, saying further bond issues would require taxes that would mean confiscation of farms; Harding called for an investigation. New York Times, June 16, 1922. Arkansas road work was largest in 1921; miles of completed work totaled 615 in 1920, 2,246 in 1921, and 946 in 1922. Arkansas Department of State Lands, Highways and Improvements, Fifth Biennial Report, 61. Most funds for local road districts in Arkansas came from bonds, and by mid-1922 districts had sold $62 million in bonds, nearly all of which was debt on districts’ land. Ibid., 70-71.

In 1920, motor-vehicle fees produced in road revenues only $92,529 for South Carolina. Louisiana’s 1921 constitution permitted the start of using such revenues. The ten other states that created systems of vehicle fees that produced at least $500,000 each for roads that year. Those funds exceeded $1 million each in Georgia, North Carolina, Virginia, and West Virginia—four states whose combined amounts were more than 60% of the region’s total. The six southern states generating less than $1 million for road work in 1920 from motor-vehicle fees, were, in descending order, Kentucky, Mississippi, Alabama, Tennessee, Florida, Arkansas, South Carolina, and Louisiana. In the nation, only four states produced no funds for roads from their motor-vehicle fees in 1920. The largest amounts were $8.9 million for New York, $8 million for Pennsylvania, $7.2 million for Iowa, and $6.4 million for Ohio. The total for the 48 states was $77.5 million, for the South $10.5 million. The South, with 23% of the nation’s population and 12% of its 1919 motor-vehicle registrations, collected 14% of its total for motor-vehicle revenues for road work in 1920. “9,231,941 Motor Cars and Trucks Registered by the States in 1920,” Public Roads 3 (April 1921): 23; Census Bureau, Manufactures, 1919, 18; Agriculture Department, Yearbook 1920, 829. Before Louisiana’s convention, parishes had governed road construction and maintenance, and the few adequate roads were in wealthier parishes such as Orleans (the New Orleans area), Caddo (Shreveport), and East Baton Rouge (Baton Rouge). Allan P. Sindler, Huey Long’s Louisiana: State Politics, 1920-1932 (Baltimore: Johns Hopkins Press, 1956), 43-44. Decisions of 1921 on financing highways affected the political activities of Huey...
Long, according to Sindler, “The decision of the constitutional convention of 1921 to finance highway construction by pay-as-you-go taxation permitted Long to champion the politically more appealing policy of state bond issues” later. Ibid., 40. “Insofar as much of Huey Long’s [later] appeal lay in his vast program of road construction, the convention’s provisions on that topic took on particular significance.” Ibid., 43. “The year 1921 was a belated date to tackle the problem of the deplorable condition of Louisiana roads, and the capacity of the fiscal program advanced by the convention and by [Gov. John M.] Parker to satisfy Louisiana’s highway needs was questionable.” Ibid., 44. Long, who as member of the state Railroad Commission since 1918 had argued for state regulation of oil pipelines, was “embittered further” by Standard Oil’s attempt at the 1921 convention to remove him from the commission. On the new Public Service Commission created by the convention, Long “sought to develop a politically useful record” on rates, reopening in 1922 hearings on telephone rates, which ultimately were lowered, retroactive to 1920. He was active soon in lowering rates of a gas and electric company, Shreveport streetcars, and all interstate railroads. “By 1923, Huey Long was a personal force in state politics.” He placed “a poor third” running for governor at age 30 in 1924. Ibid., 46-48. Long was elected governor in 1928 with roads as part of his platform; when he took office the state had less than 150 miles of concrete or asphalt paving. Phil Patton notes. “By 1931 Long had built more than 2,000 miles of surfaced roads. The road program also turned into a relief program to ease the effects of the Depression. Louisiana employed 22,000 men on roadbuilding, more than any other state—Franklin Roosevelt’s New York was second—and two-thirds of the state budget was going to the program. Long’s program anticipated the roadbuilding projects of the Works Progress Administration,” Also, for Long roads were a source of political contributions from contractors, contracts for supporters, and patronage. Phil Patton, Open Road: A Celebration of the American Highway (New York: Simon and Schuster, 1986), 52-53. In late 1922, Mississippi voters approved an amendment establishing a system of highways under state control. Clarke, 293, 295. “The Mississippi State Highway Department has no jurisdiction over road work except federal aid projects,” according to a report in early 1921. “In 1920 the Legislature passed a law making available for road purposes about $500,000 a year from a motor vehicle tax.” “Highway Development in the United States,” Good Roads 60 (Jan. 26, 1921): 35. “9,231,941 Motor Cars and Trucks Registered by the States in 1920.” 22; “Allegheny County Bond Issues Heavily Defeated,” Good Roads 61 (Aug. 17, 1921): 1034; Clarke, 291; Henry R. Trumbower, “Motor Vehicle Fees and Gasoline Taxes,” Public Roads 5 (September 1924): 7. In Florida, the gasoline tax was expected in its first two years to raise about $1.2 million in revenue, which, with some $800,000 expected from a state property tax approved in 1921, could match federal allotments for roads. Florida’s other sources of revenue for roadbuilding included $3 million from motor-vehicle taxes, and a $700,000 balance in the motor-vehicle fund. “Road Funds in Florida” Good Roads 60 (June 22, 1921): 325. Adopting a gasoline tax provided a revenue base for Mississippi to use in modernizing its roads, according to Thomas D. Clarke. “It was evident from the outset that county-property levies could not even maintain decent short lengths of roads, let alone build them. The resort to the issuance of county bonds had only a limited and immediate significance.” Clarke, 291-92.

Despite their objections to the tax system, many farmers had opposed suggested changes in Tennessee tax laws, and “the agricultural slump that struck most of the nation in 1920 only enhanced this already considerable resentment,” according to David D. Lee. Though increasingly industrialized, Tennessee had kept relying on real estate as a tax base instead of taxing the personal property that had been growing in population centers. For owners of land in rural and urban areas, “by 1920, then, taxation was emerging as a major source of discontent across Tennessee.” Lee, 20, 7, 9. North Carolina ended state revenues from property tax in mid-1920, returning all revenues to local governments. In 1921, during debates over financing North Carolina roadbuilding, a leader of the earlier Good Roads movement opposed using property taxes for building state systems of roads, for, as Cecil Kenneth Brown states, he felt such a tax would give land owners “a right to continue to have a say in road matters,” unwanted because “land owners are distinctly local” in interests. Cecil Kenneth Brown, 97-98, 105-07. South Carolina in 1920 adopted a statewide property tax for revenue for local governments in building roads and bridges; the depression made payment difficult. John Hammond Moore, 56-59. 48. In west Tennessee, Hardeman County’s voters sought tax cuts in 1921 yet approved $200,000 in county bonds in April 1922 to have Lee Highway routed through their town of Bolivar. Bolivar (TN) Bulletin, Nov. 11, 1921, March 3, April 28, and May 5, 1922. Bolivar’s efforts for road work in a depression might support David D. Lee’s argument that rural areas and small towns, not the larger and richer cities, were the sources of Tennessee’s 1920s reforms for governmental efficiency and expanded services such as highways and schools. Lee suggests support for southern state governments’ 1920s changes for efficiency and expanded public services, which George B. Tindall attributes to urban “business progressives,” was, as in Tennessee, not chiefly from residents of large cities. Elsewhere in the South, “farmers rather
than urbanites may have been the driving forces behind 'business progressivism.'” Lee, 39. George B. Tindall, "Business Progressivism: Southern Politics in the Twenties," South Atlantic Quarterly 62 (1963): 96-102, quoted in David B. Lee, Turmoil in Tennessee, 39. Similarly, South Carolina's urban counties of the upcountry, early to improve their roads, opposed later efforts in 1920-22 to have the state aid other counties. Georgia's highway officials in 1920-22 noted poorer counties would benefit if state funds aided them more than counties who earlier had paid most of their roadbuilding costs. During 1922 in Tennessee, “the state's business organizations took an active role in that year's political battles, as the Chamber of Commerce and the Tennessee Manufacturers Association entered the fray under the banner of 'Good Government and Better Business.'” Ibid., 18. In the campaign for governor, supporters of Austin Peay, at a May meeting of farmers in his home county of Montgomery, endorsed his candidacy and adopted resolutions for easing farmers’ taxes, eliminating “waste” in state government, and abolishing “needless offices.” Robertson County's Democratic executive committee endorsed Peay and supported salary limits at the highway department and abolition of several other state agencies. Opening his campaign later in May, Peay called for staff cuts at state agencies and an investigation of the highway department. State government was larger than it had been twenty years earlier, he said, when it had spent “a pittance on schools and pensions, and nothing on roads.” Later, campaigning for the general election, Peay's opponent, Republican Alf Taylor, also sought to change taxes, reorganize the highway department, and consolidate state agencies. Though the Montgomery County resolution spoke on behalf of the county’s farmers, it was written by a resolutions committee of 18 and adopted unanimously. Bolivar (TN) Bulletin, June 23, 1922; see also Lee, 26-27. A Maury County farmers' meeting, which favored policies similar to those supported by the Montgomery County group, is mentioned in Lee, 26-27, who cites Columbia (TN) Daily-Herald, July 17, 1922. The Robertson group wanted highway department officials and employees put on salary and the department's expenses limited, yet in the rest of state government it favored abolishing three departments and five bureaus. Bolivar (TN) Bulletin, May 12, June 2, 1922; Lee 30-31. Like other states in the region, Tennessee had added agencies since the late 1800s, yielding by 1920 a frequently inefficient and "tangled system of bureaucracy." Lee notes. This had resulted because "as each new situation arose, the legislature established an agency to deal with it," sometimes duplicating functions of existing agencies. Ibid., 39. Though southern legislatures had delegated some duties to agencies for administration by experts, legislators themselves continued to participate in administration. And local wealth and political power continued to influence state government through legislatures. In Tennessee, for example, the creation in 1907 of a state agency to reassess property strengthened some rural legislators who, by allying with state tax agents, used reassessment as "an effective political club." Ibid., 8. In Tennessee "as in most Southern states, the General Assembly dominated the government. The legislature controlled appointments to most state offices and staffed executive departments with the henchmen of individual members. The loyalties of Tennessee bureaucrats thus ran to their patrons rather than to their nominal chief, the governor." Ibid., 38. In 1920-22 in South Carolina, Suttles notes, the new highway commission became a forum for legislators who recommended routes for highways in their areas instead of leaving the matter to the state agency's staff. “By the end of 1922 this process became so time consuming that the commission required all persons appearing before it to submit concise written statements in advance.” Suttles, 24-26. Still, from the 1890s to 1916 in administering roads in most states in the nation, “the general tendency was toward substitution of technical management for amateur supervision.” Dearing, 52.

Wage averages were high for some kinds of road work in the South in 1921. They were above the national average for concrete work and for graveling, though not for sand-clay construction, in a comparison of wages in the nation on some 12,000 miles of federal-aid road work completed by December 1921. “Cost of Highway Construction,” Good Roads 62 (April 26, 1922): 242-43. Average wages were low for parts of the South in figures for three scattered periods in 1922. For February work on federal-aid projects, common labor was cheaper in the South than elsewhere, though within the South averages were higher for states west of the Mississippi than for those to the east. Teamsters also were paid less on average that month in the South, particularly east of the Mississippi. Ibid., 242. Similarly, for June work, average wages for common labor or for teamsters were lowest in the South, particularly east of the Mississippi. “Labor Cheaper on Federal-Aid Projects,” Engineering News-Record 89 (Aug. 24, 1922): 335. Yet for August, common labor’s wages averaged higher in the Atlantic-coast states of the South than in much of the North, though in the rest of the South they were lower than in other regions. “Federal-Aid Roads Have Record Year,” Engineering News-Record 89 (Oct. 26, 1922): 725. Construction benefited also from low costs for hiring use of horses or mules. In early 1922, an account of a report by the Bureau of Public Roads of building conditions nationwide noted that “the prices of teams reported were in a great many instances as low as
the 1914 level,” though they were expected to rise with the start of the farming season. “Cost of Labor Favorable to Road-Building Program,” Engineering and Contracting 57 (April 5, 1922): 324.

36 Experiments with sand-clay roads in South Carolina were carried out in the 1890s, though “there was little new or unique about these efforts except more careful attention to drainage and grading.” Three men in Richland and Marion counties “later would claim to have invented this process of mixing sand, clay, and water so as to produce a remarkable road surface, something much better than anyone had seen in many years. By the turn of the century the U.S. Department of Agriculture was hailing South Carolina’s sand-clay highways as a model for the rest of the nation.” John Hammond Moore, 35. Data for kinds of federal-aid work completed or underway by June 1922 are from Agriculture Department, Report, 1922, 473-84.

37 Of the nation’s 1,761 miles of sand-clay surfacing completed with federal aid by July 1922, 75 percent was in the South. Georgia led the nation in sand-clay mileage by mid-1922, completing 488 miles. State totals for kinds of federal-aid work completed and under way by June 1922 are from Agriculture Department, Report, 1922, 477-78, 483-84. In projects of sand-clay surfacing, South Carolina by mid-1922 completed 319 miles, North Carolina 253, Alabama 195, and West Virginia 49. In projects of graveling, Arkansas completed 279 miles, Louisiana 267, and Mississippi 210. The bridge projects completed with federal aid by mid-1922 in the South totaled 16 miles, in Georgia 13.5 miles. Georgia’s bridge projects included “no less than 10 major structures from 1000 to 2300 ft. long across the large streams of middle and south Georgia.” Georgia State Highway Board, “Report.” 9. W. R. Neel, Georgia State Highway Engineer, “Report, January 1, 1923,” 9-17 in Georgia State Highway Department, Fifth Annual Report, January 1, 1923 (Atlanta, 1923). 9. Georgia’s federal-aid helped build 255 bridges from March 1919 to January 1922. Before World War I, most bridges in Georgia had been built by the 160 counties. “A few of the counties had learned the value of engineering work on the more important structures,” but most left such design work to bridge companies. Many bridges had been built near the water line, subject to flooding, and many were impermanent by postwar standards. Georgia’s primary road system in 1922 included 1,101 bridges built of wood, 254 of steel, and 38 of concrete. “What One State Highway Department Has To Do,” Engineering News-Record 89 (Aug. 3, 1922): 178.

38 Though most men worked at applying gravel or sand-clay surfacing in southern federal-aid projects, other kinds of work were available. They included applying bituminous macadam surfacing, where tar compounds helped seal packed stone surfaces; Tennessee had a third of the region’s total in work completed or under way by mid-1922 with federal aid. Men applied some water-bound macadam surfacing, particularly in Tennessee and Virginia. Grading and drainage work was done on slightly more miles of road than in the West, much less than in the Midwest or Plains regions. Southern governments, particularly in Georgia, used federal aid more often than usual to build bridges. They tried several kinds of paving—with macadam, concrete, or brick—much less often than governments in the North Atlantic or Midwest regions. Southern projects, complete or under way by mid-1922 with federal aid, were for applying sand-clay surfacing to 2,543 miles and graveling to 2,643 miles. Other projects applied bituminous macadam surfacing, in which tar compounds helped seal packed stone surfaces, on 785 miles in the region (particularly in Tennessee, for a nearly third of the total). Water-bound macadam surfacing was extended for 462 miles in the region, including more than 100 miles each in Tennessee and Virginia. Grading and drainage work in the region totaled 770 miles. States totals for sand-clay projects completed or under way by mid-1922 with federal aid included work on 828 miles in Georgia, 654 in South Carolina, 615 in North Carolina, and 274 in Alabama. Sand-clay work was done in smaller amounts in Virginia, West Virginia, and Florida. Gravel projects were extensive in federal-aid work in Louisiana (663 miles), Arkansas (651), Mississippi (471), Alabama (343), South Carolina (120), and Georgia (107). Projects to grade and drain roadbeds were for more than 200 miles in Kentucky and in Mississippi, and for 122 in West Virginia. For bridges completed or under way by July 1922 the South’s total, 28.6 miles, was 57% of the national total; Georgia’s part was 15.1 miles. The comparative costs of four main kinds of road work changed little in national averages during the depression. In cost of construction, concrete paving ranked first, ahead of bituminous macadam, then gravel, and grading-draining. That remained their relation 1920-22, though concrete and bituminous macadam dropped in cost in 1921-22. Thomas H. Mac-Donald, "An Economic Foundation for Future Highway Progress," Good Roads 62 (June 7, 1922): 312. Suttles, 33-34.
The South ranked fourth among the five regions in 1921 net income reported by individuals on federal tax returns. Regions’ income totals for 1921 were: North Atlantic $8.7 billion; Midwest $5.4 billion; West $1.77 billion; South $1.74 billion; and Plains $1.55 billion. The national total for the net incomes in 1921 was $19.3 billion, lower than the total of 1920 ($23.45 billion) or 1922 ($21.1 billion) yet higher than the total of 1919 ($19.6 billion). The totals understate net income, for they include only individual net incomes at levels of at least $1,000, the levels at which they were taxable. Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. The South’s total for cost of federal-aid projects completed by mid-1922 exceeded that of three other regions yet was far from matching the leading total, for the Midwest. The South’s total for those projects was 19 percent of that for the nation. Regions’ totals were: the Midwest $80.2 million; the South $46.2 million; the North Atlantic $44.8 million; the Plains $36.7 million; and the West $32.5 million. The national total for cost of federal-aid projects complete by mid-1922 was $240.6 million, which was 1.2 percent of the national total for 1921 income reported by individuals on federal tax returns. The cost of such completed projects in the federal-aid program included shares paid from federal, state, and local governments. The federal share of the projects was paid to states either as advances during work or reimbursement when the projects were completed and approved as meeting federal standards. For its completed projects, North Carolina received 13% of the federal aid paid in the South by July 1922. The eight southern states that received between $1 million and $2 million and their amounts are: South Carolina $1.85 million; Arkansas $1.7 million; Alabama $1.47 million; Mississippi $1.45 million; Louisiana $1.4 million; Virginia $1.3 million; Kentucky $1.2 million, and West Virginia $1.2 million. The smallest amounts were for two states—Tennessee $586,897 and Florida only $29,701. State totals for federal aid are from Agriculture Department, Report, 1922, 477-78, 483-84. Data on federal-aid road work completed or under way by mid-1922 are discussed in note 7 of chapter 1, page 231. The South’s total for the cost of federal-aid projects completed by July 1922 (representing matching of local, state, and federal funds) was $46 million. Most of that was for projects completed in the depression. Those funds for completed projects were added to southern economies by mid-1922. The allotments of federal funds were incentives that drew into construction projects large amounts of state and local funds. In every southern state, federal funds were matched more than equally. Indeed, in Arkansas, where the projects were under authority of new local districts and where for a while after May 1921 federal funds were stopped, the federal share was only one-third their cost. The largest single amount, 27% of the South’s total, was in Georgia, where completed federal-aid projects cost $12.5 million. In North Carolina, the completed federal-aid projects cost $5.7 million, in Arkansas $5.14 million. The region’s smallest amounts for such projects were in Tennessee (where they cost $1.24 million) and Florida ($69,466). Other state totals for cost of federal-aid projects completed by July 1922 were: South Carolina $3.95 million; Louisiana $3.17 million; Alabama $3.11 million; Mississippi $3.07 million; Kentucky $2.85 million; Virginia $2.69 million, and West Virginia $2.68 million. Federal funds paid 33% of the cost of federal-aid projects completed by mid-1922 in Arkansas. In the South’s eleven other states then, federal funds paid amounts that, in state totals, ranged from 42% to 48% of the cost of completed projects in which they were used. Ibid.

Georgia, which had led the region with federal-aid projects costing $12.5 million in work completed by July 1922, had such projects under way then that were approved to cost $8.2 million less. Yet in Tennessee, where
completed projects' costs of $1.24 million had exceeded only those of Florida in the region, work was under way on projects whose approved cost would raise the state's total by $11.1 million. In Georgia, the cost of federal-aid projects decreased for those under way in late June 1922 to 66% of those completed by then. State officials there said federal-aid work rapidly expanded in 1921, when counties matched federal funds, would have no state funds to provide matching in 1922. The costs in the other southern states increased, likely reflecting several factors: rising contract costs in anticipation of better economic conditions; increasing support for road work as farm produce prices improved; the approach of November 1922 elections, and further preparation of funds and plans for road work. States and their percentage increases are: Tennessee 89%; Virginia 175%; Kentucky 149%; Mississippi 98%; Alabama 93%; West Virginia 89%; Florida 84%; Louisiana 70%; North Carolina 30%; Arkansas 23%; and South Carolina 7%. The depression's low wages and prices in Georgia had encouraged much construction by 1922, reducing funds available for further work by the state highway department. The funds were expected to be less than half the amounts available the two previous years, according to Georgia's highway board. Still, the "decreased cost of labor and material" was extending the mileage of roads built in 1922. Officials of Georgia counties let most 1922 road contracts later than usual, in summer and fall, after the economy had begun to improve and near voting time in an election year. By late 1922, contract prices were increasing, together with costs of materials, said Georgia's highway engineer, and more men were finding work in jobs other than roadbuilding.

Georgia State Highway Board, "Report, 1922," 1-8 in Georgia State Highway Department, Fourth Annual Report, 1922 (Atlanta, 1922), 1; W. R. Neel in Georgia State Highway Department, Report, January 1, 1923, 73. For the nation's forty-eight states, cost rose from $240.6 million for federal-aid projects completed to $322.8 million for those under way. Costs of projects increased in the South from $46.2 million to $77.6 million and in the North Atlantic region from $44.8 million to $51.6 million. In the Plains, costs tripled, rising from $36.7 million to $98 million. They declined in two regions: in the West from $32.5 million to $25.5 million; and in the Midwest from $80.2 million to $69.8 million. Agriculture Department, Report, 1922, 473-83. As the economy improved, road officials, in letting more projects, also had a chance to contract for work before construction costs adjusted to the recovery. Higher prices may be part of higher project costs for projects under way yet contracted for in late 1921 or early 1922, though many projects completed represented prices of the boom of early 1920. Also, federal aid was providing a larger share of the match of funds; states and localities relied on it more and on their own funds less. In every southern state except West Virginia, the share of costs provided by federal funds increased in projects under way by July 1922, compared to its share in projects completed. And the share of federal funds increased (reducing the matching share of state and local funds) in thirty-two states for projects under way in July 1922, compared to the share in projects completed by then.

"The South's agriculture benefited by September from what the agriculture secretary called "the very substantial advance in the price of cotton." Yet with consumers paying higher prices, farmers' purchasing power in September was "about what it was in December, 1921, which was at the lowest point since the war." Henry C. Wallace, Report of the Secretary of Agriculture, For the Year Ending June 30, 1922 (Washington, 1922), 2-3. Cotton farmers produced a "fairly good" crop and got good prices in Arkansas in 1922. Arkansas State Bureau of Mines, Manufactures and Agriculture, Agricultural Arkansas, Biennial Report, 1923 (Little Rock, 1923), 11-12. Virginia farmers got better prices "for nearly all farm crops" than in 1921, bringing better returns particularly in "the cash crops, tobacco, wheat, cotton and fruits." Though 42 percent of Virginia's cultivated acreage was in corn in 1922, farmers had made a "large increase in the tobacco and cotton acreage." Virginia Department of Agriculture and Immigration, "Year Book, 1923," Bulletin No. 183 (Richmond, 1923), 103-05. Florida's lumber industry had lower expenses because trucks and better roads aided cutting and hauling, said officials in Hernando County. C. H. Freas, "Hernando County," 104-09 in Florida Department of Agriculture, Seventeenth Biennial Report, 1921-1922 (Tallahassee, [1923]), 108-09. Products of Hernando County included crates for packing fruits and vegetables, including tomatoes, which increased in Marion County from 215 railcar shipments in 1921 to 720 in 1922. In Marion County, where in 1922 "greatest development has been in the tomato crop," the "packing house facilities for handling the tomato crop here have been greatly enlarged this season." L. H. Chazal, secretary, Chamber of Commerce, "Marion County," 159-62 in Florida Department of Agriculture, Seventeenth Biennial Report, 1921-1922 (Tallahassee, [1923]), 161. Tourism had supported a quickly growing Miami since 1896, when Henry Flagler's Florida East Coast Railway entered the city. Paul S. George, ed., A Guide to the History of Florida (Westport, CT: Greenwood Press, 1989), 263. On the main route on the East Coast, the surface was "in good condition" on North Carolina roads. And between Camden and Columbia in South Carolina, "one of the really bad detours of the trip," requiring fording a stream, had been eliminated by "a new concrete and asphalt road." Rough
stretches on the route were occasional from east of Augusta, Georgia, to Florida, where sections included narrow brick lanes and well-kept asphalt roads. The trip showed "evidence of a vast amount of road work, especially in Virginia and the Carolinas." New York Times, Jan. 7, 1923, p. 10 (DX). The five southern states on the East Coast in 1920 had more autos per person and autos on higher percentages of their farms than other states in the region.

Chapter 4

1Indiana Farmer's Guide. May 7, 1921.


3All states in the nation formed highway departments by 1920, as required by the 1916 act establishing the federal-aid highway program. During the depression, Midwest states could direct federal-state roadbuilding with some of the nation's larger staffs, partly a result of pre-1920 development of the states' activities in road work. In the top one-third of U.S. states in staff size of state highway departments were Illinois (ranking 4th in the nation), Iowa (7th), and Michigan (9th)—each with more than 500 people. Others in the Midwest were Missouri (17th), Indiana (21st), Minnesota (22d), Wisconsin (25th), and Ohio (31st). The rankings are for size of administrative, engineering, and clerical staff. The totals were published in mid-1922. The average for the 46 states listed was 316 employees, a level exceeded in the Midwest except by Missouri, Indiana, Minnesota, and Ohio. Totals are from Arkansas Department of State Lands, Highways and Improvements. Fifth Biennial Report, 84. In how early they created a state highway agency, these Midwest states were in the top one-third in the nation: Ohio, Iowa, Illinois, Michigan, and Minnesota, each of which had an agency by 1906. Others created theirs soon afterward except Indiana, which formed its agency in 1917, the year it was required by U.S. law. Dearing, 54-55. The formula for allotting states the federal highway funds remained unchanged when Congress approved new funds Nov. 9, 1921. A federal official reported that "the three factors governing the distribution remain as before—area, population, and mileage of rural delivery and star routes." The net appropriation was divided into three parts, and each one-third was apportioned in the ratio which one of the three factors in each state bears to the total for the nation. "The Federal Highway Act." Public Roads 4 (December 1921): 17-18.

4Voters in 1876 in Woodbury County, at Sioux City, IA, selected road supervisors in 62 districts. Of the 20 townships, two had 1 road district; others ranged between 2 and 6 districts each. Sioux City (IA) Daily Journal, Nov. 10, 1876. Thompson, 75. In the depressed economy of 1875, a resident of Tama County in central Iowa seeking lower taxes complained that "scarcely a bridge petition was rejected" in 1874 by the county government. The county levied a one-mill bridge tax that year, and reportedly still had more than $10,000 in its bridge account by early 1875. The money already collected seemed to the resident enough "to build all bridges that may be called for" in the county in 1875. Letter from G. J. reprinted in Traer (IA) Clipper, Jan. 15, 1875. Some taxes could be paid in labor. Township trustees levied property taxes yearly for roads and bridges. The taxes were figured as amounts of money for each person on the township tax list, yet the trustees decided yearly what part of those taxes would be paid in labor and how much money they would allow for a day's labor. Apart from those property taxes, a poll tax required still other work. Code of Iowa, 1872 (Des Moines, 1873), Title VII, Section 969, 168; Ibid., Title VII, Section 983, 170; Ibid., Section 983, 171.

5Iowa Homestead, June 9, 1893; statement of Mr. Watts of Warren County to joint meeting of Iowa Road Improvement Association and Iowa State Agricultural Society, Jan. 12, 1893, 633-36 in Iowa State Agricultural Society, Report, 1892 (Des Moines, 1893), 633. The local independence attained in statute labor on roads in small districts complied with republican traditions more than did a proposed cash tax to hire men to be supervised by one person in the county, Mr. Watts argued. "It is in the hands of the people and the people are the government, and your move is in the direction of aristocracy and tyranny over the people." Watts seems to have been wary cash taxes could lead to bonds, obligating farmers for repayment. The proposal for a cash tax, he said, was not one supported by "the common farmers that are farming for a living, but a scheme on the part of the farmers who are farming for fun and in the interest of Wall street. They want to bond the county." Ibid., 634. Hal S. Barron traces farmers' opposition to bonds in the North Atlantic and Midwest regions to earlier debt in rural communities through "public and private investment in local railroads that either failed or never materialized." Barron, Mixed Harvest, 28. Many farmers across the North favored local control of roads because of ideology and from concern about costs. Ibid., 41. Barron argues that local control of roads was part of republican traditions of home-rule among
many farmers of the 1800s North, and that their objections to centralized state authority over roads were part of
opposition by some Midwest farm groups to early-1920s construction of hard-suraced roads. Hal S. Barron, “And
the Crooked Shall Be Made Straight: Public Road Administration and the Decline of Localism in the Rural North,

W. F. Clements, “Agency District,” 281-84 in Iowa State Agricultural Society, Annual Report, 1889 (Des
Moines, 1890), 283. Similarly, near Anamosa “the method of building roads has been improved by the use of road
graders, giving round surface and better drainage.” E. W. Gawley, “Anamosa District,” 286-88 in Iowa State Agri-
cultural Society, Annual Report, 1889 (Des Moines, 1890), 287. Iowa State Register (Des Moines), Jan. 13, 1893.
Hal Barron observes that the horse-drawn road scraper machine, marketed by 1879 and widely used in the North
Atlantic and Midwest regions in the 1880s, “improved roads without necessitating centralized administration or
higher taxes.” Barron, Mixed Harvest 26-27.

Iowa’s 1897 law on poor relief stated that “the relief may be in the form of food, rent or clothing, fuel and
lights, medical attendance, or in money, and shall not exceed two dollars per week for each person for whom relief
is thus furnished, exclusive of medical attendance.” Township trustees “may require any able-bodied person to
labor faithfully upon the streets or highways at the rate of five cents per hour in payment for and as a condition of
granting relief; said labor shall be performed under the direction of officers having charge of working streets and
highways.” Code of Iowa, 1897 (Des Moines, 1897), 783. Iowa’s poll tax continued to be paid in road labor, the
law in 1897 providing that “the road supervisor shall require all able-bodied male residents of his district, between
the ages of twenty-one and forty-five, to perform two days’ labor upon the roads, between the first days of April
and September of each year.” Ibid., 575. Further, “eight hours’ service for a man, or man and team, shall be required
for a day’s work; but except on extraordinary occasions no person shall be required to go more than three miles
from his place of residence to work” on the roads. Ibid., 572. In 1890 in towns and cities, vagrants could be sentenced
to work on streets. Acts and Resolutions passed at the Regular session of the Twenty-Third General Assembly
of the State of Iowa, Begun January 13, and ended April 15, 1890 (Des Moines, 1890), 68. To aid in road improve-
ment, convicts at Iowa’s prison at Anamosa by 1894 broke refuse stone from the state quarry into pebbles, avail-
able to counties for use in surfacing roads. Acts and Resolutions passed at the Regular session of the Twenty-Fifth
General Assembly of the State of Iowa, Begun January 8, and ended April 6, 1894 (Des Moines, 1894), 33-34.
With the funds from the state road tax in the early 1900s, Minnesota paid part of road projects in each county, the
share by 1913 varying by counties’ property values. Minnesota, Report of the State Highway Commission of
Roads and Taxes,” 222-32 in Proceedings of the Eighth Annual Conference on Highway Engineering Held at
University of Michigan, Feb. 13-17, 1922 (Ann Arbor: University of Michigan, 1922), 225-26, 222

The state plan paid one-third to one-fourth of a road’s cost, leaving local supporters to raise amounts for any
share not covered by a township. Ibid.: Frank F. Rogers, History of the Michigan State Highway Department,
1905-1933 (Lansing, MI: Franklin DeKleine Co., 1933), 77. Beginning in mid-1905, when Michigan’s State High-
way Department was organized, in four years “359 miles of road were built for state reward on which $254,126
was paid” by the state. Ibid., 95. Rogers suggests the traditional community obligation active in the statute labor
system may have led farmers to contribute cash for the new road from Battle Creek. “They really were ashamed
to be caught on the new road by their neighbors without having contributed, so in order to pacify their consciences,
for months” they stopped at the store to leave cash. Ibid., 78.


In the late 1800s, county convicts worked on roads in many parts of the nation, and the practice remained in
law beyond 1922 in every state except Rhode Island. In states of the North and West, most convicts worked inside
prisons, though increasingly honor inmates labored on roads and prison farms. Steiner and Brown, 3-4. Editors of
Cedar Rapids Republican, discussing a news item from Tipton (IA) Conservative on road work on North Iowa
Pike, quoted in “An Iowa County Makes Good Road,” Road-Maker 2 (November 1912): 10. The Tipton news-
paper, said the Cedar Rapids editors, had noted discussions there of how to use the county’s accumulating funds
from the automobile tax, then totaling $600. “This sum divided among the various road precincts will not be of
great help to any one of them,” it seemed to the Cedar Rapids editors. Thus, even new sources of tax revenue
developing in the 1900s were insufficient if spent in localities, though the funds might affect travel if matched by others and spent on a few routes. With its share of the new revenue from auto fees, Benton County paid part of a project for paving what was called then "the first concrete county road to be built in Iowa." Merchants from Vinton urged the county to pave a two-mile stretch of the road north of the town. "Vinton business men and farmers directly interested contributed $2,800 to the project, and the county paid $2,200 from the vehicle revenue. James Traer. "How Vinton, Iowa, Built a Concrete Road," Road-Maker 2 (October 1912): 4-5.

11 Secretary of Agriculture and Postmaster General, Joint Report of the Progress of Post-Road Improvements, 1913, 8-9. Non-employment of convict labor in federal public work had been required by an Executive Order of May 18, 1905. Opposition to initial provisions, requiring an 8-hour day and barring use of convicts, came from several locations. The states of Iowa, Alabama, and Oregon were the only ones that agreed to the initial provisions. The Post Road construction program, approved by Congress on Aug. 24, 1912, was intended in part to gather data for Congress to use in considering whether to form a larger, ongoing federal program. The 1912 legislation appropriated $500,000 for road projects, in which state or local governments were to provide double the amount of federal funds received. Initially, $10,000 was allocated for each state. Few states responded, a result federal officials attributed to small amounts allocated, lack of provisions in states' laws permitting joint construction with the federal government, or lack of interest in working under federal supervision. Thus, the postmaster general and the agriculture secretary selected a few projects for study. Methods of handling funds and supervising work in the program varied often to meet conditions of local laws, requiring, they said, more uniformity through actions of states. They contended that, despite correspondence and comments by local officials objecting to federal control of spending the joint funds, "every effort should be made to draw local funds within the range of skilled supervision by the Federal Government." For data, the federal Office of Public Roads studied in detail four projects on post roads. One of those was a midwestern project in Boone and Story counties in Iowa; others were in Alabama, Mississippi, and Maine. Ibid., 3-4, 8-9, 10, 13. Other projects began besides those studied. In December 1913, Dubuque County in Iowa approved $60,000 for improving 25 miles of the Hawkeye highway in the county; the federal government was expected to provide $30,000 to match the funds. Sioux City (IA) Journal, Dec. 12, 1913. Gathering information and proposing a general solution to a problem had been familiar among Progressives. In similar terms, Logan Waller Page, chief of the federal Office of Public Roads, described the new federal program. "As a result of the experiments about to be conducted, the government may enter upon a systematic campaign of aiding the good roads movement throughout the country." In that, it would seek to aid in rural delivery of mail and in travel of farmers to get produce to market, he said. Fairfield (IA) Daily Journal, Aug. 31, 1912. Later, in a larger program Congress would approve in 1916, convicts were used increasingly in roadbuilding amid wartime and postwar labor shortages.

12 MacDonald suggested that road work by the districts and a plan for matching state funds could speed improvements. "The drainage law where honestly and efficiently applied in this state has produced good results. Drainage is probably more of a private enterprise than road improvement. A law which would provide for the building of roads in a manner similar to the method under which drainage districts are established, but providing also for a considerable percentage of the cost to be paid by the public, would alter a fair trial doubtless become popular." A community seeking a better road could form the district and petition county government to build "a permanent road." If the road met standards of the state highway department, he said, it could be paid for by matching funds from the district, the county, and the state, each paying one-third. "The principle of state aid has become so well established, especially in the east, that about one-seventh of the total road expenditures of 1911 in the United States was state aid money." State aid meant that much roadbuilding "was made under expert engineering advice and supervision furnished by the state." Thomas H. MacDonald, state highway engineer of Iowa, "Road Improvement and Automobile Tax," Road-Maker 2 (November 1912): 4. By 1920-22, MacDonald was chief of the U.S. Bureau of Public Roads, directing the federal-aid road program. Though farmers earlier had drained land by making ditches, in Illinois in the 1880s they found that "tiling rewarded the investment" and began laying much drainage tile in the black-earth counties; many Iowa farmers soon did so. "Cheap labor and falling interest rates helped speed the tasks." Owner-operators benefited more than tenants or farm laborers who sought ownership. Land obtained at $1.25 an acre in central Illinois or eastern Iowa by the 1840s was worth $40 to $60 an acre or more by the 1880s and 1890s. "The cost of drainage alone could add from $5 to $20 to the farmer's investment in his acres." Tenancy increased in both states in the late 1800s. Allan G. Bogue, From Prairie to Corn Belt: Farming on the Illinois and Iowa Prairies in the Nineteenth Century (Ames: Iowa State University Press, 1994, University
of Chicago Press, 1963), 285-87. Michigan, State Highway Commissioner, Ninth Biennial Report, 11-12. Similar local districts with taxing authority were used by the early 1900s in the West for building and operating projects for irrigation. The example of drainage districts was familiar to many midwestern farmers who had used them, relying on income from a profitable agriculture that also offered chances to recoup improvement costs when selling the land. Yet also, districts' drainage projects often used bonds for financing, obligating affected farmers to taxes that could not be cut in a depression. Iowa raised its vehicle fees in 1919, quickly producing more funds for primary roads than were being spent. The fees, collected from throughout the state generally, were growing much faster than local taxes on land as a source of road revenue. Urban counties, paying large amounts in vehicle fees though receiving revenue from the fees only by county totals for land area, contributed to other counties' road programs. Nearly 100 cities and towns petitioned Iowa's legislature in early 1921 for a share of the fee revenues being divided among counties. Farm Bureaus in some populous counties, according to a Dubuque newspaper, advocated making federal-state road allotments, which included funds from the fees, by population and area instead of just by area, a custom which Farm Bureaus in less-populous counties favored continuing. Des Moines Register, Jan. 18, 1921; Dubuque Telegraph-Herald, Dec. 15, 1921.

13 Minnesota. Report of the State Highway Commission for 1912-1913, 6; Minnesota, Report of the State Highway Commission of Minnesota, 1915-1916 (St. Paul, 1917), 11-12. In 1920, four contiguous states in the Midwest led the nation's others in share of area in improved farm land; the proportions rose westward from Ohio's 71 percent to Iowa's 80 percent. Farmers also were using much of Missouri, of whose area 56% was in improved land in farms. For Michigan, Minnesota, and Wisconsin, the proportions averaged 38 percent of area. Census Bureau, Census, 1920, vol. 5, Agriculture, 34-35. Profitable agriculture that led to development of farming in the Ohio-Iowa belt steadily increased the value of land for many farmers there, even before wartime prosperity. In Iowa, for example, "values had risen an average of almost $6 an acre a year, with the farm of 1914 worth almost three times its value in 1900." William G. Murray, "Iowa Land Values—1803-1967," Palimpsest 48 (October 1967): 441-504, p. 461. Also, in the Ohio-Iowa belt, despite growing urban areas, many people were available to keep farms operating and rural areas populated. Its four states led the region in rates of farm tenancy, a practice whose conditions here allowed tenants more profit and more independence in the economy and politics than those of the South. Farms operated by tenants in 1920 were 43% of all farms in Illinois, 42% in Iowa, 32% in Indiana, 30% in Ohio, 29% in Missouri, and 25% in Minnesota. At lower levels were Michigan (18%) and Wisconsin (14%). In the South, tenancy rates exceeded 60% in South Carolina, Mississippi, and Georgia; they exceeded 50% in Alabama, Louisiana, and Arkansas. Ibid., 132. In much of the Midwest, many people farming using considerable credit, machinery, and valuable land—items whose costs would remain amid postwar declines in farm-produce prices. Each of the eight Midwest states in 1920, as in 1910, ranked in the top one-third of states in value of farm implements and machinery. Census Bureau, Abstract of the Census, 1920, 600. Many farms raised corn, livestock, or fruit for sale locally and for shipment to distant markets by railroad. On the black, level lands of central Ohio, Indiana, Illinois, and Iowa, corn and livestock were principal farm products. Soil considered less-adaptable to growing corn was used in southern counties of those states for apple and peach orchards. Much of the produce of those areas was for rail shipment, though scattered farms in the states produced for markets in nearby cities and towns. Laurenz Greene, horticulturist of Lafayette, IN, "The Fruit Growing Industry of Illinois and Indiana," speech before joint session of Iowa State Horticultural Society and American Pomological Society, Nov. 15-17, 1922, at Council Bluffs, Iowa, 143-47 in Transactions of the Iowa State Horticultural Society, 1922 (Des Moines, [1922]), 143-44. In several areas near the Great Lakes, fruit growing had developed by the early 1900s. They included by 1870 southwestern Michigan (amid development of nearby urban areas), by 1880 northern Michigan (where fruit trees were planted to reclaim cutover timberland), and by 1920 the Door Peninsula of Wisconsin. Harvest laborers often included people from nearby urban areas' immigrant populations, who responded to advertisements and traveled by excellent boat and rail connections. Amid wartime labor shortages of 1918, workers were imported and boarded or lived in specially built camps, and "one orchard company used workers from the Oneida Reservation west of Green Bay." With climate tempered by these lakes, these areas became "islands of variation in the nation's hay and dairying region." Michigan ranked sixth in the nation in orchard products in 1899. Margaret Beattie Bogue, "The Lake and the Fruit: The Making of Three Farm-Type Areas," Agricultural History 59 (1985): 494-95, 510-11.

14 Seven of the Midwest's states ranked in the top third among the nation's states in 1904 in mileage of rural roads with surfacing of various kinds. The eighth, Iowa, ranked in the top half. The rankings are by state totals for
road improvements, including work of states and their localities. Comparisons are for total mileage of all rural roads surfaced, whether by macadam, bituminous macadam, gravel, sand-clay, brick, Portland cement concrete, or miscellaneous other materials. Midwestern states, particularly Indiana and Ohio, kept their lead of 1904 in tabulations in 1909 and 1914 by surfacing other miles of rural roads. Totals for 1904, 1909, and 1914 are from Anderson, 20. Obtaining federal aid in roadbuilding was of interest to an Ohio official in 1905. "If the much discussed proposition that the Federal government shall make appropriations to aid the states in road building should be realized," said Sam Houston, Ohio's highway commissioner, the funds could reduce counties' matching share in the state's road program, easing objections to the state plan. Report by Sam Houston, Ohio highway commissioner, to Ohio Gov. M. T. Herrick in 1905, quoted in Ohio Department of Highways, Report, 1917-1928 (Columbus, 1928), 36-37. On a road that seemed narrow for postwar use, Illinois officials approved work in 1922. A caption described the work as a "method of widening an old 10 foot pavement to accommodate two lines of traffic" east of Pittsfield, a project on a state Bond Issue road being done by state day labor forces. A photo of the work showed a truck with solid rubber tires unloading concrete to add a paved stretch to widen the road. Illinois Department of Public Works and Buildings, Division of Highways, Fifth Annual Report, Jan. 1, 1922 to Dec. 31, 1922 (Springfield, 1923), 30. By 1920, autos were on 73% of Iowa farms. They were on 57% in Minnesota and 53% in Illinois. The only midwestern states with autos on fewer than 45% of farms were Michigan (40%) and Missouri (31%). States' totals for autos on farms, 1920, are from Census Bureau, Census, 1920, vol. 6, Agriculture, Pt. 1. 50. Partly from rural use of autos, Iowa led the nation in ratio of ownership—an auto for every 6 people. Four states-- Minnesota, Ohio, Michigan, and Wisconsin— each had autos at levels of at least one for every 11 people. The ownership ratio was one auto per 13 people in Indiana and, raised by large urban population, in Illinois. At one per 14, Missouri ranked eighth in the region and midway among the forty-eight states. Traffic recently had grown most in Iowa and Missouri; in both, autos registered in 1918 increased by 30% in 1919's good economy for agriculture and industry. Also, the five states from Ohio to Missouri and Iowa were in the top one-third of 48 states in 1919 mileage of rural roads per square mile of state area. Agriculture Department, Yearbook 1920, 829. In Ohio, owners registered 511,000 motor vehicles in 1919, ranking second to New York among the forty-eight states. The other midwestern states also ranked in the top third of the nation. Illinois had the region's second largest total, 478,438 vehicles. Levels of Ohio or Illinois were about twice those of Minnesota, Missouri, or Wisconsin. Between them were Iowa (364,043 vehicles) and Michigan (325,813). Though Indiana had the Midwest's fewest, 227,000 vehicles, it ranked ahead of thirty-four states in other regions. Ibid. Many large centers of manufacturing and commerce had formed in the Midwest by 1920. Of seventy-seven U.S. cities with largest values in 1919 for manufactured products, nearly one-third were in the Midwest. The region's twenty-five such cities were mostly in its eastern states, though others were scattered elsewhere in the Midwest. Nine of the cities were in Ohio, five in Michigan. Three were in Wisconsin, two each in Minnesota and Missouri, and Indiana and Iowa each had one. Illinois had only one, yet Chicago ranked second in the nation in 1919 value of products. Among the 77 U.S. cities ranked by 1919 value of products, Chicago ranked 2d with products valued at $3.6 billion; Detroit 4th at $1.2 billion; Cleveland 5th at $1 billion; St. Louis 6th at $871 million; Milwaukee 12th at $576 million; Akron 13th; Cincinnati 14th; Minneapolis 15th; Kansas City, KS, 16th; Indianapolis 19th; Toledo, OH, 21st; Flint, MI, 24th; Youngstown, OH, 28th; Kansas City, MO, 38th; Columbus, OH, 39th; Dayton, OH, 42d; Sioux City, IA, 48th. Also in the group were Canton, OH, ranked at 60th; Racine, WI, 63d; Lorain, OH, 68th; Grand Rapids, MI, 70th; Pontiac, MI, 73d; Lansing, MI, 74th, and Kenosha, WI, 75th. The 77 cities listed each had 1919 values of products exceeding $100 million. Most of the 52 non-Midwest cities listed were in the Northeast. Census Bureau, Manufactures, 1919, 19. Ohio had the nation's third-largest number of wage earners in 1919, and all other midwestern states ranked among the nation's top 12, except for Minnesota and Iowa, both ranking in the middle third of states. Similarly, in 1919 value of manufactured products, Illinois ranked third in the nation, and the rest of the region except Minnesota and Iowa ranked among the top 12 states. Ibid., 18.

Four states—Ohio, Michigan, Indiana, and Illinois—were at least 50 percent urban. Settlement was sparse in northern areas of Michigan, Wisconsin, and Minnesota. Census Bureau, Abstract of the Census, 1920, 75; Census Bureau, Manufactures, 1919, 18. Midwestern population was greatest in states east of the Mississippi River, though Missouri ranked ninth in the nation. Largely because of urban centers, state totals for population per square mile were much higher in Ohio (141 people) and Illinois (116) than in Indiana (81), where it was higher than in the remaining midwestern states. The comment on the change from required work on roads as a way of paying taxes to having a job in a depression because of expanding road-construction programs is from Waterloo (IA) Times.
Tribune. Feb. 10, 1922. An era of developing the nation’s railroads had been followed by one of work on its roads, it said.

16 Internal Revenue, Statistics of Income, 1920, 22-23; Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Totals for states are for individuals in calendar years, for net incomes of $1,000 and over. Individuals with lower income were not required to file federal returns. Many people usually made less. Though they need not have filed tax returns, they were affected no less by the economic trends. Some indication of the number of people making lower incomes emerges from dividing states’ totals by their 1920 population. Those totals, of per-capita taxable income, alter states’ rankings among each other, though not the percentage change yearly within a state. For 1920, Illinois, Iowa, Ohio, and Michigan rank in the top one-third of states, once population is balanced against incomes at taxable levels. The other midwestern states rank in the middle one-third of the nation’s states. With population slightly larger than the South’s and smaller than the North Atlantic region’s, the Midwest had per-capita taxable incomes well above every southern state, helping support auto purchases and roadbuilding in 1920 and later. In Illinois, a large population, much of it urban, yields per-capita taxable income of $283 for 1920. Iowa’s much smaller population yields a per-capita taxable income for 1920 of $263, ranking second in the region. Other 1920 values in the region were: Ohio and Michigan, $244 each; Minnesota and Indiana, $190 each; Wisconsin, $166; and Missouri, $161.

17 Ohio ranked fourth in the nation in totals from the federal returns 1918, fifth in 1919 and 1920, and sixth in 1921 and 1922. Michigan, ninth in 1918, was eighth during 1919-1922. In 1921, income declined in Illinois less than 1%, in Missouri by 8%, and in Wisconsin by 13%. In Iowa, the postwar boom buoyed many incomes before produce prices fell. The state’s total of taxable incomes peaked in 1920 and fell to half that value for 1921. Ibid. An Iowa newspaper editor in early 1922 reminded readers to check about filing tax forms on 1921 income, despite conditions in the region. “In the middle west it looks like the man who will pay an income tax this year will be a man of distinction.” Editorial of Correctionville (IA) News, reprinted in Sioux City (IA) Journal, Feb. 2, 1922.

18 For Illinois, the 1922 total was 5% above that of 1920. Missouri’s total was 4% less than 1920, Wisconsin’s 8% less, Michigan’s 11% less. The 1922 income totals for Minnesota and Indiana were each 23% below 1920 income levels, and for Ohio, 20% below 1920. Iowa’s total was down from that of 1920 by 43%.

19 Census Bureau, Manufactures, 1919, 18. Iowa’s decline was greater than for many midwestern rural areas in the period because of the state’s pre-depression prosperity. Its largely rural economy ranked eighth in the nation in net income for 1918, according to individual tax forms. That surpassed several states with more industry or larger size. Iowa ranked tenth in the nation in totals for individuals’ net income in 1919 and 1920, sixteenth in 1921, and fifteenth in 1922. Internal Revenue, Statistics of Income, 1920, 22-23; Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Though corn was among the top three crops in 1919 value in every midwestern state, wheat also was among the top three in Ohio, Indiana, Illinois, Minnesota, and Missouri. Hay and forage was among the top three in all, reflecting continued use of animals on the region’s farms as well as operations raising cattle and horses. Various perishable foods were produced under the region’s growing and shipping conditions; potatoes ranked third in value in Michigan and Wisconsin. Census Bureau, Census, 1920, vol. 5, Agriculture, 705-06. Changes for many midwestern rural areas likely resembled those in Iowa. There, with the region’s lowest value for 1919 production of manufactured goods, the economy’s trends affected most people through farming.

20 The Midwest’s 1920 wheat harvest included “a large number of factory hands,” particularly from auto plants, whose “chance to make money in the harvest came just when they lost their employment” in industries, according to Don D. Lescroher, Harvest Labor Problems in the Wheat Belt, Agriculture Department Bulletin No. 1020 (Washington, April 1922), 16, 14, 10-11, 14. 24. Harvesters were estimated at 150,000 to 200,000 men. Iowa wheat offered harvest work usually from late June into August. Ibid., 6-8, 14-19, 24. Threshers and crews were expected in August also in North Dakota. “With the Kansas harvest practically finished and much wheat threshed in Nebraska, thousands of men following threshing machines are expected to come into North Dakota to finish the

21 Auto plants during the war had hired often from among whites from the Midwest, blacks from the central South, Canadians, and women. In 1910-20, many such people came to auto centers from farming or mining areas of the Midwest; many were single young men who retained ties with families on farms and in towns. Bernstein, 52, 55, 70-71. In Cleveland, OH, rural southerners arriving during the war raised its black population, slightly over 8,000 in 1910 and more than 34,000 in 1920. Thomas F. Campbell, “Mounting Crisis and Reform: Cleveland’s Political Development,” 298-324 in Thomas F. Campbell and Edward M. Miggins, eds., The Birth of Modern Cleveland, 1865-1930 (Cleveland: Western Reserve Historical Society, 1988), 315-16. At Columbus, Ohio, women sometimes hired cooks and maids from outside the state, apparently before they arrived. In one such case, at the city’s Union Station “a girl arrived from Blaine, Ky,” who “had come to Columbus to a well know women for housework.” She waited for her employer at the station’s Travelers’ Aid desk. Columbus (OH) Dispatch, Dec. 12, 1921. National Labor Journal (Pittsburgh), Nov. 19, 1920. Postwar prices for farm goods fell in the U.S. as European farmers returned to production and the federal government stopped its wartime program of supporting wheat prices, according to John D. Hicks. Farmers’ borrowing for land or improvements in the war and boom produced, in the depression, many bankruptcies and foreclosures, so that some 453,000 farmers lost their land.

“The boom had turned into the worst agricultural depression the nation had ever known.” American farms and businesses had expanded in the war, and they met higher interest rates from the Federal Reserve Board in 1919 and 1920 and the close of federal policy offering foreign loans for reconstruction in early 1920. Industry cut production in the brief depression and soon recovered; farmers continued to produce for lower prices for the next two decades. John D. Hicks, Republican Ascendancy, 1921-1933 (New York: Harper & Row, 1960), 18-22. In Peoria, IL, the unemployed were estimated at 5,000 men by November. Auto Worker (Chicago), December 1920. The U.S. auto industry was affected early in depressions, according to Lloyd M. Bailer, because purchase of its product, a large durable item, could be postponed during periods of unemployment. Lloyd M. Bailer, “Negro Labor In the Automobile Industry,” (Ph.D. dissertation, University of Michigan, 1943), 17. Blacks had worked in the North since the 1870s in Pittsburgh’s iron and steel production, the 1880s in the Ohio-Pennsylvania coal district’s mines, the 1880s and increasingly in the 1890s in meatpacking plants at Chicago. Often they were imported as strike-breakers, jobless after strike settlements. Black employment in “automobile manufacturing resulted primarily from the general labor shortage prevailing during World War I and the immediate post-war period.” Amid labor shortage while immigration was barred in wartime, many industries offered high wages, and thousands of southerners, blacks and whites, moved north. Detroit had 5,471 black residents in 1910, 40,838 in 1920. Bailer, 26-29, 34. In the war, both auto use and the auto industry changed, Irving Bernstein argues. “Before the war the automobile had been an exotic, undependable, expensive contraption; at its conclusion the automobile had become a vital part of America’s economic and social life within the means of a large share of the people. In the period 1914-1920, capital investment in the industry trebled, production quadrupled, employment in the industry trebled, and automobile registrations increased almost six times. The great expansion of the national income in the war period gave the American people the means with which to purchase the growing numbers of cars produced.” And “the fundamental act in highway policy,” the measure authorizing the federal-aid road program, was approved in 1916. Bernstein, 63. As automobile production centers, “the one-industry character of cities like Detroit, Flint, Toledo, and Akron made them particularly vulnerable when the depression struck” in 1920. Bernstein, 55.

22 St. Louis Post-Dispatch, Oct. 24, Oct. 30, 1920. General Motors’ workforce at St. Louis of 3,000 in March 1920 declined to 1,400 by October, then to 700 later that month. Ibid. Civic and political groups held a late-October parade in St. Louis just before Missouri voters considered authorizing $60 million in road bonds. The parade, though, promoted “Good Roads,” of benefit to rural and commercial groups, instead of emphasizing jobs the bonds would support. The parade for roads was sponsored by St. Louis city and county units of the state Good Roads Federation. “It was participated in by women’s, civic, religious and political organizations, by St. Louis posts of the American Legion, Boy Scouts and other organizations devoted to some phase of public welfare.” Ibid., Oct. 31, 1920. Urban voters approved the road bonds by large margins in St. Louis and Kansas City. Rural Nodaway and Sullivan counties were among those opposing the bonds, “because the farmers’ clubs up there fought against it,” said Raymond Walsh, St. Louis headquarters manager of the Federated Roads Council of Missouri. Ibid., Nov. 4, 1920. In Indiana, the Blackford County Farmers’ Association on Dec. 11 “passed a resolution calling upon the Legislature, at its next session, to repeal the State Highway Commission Law. The
farmers feel that the benefits derived from the present law are not commensurate with the benefits that could be derived if the money were placed in the county road repair fund. The resolution also asks the abolishment of the office of county road superintendent, stating that the duties of this office could be taken over by the county commissioners." "Indiana Farmers Ask Repeal of Road Law," Good Roads 60 (Jan. 12, 1921): 17. Early-1900s advocates of Good Roads had emphasized benefits to farmers and rural communities. Autos then were scarce, road authority was often in counties or smaller districts, and taxes to improve roads came mostly from land. States in the Midwest and elsewhere enacted some state taxes to aid localities in road-work costs. Yet after World War I, when traffic was heaver and auto ownership spreading, road advocates could more easily note benefits for rural and urban residents. After the war, road funds in the nation increasingly came from the general population—from local and state bonds, state taxes on autos and gasoline, and federal funds. Still, some road funds continued to come from taxes on farmland in many places.

23 Labor World (Duluth, MN). Oct 30, 1920. Labor groups also supported other ballot items in November 1920. Voters approved bonds for roadbuilding then in Minnesota ($75 million), Missouri ($60 million), West Virginia ($50 million), Virginia ($50 million), Kansas ($60 million), Colorado ($55 million), and Idaho ($2 million). Voters defeated road bond measures in Florida ($20 million), Washington ($30 million), and Montana ($15 million). "The National Election and the Highways," Concrete Highway Magazine 4 (December 1920): 206-07. Public works to hire the jobless were advocated in late 1920 by the Duluth Herald. They were supported also by the pro-Communist Truth (Duluth, MN), which praised the Soviet Bolsheviks for beginning public works and nationalizing industries to reduce unemployment. Truth claimed hiring the jobless through public works was "sheer Bolshevism," omitting notice of similar practices among governments of other European nations before 1919 and among urban governments in the United States since the mid-1800s. Truth (Duluth, MN), Dec. 31, 1920. St Louis County extended from Duluth north for about 110 miles to the Canadian border. "Largest County Bond Issue," Public Roads 2 (July 1919): 7.

24 Despite new federal and state sources of road funds by 1920 that reduced the share contributed locally, land continued to be taxed for nearby road construction in many parts of the nation, including Wisconsin, where in late December 1919 officials of the county surrounding Racine held a hearing on the 1920 special assessment for the program of roadbuilding recently approved by local voters. The officials, a labor newspaper reported, listened to "various parties of the county as to rates to be fixed, some of those whose land would be benefited complaining that the tax voted on them was too high. There was considerable wrangling and charges of partiality" before agreement. Labor Advocate (Racine, WI), Jan. 22, 1920, Aug. 21, 1919. Local relief in depressions had been tied to street work, voluntary or required, in many cities since the 1800s. In Ohio during the depression of the 1870s, for example, the city of "Cleveland required people on public welfare to work on street repairs or be sent to the workhouse." Edward M. Miggins, "A City of 'Uplifting Influences': From 'Sweet Charity' to Modern Social Welfare and Philanthropy," 141-71 in Thomas F. Campbell and Edward M. Miggins, eds., The Birth of Modern Cleveland, 1865-1930 (Cleveland: Western Reserve Historical Society, 1988), 151. Congress approved $200 million in new funds, for roadbuilding and for thus employing men expected to be jobless as the nation's economy converted from war to peacetime, in a bill signed by President Wilson Feb. 28, 1919. In the House, the bill was supported by 155 Democrats, 109 Republicans, a Socialist from the Northeast, and a representative each of the Farmer-Labor Party and the Nonpartisan League, both of whom were from the Midwest. 65th Congress, 3d sess., Congressional Record (Feb. 19, 1919), vol. 57, pt. 4, 3789-90. Federal funds were to be matched equally by funds from states.

25 Expecting a slowing postwar economy, Minnesota had planned expanded road work in 1919 "in order to take care of a probable over-supply of labor," state highway officials said. "Arrangements were made with all of the counties to carry unusually large projects." Yet when the 1919 building season opened, fewer men than expected sought road work, and equipment and materials often were unobtainable using congested railroads. Minnesota, Report of the State Highway Commission of Minnesota, 1918 and 1919 (St. Paul, 1920), 1. Michigan, State Highway Commissioner, Ninth Biennial Report, 8. Scarce labor in Illinois in the last half of 1920 raised wages in road work and, together with high prices for equipment and material, reduced road construction. Illinois Department of Public Works and Buildings, Division of Highways, Fourth Annual Report, July 1, 1920 to Dec. 31, 1921 (Springfield, Ill., 1922), 21. The land boom's effect on farmers in Iowa and Minnesota is discussed in W. G. Murray and Willard O. Brown, "Farm Land and Debt Situation in Iowa, 1935," Iowa Agricultural Experiment
Station Bulletin 328 (1935), 16-17; and E. C. Johnson, "Farm Mortgage Foreclosures in Minnesota." Minnesota Agricultural Experiment Station Bulletin 293 (1932). Both are cited in Wayne Bitting, "Farm Foreclosures in Southern Iowa from 1915 to 1936 in Relation to Land Values, Type of Mortgage Holder, and Soil Erosion" (M.S. thesis, Iowa State College, Ames, Iowa, 1937). Seeking to protect wages and jobs of union members, Samuel Gompers, American Federation of Labor president, during the war reluctantly accepted allowing Mexicans to enter the U.S., and in the postwar depression called for union affiliates to force Mexicans to become citizens to remain in the unions, though few unions took that step. Lawrence A. Cardoso, Mexican Emigration to the United States, 1897-1931 (Tucson: University of Arizona Press, 1980), 134-35. 97. The city council in Highland Park also voted to stop hiring unmarried women until economic conditions improved. New York Times, Oct. 12, 1921.

26Ohio Farmer, Feb. 19, 1921. In Ohio, the price for corn on Jan. 1, 1921, was 41 cents a bushel; a year earlier it had been 68 cents. Ohio Department of Agriculture, Crop Summary for 1920 and 1921, Official Bulletin vol. XV no. 2-3 (Columbus, February-March 1922), 35. "Toledo Creates Emergency Unemployment Fund," Engineering News-Record 86 (Feb. 10, 1921): 279; "Wisconsin Governor Urges Employment of Idle Men in Road Work," Good Roads 60 (Feb. 9, 1921): 89. "We sympathize with the Southerner who has come North," said W. L. Evans, Chicago Urban League's industrial secretary. Yet "we feel it our duty to tell you of conditions here so that you may not leave your homes uninformed." for "people all over the North are being put to the test of surviving the present period of industrial depression." The league's bread line by March had grown to more than 400 people. Chicago Defender, March 12, 1921. Denver (CO) Labor Bulletin, March 5, 1921; Austin (MN) Daily Herald, Jan. 2, 1922.

27Wisconsin Farmer, March 3, 1921. Pierce was editor also of the farm journal Iowa Homestead. Also from the Midwest besides Henry C. Wallace, the agriculture secretary and former editor of Wallaces' Farmer in Iowa—was Thomas H. MacDonald of Iowa, chief of the U.S. Bureau of Public Roads, the agency administering the federal road program within the agriculture department.

28Chicago's building contractors proposed reductions of 25 cents an hour for "skilled mechanics" and 30 cents for laborers. Before cuts, the scale was "$1.25 an hour for mechanics and $1 for laborers." Indianapolis News, April 1, 1921. The cuts would leave laborers in urban building-trades unions above wage levels for federal-aid road work, which often averaged less than 50 cents. Also in April, construction in six other midwestern cities stopped as building-trades unions rejected wage reductions; some union members quit work in Dubuque, Waterloo, Sioux City, Des Moines in Iowa and in Omaha and St. Louis. Indianapolis News, April 1, 1921. By autumn, Chicago building-trades unions were still considering the industry's wage agreement, though in a form a court recently had issued. If union members returned to work, a newspaper reported, "it is expected that building operations that will give employment to more than 25,000 men will be undertaken within the next few weeks." National Labor Journal (Pittsburgh), Sept. 16, 1921. Chicago Tribune editorial, reprinted in Seward (NE) Journal, June 3, 1921.

29Opponents of centralized, state control of road work cited costs of new concrete roads in Illinois, according to the journal. "In Indiana the county organizations recently deprived of a large part of their road funds and the perquisites therefrom are trying to get back what they have lost." And "in Missouri the struggle is to get the designation of state roads into the hands of the legislature." "Politics Attacks Highway Departments," Engineering News-Record 86 (April 14, 1921): 622. In Ohio and Indiana, legislative bills were introduced seeking to abolish the state highway departments. Ohio Farmer, Feb. 19, 1921; "Changes Recommended for Indiana Highway Commission," Engineering News-Record 86 (March 10, 1921): 443. Officials of Elkhart County at Goshen, IN, awarded four road construction contracts, totaling $426,904, despite protests of farmers over material and labor costs; the four contracts had been delayed once, in mid-March, when bids for them totaled $447,209. Sometimes, though, city residents opposed new road work in spring, because of materials costs, as did an official of Taxpayers' League of Indianapolis, countering the support by a "delegation of Wayne township farmers" for beginning the projects. Indianapolis News, April 26 and 29, 1921. Material costs were cited also by Indiana's governor when he said in spring the state highway department would delay its work. Ibid., April 29, 1921. By mid-April, Indiana growers of fruit and truck crops had problems with late freezes, though "the supply of farm labor is considerably greater than the demand at this time," the state's agricultural statistician reported. Ibid., April 18, 1921. In western and northwestern Michigan also, growers had some damage to fruit trees from a freeze. Ibid., April 22, 1921. In Ohio also,
production fell in 1921 for apples (to 24% of the 1920 crop) and peaches (to 10% of the 1920 crop); other large declines in production included those for tobacco, pears, onions, and potatoes. The largest amount of decline in value in Ohio was for the top crop, corn, worth $112.4 million in 1921 and $62.7 million in 1921. Ohio Department of Agriculture, "Crop Summary for 1920 and 1921." Some farmers opposed road work when it was suggested later in 1921, by the President's Conference on Unemployment in autumn. Among opponents for various reasons were those by whom "it is contended that when the city wage earners are content to accept a scale of wages on a par with the prices of farm products there will be little need for providing government created jobs for the unemployed." Ohio Farmer, Oct. 15, 1921.

30 Antigo (WI) Farmers Journal, Aug. 23, 1921. Truth (Duluth, MN), July 1, 1921. Canadian officials estimated spring needs for laborers on Saskatchewan farms at 4,000 to 5,000 people. Detroit Free Press, April 2, 1921, p. 15. Black men in Virginia could learn of the Midwest’s wheat harvest and locations where it needed laborers by reading articles such as that in Norfolk (VA) Journal and Guide, July 16, 1921. In preparations for the wheat harvest in areas near Wichita, KS, a newspaper noted, “employment offices report that they have received numerous inquiries from women who wish harvest work. Most of the women prefer employment as cooks, although several have announced they have no objections to doing manual work, if desired. It is virtually a certainty that the state of Kansas will have a surplus of harvest hands for the crop this year.” Idaho Falls (ID) Daily Post, June 8, 1921. Fruit growing had developed by the early 1900s in areas of the Midwest including southwestern and northern Michigan and the Door Peninsula of Wisconsin. In 1880-1920, the growers hired many people from nearby urban areas for harvests. Margaret Beattie Bogue, 494-95, 510-11.


32 The Belgium, WI, contractor, building a project for the state highway department, had paid $50 a day for seven teams to haul stone nine miles in 1920. He began using a 3½-ton truck, hauling more daily than the teams. Then, he stopped using teams, leaving daily expenses at $18.40. "Takes Place of Seven Teams and Saves Owner $32.35 a Day," Road Grader, Excavator and Grader 14 (December 1920): 14. At Austin, MN, use of 52 trucks on one road project was noted in a review of significant local events of 1921. Austin (MN) Daily Herald, Jan. 2, 1922.

33 In Langlade County, WI, two projects each used 10 teams and teamsters in graving, and one used six of them in grading. Antigo (WI) Farmers Journal, June 14 and May 17, 1921. Clearing the 6-mile roadway in Chippewa County, WI, was a project many supported locally. A newspaper reported that “the county agent, with the permission of the county board committees, the county highway committee and the chairman of the county board is furnishing employment to over thirty people in the towns of Holcome, Arthur, Estella and Ruby in doing this work.” The county agent’s operation of the machine indicates the county, instead of letting a contract to a construction company, was saving funds by doing the work itself, hiring its own labor force. County officials said the road might be finished in 1922 across the county. Also by fall 1921, jobs in Langlade County opened at lumber camps, whose crews, near usual size, were “skidding logs and making roads in preparation for winter hauling.” Antigo (WI) Farmers Journal, Oct. 18, 1921. “Wisconsin farmers received the lowest gross income in the economic depression following the war in 1921.” In that year, farmers’ income there from crops, livestock, and livestock products fell 34% from 1920, 43% from 1919. The declines particularly related to livestock and livestock products, whose sale provided 80% of Wisconsin farmers’ income. Milk checks of dairy farmers were 26% less in 1921 than in 1920, 36% less than in 1919. Yet “during 1922, particularly the latter part of the year, a change for the better was very noticeable.” Prices rose by then for dairy, hogs, and crops except potatoes. The 1922 potato crop’s value was 66% of that in 1921, which products “had a depressing effect in the potato sections of the state.” Wisconsin Department of Agriculture, "Biennial Report, 1921-1922," Bulletin No. 50 (Madison, Dec. 31, 1922), 5-6.

34 “Business Methods Increase Output of Highway Contracting Organization,” Concrete Highway Magazine 6 (May 1922): 117-119. Mrs. Axel Holm of South Range, WI, was contractor in 1921 for 4.5 miles of road through Pattison State Park, near Superior, WI. Contractors’ & Engineers’ Monthly 3 (December 1921): 45. “Iowa Concrete Road Builder Mounts His Equipment on Railroad Flat Cars for Convenient Moving.” Iowa State High-
Four small locomotives were part of an industrial railroad used in a paving project in Palo Alto County, IA, in 1921. Crews there included five train engineers, two truck drivers, 14 men for other loading and hauling work, and 27 men for mixing concrete and spreading and finishing it on the road. “Material Handling on a Federal Aid Job in Iowa,” Engineering and Contracting 57 (Jan. 4, 1922): 23-24; Iowa State Highway Commission, Report 1920 (Des Moines, 1921), 85. In northeastern Iowa, at a paving project near Independence, “a goodly crowd was on hand to see the first truck load dumped into the road.” The truck brought a load of cement made in a large mechanical mixer, “a huge affair,” set up in town beside railroad tracks, where a large crane in a material at the road, cement was dumped, then smoothed by a finishing machine. In summer 1922, “the big cement mixing machine and the finishing machine are visited by many interested spectators every day.” Independence (IA) Bulletin-Journal, May 4, May 11, and June 15, 1922.

Labor was about 10% of total cost for a summer 1921 paving project in northwestern Iowa, near Hull. Railroads shipped in sand and other material. Two trucks, making a total of 55 trips daily, hauled concrete to pavers in June, increasing at times to 13 trucks, making a total of 150 to 200 trips daily. Besides truck drivers, 55 men worked at the project, paving an 18-foot-wide road. Of the contract price ($106,057) the amount for labor ($10,984) was slightly more than 10%. Truck drivers’ wages were 41% of the labor total. Wages for all workers except truck drivers on the project totaled $5,612; for truck drivers, each paid $2 an hour, wages totaled $4,472. Hourly wages included 40 cents for wheelbarrow men, gravel shovelers, or concrete spreaders, 95 cents for concrete finishers, and 90 cents for a horse team and driver. “Data on Truck Operations and Construction Costs of Concrete Pavement in Sioux County, Iowa.” Engineering and Contracting 57 (Jan. 4, 1922): 17-18; Iowa State Highway Commission, Report 1920. 87, 64, 18.

Illinois Department of Public Works and Buildings, Division of Highways. Fourth Annual Report, 21. In 1922, still more men would work in the state-run work of Illinois. The state Division of Highways added two construction crews to its day-labor organization, operating a total of four that season. One crew worked on Route 2 between Cobden and Carbondale, one on Route 4 north of Dwight, and two on Route 36 from Winchester to Pittsfield. The Dwight crew worked in conditions much like those of contractors’ projects. “The other outfits, however, were assigned to particular sections where there were uncertain and undesirable features which made construction hazardous and expensive. By late 1922, the Winchester-Pittsfield crew’s work “has been confined almost entirely to grading the heavy cuts and fills” near the Illinois River, allowing for little paving. All the crews worked mostly with war-surplus equipment. In a photo, one day-labor crew, “on Bond Route 10 east of Pittsfield,” was adding a second lane to a road’s older 10-foot width of pavement; a truck like many that were war surplus (with an open cab and solid-rubber tires) was backing up on a paved center section of road to dump concrete. Illinois Department of Public Works and Buildings, Division of Highways, Fifth Annual Report, 20-21. 30. In Ohio, officials tried to cut paving costs and speed the work by making a large project’s construction state-run instead of contracting with a company. In that, highway officials themselves hired and supervised a state labor force. Columbus (OH) Dispatch, Jan. 5, 1922. A state might try to make projects cheaper by buying cement in large amounts, at lower cost, to furnish to contractors. Among such states in 1921 “the principal ones” were in the Midwest—Michigan, Indiana, Illinois, and Wisconsin. Engineering News-Record 88 (April 13, 1922): 596. Or a state might join with others to seek lower prices, as eight states did in winter 1921-22. The eight, which boycotted the cement market, were Michigan, Illinois, Wisconsin, Minnesota, Iowa, and Missouri in the Midwest, together with Kansas and South Dakota. Highway officials of the eight states, at a meeting of the Mississippi Valley Association of State Highway Officials in January 1922, voted to boycott cement until prices declined. Columbus (OH) Dispatch, Jan. 22, 1922. Also, the increased scale of work in 1920-22 sometimes changed opinions of officials themselves as they encountered costs of large projects. Brick, for example, though used in paving by many American cities since the late 1800s, became too costly early in the depression when used for the distances of rural highways. Similarly, for gravel, one of the era’s cheapest materials for surfacing roads, the new scale of road work set off some state-wide searches to determine supply, if not directly to affect prices. That created a market in many rural communities for local stone, and for jobs in digging, crushing, and hauling it. Also, many roads in 1921 were graded or drained to modern standards, preparing them for surfacing later. A brick paving project in
Scott County, in southeastern Iowa, had support from some nearby farmers in summer 1920, yet was protested in February 1921 by another such group, which wanted a delay until material and labor prices fell as much as farm products had. Davenport (IA) Democrat, Dec. 31, 1920, Feb. 15, 1921. The work was stopped during winter 1920-21 by Iowa's highway department, objecting to its cost. Ibid., Dec. 31, 1920. For years brick had been used often nearby in street paving in Davenport, where in 1894 "two of the swiftest brick layers" ever in paving put down 28,000 brick as surfacing in one day. Ibid., Aug. 7, 1894. Ohio cut brick's cost by convicts' labor, widely used by states while labor for road work was scarce in the war and postwar boom. Convicts at the Ohio's plant at Junction City made at least 3 million bricks in 1920. "Ohio Convicts Make Paving Brick," Good Roads 60 (Jan. 19, 1921): 28. Brick use had sometimes been an effort to stimulate local industry, as in Des Moines, Iowa, in the depression of 1893. A local company then helped finance public works, accepting city certificates-to-pay in return for bricks, at once putting some 150 men to work on four miles of streets and keeping employees at work in its large brick plant. Iowa State Register (Des Moines), Nov. 3, 1893. Brick was more durable than other paving materials available in the 1800s in many places. During the 1920-22 depression, comparative costs of four main kinds of road work changed little in national averages. In cost of construction, concrete paving ranked first, ahead of bituminous macadam, then gravel, and grading-draining. That remained their relation 1920-22, though concrete and bituminous macadam dropped in cost in 1921-22. Thomas H. MacDonald, "An Economic Foundation for Future Highway Progress," Good Roads 62 (June 7, 1922): 312. The state highway commission in Iowa reported that in 1921 its "gravel hunting crews saved counties $243,000" by locating new sources of material. Des Moines Register, Jan. 26, 1922. Convicts were used in midwestern road work in states also including Missouri, which reported 106 escapes from prison road camps in the four years it had been using their labor on roads. It reduced its guard costs by late 1921 by sending only convicts considered to be "trusties" to road camps. Good Roads 61 (Dec. 14, 1921): 275.

"$60,000,000 Road Measure Passes Missouri Legislature," Good Roads 61 (Aug. 17, 1921): 91. Missouri's legislature by July had "been in regular and extra session since the general election of last year," when the bonds were approved. In its division in July, some groups "want hard surfaced roads, others gravel; some want the work to proceed under the direction of the State Highway Commission, others want the funds divided among the counties. Numerous bills have been introduced incorporating the above ideas; and peanut politicians continue to block road development in the state." "Missouri Still Legislates," Good Roads 61 (July 27, 1921): 47. Letter from W. L. Leffler of Ohio, Indiana Farmer's Guide, Aug. 13, 1921. Resolution of American Federation of Labor's convention quoted in part in United Mine Workers Journal (Indianapolis), Aug. 15, 1921. In Iowa, for example, one-fourth of costs for paving in federal-aid projects was assessed against nearby land. In Michigan, all federal-aid contracts in 1921 included costs for federal and state governments, as well as counties and townships (two levels of government often setting taxes on land). In Ohio, state highway projects could require from 10% to more than 50% of costs from county or township sources. County bonds, and taxes on land, were part of funds for state highway programs in Wisconsin, yet after June 1921 all county participation in state-federal work was voluntary; half of the state-federal fund was divided by formula (based on county area, valuation, and road mileage) among all counties. Michigan, State Highway Commissioner, Ninth Biennial Report, 62-63; "Road Building in Michigan" Good Roads 61 (Dec. 7, 1921): 257; Ohio Farmer, May 7, 1921; Labor Advocate (Racine, WI), Jan. 22, 1920; Wisconsin Highway Commission, Fifth Biennial Report of State Highway Activities (Madison, 1924), 32.

A newspaper, citing a recent Labor Department survey, reported St. Louis had 69,000 unemployed; Minneapolis 5,000; St. Paul 9,500; Kansas City, MO, 9,000; Kansas City, KS, 4,000; Duluth 7,000; Des Moines 5,000, and Davenport, IA, 3,000. Fargo (ND) Forum, Oct. 15, 1921. In the Great Lakes area's timber industry, jobs were estimated at 40 percent of the usual, though some lumbermen and miners farmed part-year in northern cutover areas. "Unemployment in the Lumber Industry," Engineering News-Record 86 (Oct 13, 1921): 631. Some 8,000 were jobless in Springfield, IL, including more than 2,000 miners, according to the state labor department. At Kenosha, WI, industries were employing 65% of the number a year earlier. Kenosha Manufacturers Association reported. Fargo (ND) Forum, Oct. 14, 1921. Early-1920s settlers in Michigan's cut-over areas included lumbermen and miners who farmed on small acreages part of the year, returning to mines or lumber mills in winter, according to C. E. Johnson, an early settler at Ironwood. Michigan Bureau of Agricultural Industry, "Report," 16-58 in Michigan State Department of Agriculture, First Biennial Report, for the Fiscal Years ending June 30, 1923 and 1924 (Lansing, 1924), 24-25. "Winter Road Work Proving Successful in Minnesota," Engineering News-Record 88 (Feb. 9, 1922): 2334-35. Wages had fallen in winter, the U.S. Bureau of Public Roads announ-

Migration back to towns and farms of western Michigan is noted in a survey by a Pennsylvania Railroad agricultural agent described in Detroit Free Press, Dec. 28, 1921. Ohio's state agriculture officials said the trend showed in letters and ad requests they received for their bulletin of market news and exchange. Columbus (OH) Dispatch, Dec. 9, 1921. For many farmers, credit was easier by winter when federal funds for loans were made available to local banks through a revived War Finance Corporation. By December 1921, some 20 banks scattered throughout Illinois, for example, had received $738 million for lending to farmers, and the state committee had received applications for $700,000 more. Prairie Farmer, Dec. 3, 1921. A correspondent from Ogle County, IL, who asked if WFC money was "just to the help those who own land or can tenants get some of it too?" was told that anyone whose credit was good with his banker could borrow from the funds. Ibid., Nov. 12, 1921. In Minnesota, applications for the loans declined statewide from as many as 100 a day near Jan. 1, 1922, to 25 a day or fewer by mid-February. Austin (MN) Daily Herald, Feb. 16, 1922. Government and farm organizations were unprepared to cope with agricultural depression, though the farmers' plight brought some action in the interim before a new, Republican administration. Farm credit expanded with federal funds because "hard-pressed farmers, through their congressional representatives, forced the Wilson administration in January 1921 to reinstate the War Finance Corporation to help finance farm product exports. It was becoming clear that the government could not sit on the sidelines in the face of the disastrous decline in agricultural prices and its related effects." Joseph G. Knapp, The Advance of American Cooperative Enterprise: 1920-1945 (Danville, IL: Interstate, 1973), 7. In the U.S., the years 1919-1923 were a "crisis in the business of agriculture, its social outlook, and its political behavior. In 1919 farmers, riding the crest of a boom, were being cursed as a cause for the 'high cost of living,' but at the end of the period farmers were grievously depressed, politically rebellious, and the object of deep national concern." James H. Shideler, Farm Crisis, 1919-1923 (Berkeley: University of California Press, 1957), 1.

Four farms near Bagley were described in ads for mortgage-foreclosure sales in late 1921, as others there would be through 1922. Bagley (MN) Farmers' Independent, Dec. 22, 1921. Austin (MN) Daily Herald, Dec. 20, 1921.

In Columbus, OH, a shelter turned away 100 men, and jail officials began limiting men to sleeping only in their building's bunks, no longer in its corridors. Columbus (OH) Dispatch, Dec. 16, 1921. Detroit's 1921 crimes by holdup gangs included on a December night eight robberies, mostly of auto-related businesses, presumably considered locations of cash. That night, armed men robbed three gas stations in a stolen auto, and men held up two store owners, a coal office, and two cab drivers (four others had been robbed that week), stealing a total of $500 and two cabs. Detroit Free Press, Dec. 30, 1921. The resolutions of Two Harbors Federated Trades Assembly were reported in Labor World (Duluth, MN), Dec. 24, 1921. Duluth in winter had let several contracts for its 1922 paving. "$7,000,000 for Construction in Duluth and Vicinity," Engineering News-Record 88 (March 2, 1922): 574. At Indianapolis one January morning, a newspaper reported, "a crowd of 500 men stood in line at the municipal barns today seeking temporary jobs in the street cleaning department," before twenty were put to work for $3 a day; ten others were hired to put cinders on unpaved streets. Indianapolis News, Jan. 26, Jan. 18, 1922. Women were one-quarter of the people placed in jobs in January by the Indianapolis free employment service, a state-federal agency. Hired through the agency were 1,199 men and 531 women. Ibid., Feb. 3, 1922. In Ohio, six
school construction projects had begun in Cleveland; park improvements, water main extensions, and a bridge were under way in Youngstown; sewer work to hire about 450 men was set in Akron; two school buildings and a powerhouse were providing jobs for "several hundred" in Lorain; sewer and park projects were under way in Dayton; about 1,000 men were working in park and street projects in Toledo, where a much school construction was planned; and street paving continued in Canton, where the jobless were estimated at 2,000, though "with the closing of street and county road work this number will be materially increased." *Columbus (OH) Dispatch*, Dec. 7, 1921. In response to the aldermen at Davenport, the city engineer said doing the work by hand was costing four times what it should. Still, that week 200 other men were to be hired. *Davenport (IA) Democrat*, Jan. 4, 1922; *Antigo (WI) Farmers Journal*, April 18, 1922. In an experiment copied at other towns, merchants at Madella, Minnesota, in early 1922 were accepting corn, at 10 cents above local market price, for purchases and to settle accounts. That method, a newspaper reported, turned some 35,000 bushels of corn into "new money released in the community and relieved the financial pressure on merchants." It offered nearby farmers an exchange of crops for supplies at a better rate than the market. *Sioux City (IA) Journal*, Feb. 22, 1922.

In northern Michigan's lumber camps, an estimated 50 percent more men than a year earlier were working, though at lower wages. *Detroit Free Press*, Jan. 2, 1922; ibid., Jan. 1, 1922, p. 1-8. In the Cleveland mayor's efforts to cut the city payroll, one day's action dismissed 398 people, including 115 laborers in the street cleaning division. *Columbus (OH) Dispatch*, Jan. 5, 1922. Many youths reportedly came to Columbus to enlist in the army, often only to join the jobless. Much as in other cities, social agencies were cooperating, keeping a central registry to limit vagrants to two nights of free shelter and meals. Ibid., Jan. 26, 1922. *Sioux City (IA) Journal*, Jan. 11, 1922. Minneapolis officials discussed shelter conditions with veterans' and labor groups after a man there was found to have smallpox. *Minneapolis Tribune*, Jan. 4, 1922. *Indianapolis News*, Feb. 1, 1922. At an unemployment conference held by the Indianapolis Central Labor Union, officials of several local unions discussed methods of relief and named a committee to call on the governor, mayor, and officials of city and county governments to start public works. Also, "the relief measures sought, it was said, will not apply wholly to organized labor, as it is the unorganized working class that is suffering the most seriously from the depression." *Indianapolis News*, Jan. 31, 1922.

"Highway Development in the United States," *Good Roads* 60 (Jan. 26, 1921): 33-36, 40-41; "November Election Boost to Good Roads," *Roadmaker, Excavator and Grader* 15 (January 1921): 13; Barron, *Mixed Harvest*, 255 n. 54. Illinois voters would approve $100 million in bonds in 1923. Ibid. Rogers, *History of Michigan State Highway Department*, 104-05. Michigan issued $20 million of the bonds from Nov. 1, 1919 to July 1, 1922, by when an additional $10 million became available for 1922, according to Frank F. Rogers. A state tax on property for $2.2 million was levied in 1920. Yet as revenue from auto registrations rose from $2.2 million in 1920 to about $3 million in 1921, the state highway tax was cut by half for 1921. The tax would pay for interest on and retirement of the highway bonds. The state paid about 80% and counties 20% of cost of road construction in the state trunk line system; the state paid about 30% of federal-aid roadbuilding, leaving the federal government and counties to pay the rest. Michigan's legislature abolished required statute labor in 1907, providing for townships to levy cash taxes. Despite spending by the state and counties, townships' cash road tax, in 1922 totaling $11.1 million, "has always been the largest road tax levied in the state." Rogers, "Michigan's Roads and Taxes," 225-26, 222. *Wisconsin Highway Commission, Fifth Biennial Report*, 26, 32. The editorial of *Milwaukee Times* endorsing Edison's suggestion that paper currency be issued to pay for public projects was reprinted in *Bagley (MN) Farmers' Independent*. It also reprinted a *New York Times* report of Dec. 6, 1921, on Edison's trip with Henry Ford to the federal dam project at Muscle Shoals, AL, in which Edison attributed the idea to Ford, who had proposed to lease, complete, and operate the dam. *Bagley (MN) Farmers' Independent*, Feb. 23 and March 2, 1922.

Vehicle-registration fees totaled $7.5 million then in Iowa and $5.9 million in Illinois. In Indiana they totaled $1.8 million before fee increases in early 1921 on heavy trucks and trailers and powerful autos, producing in the first half of 1922 revenue of $2.6 million for the state highway fund. "Highway Development in the United States," 33-35; *Engineering News-Record* 88 (Sept. 22, 1921): 504; *Engineering News-Record* 88 (Feb. 23, 1922): 338; *Indianapolis News*, April 1, 1921; Ibid., July 17, 1922. Minnesota in 1921 collected fees totaling $5.6 million. *Austin (MN) Daily Herald*, Feb. 15, 1922. Both principal and interest on the county road bonds was to be paid out of funds derived from Minnesota's motor-vehicle tax. Earlier, the state had assumed road bonds of Minnesota counties worth nearly $12 million, and a 1921 law added $5.4 million more. Others worth $6.9 million were set for
assumption when construction of their projects was completed. Minnesota Commissioner of Highways, *Report, 1922* (Minneapolis, 1923), 33-35.


47. Bids for “a large mileage” of those projects were rejected in February 1921 because they averaged nearly $40,000 per mile, including usual amounts of grading, culvert, and bridge work. Gov. Len Small and the highway agency’s director announced that no contracts would be awarded for 18-foot-wide concrete paving where costs exceeded $30,000 a mile. “It was felt that the prices asked for pavement on that date did not reflect the prevalent economic conditions,” highway officials reported. Later in the year, Illinois awarded 704 miles of paving contracts within that limit. Illinois Department of Public Works and Buildings, Division of Highways, *Fourth Annual Report*, 4-5. 6. Illinois Department of Public Works and Buildings, Division of Highways, *Fifth Annual Report*, 45. The cross-state highways improved were the Lincoln Highway (Chicago to the Mississippi River at Clinton), the old National Road (Marshall to the Mississippi at St. Louis and on a branch to Cairo), and a third highway (Chicago to the Mississippi at Rock Island, branching to St. Louis). Thomas H. MacDonald, “Report of the Chief of the Bureau of Public Roads,” 461-503 in *Agriculture Department Report, 1922* (Washington, 1923), 466.

48. S. E. Bradt, Illinois superintendent of highways, “Preparation for the Reconstruction Period following the End of the War,” *Public Roads* 1:9 (January 1919): 50. Endorsement or Illinois road bonds came from Chicago Federation of Labor, Typographical Union No. 16 of Chicago, the Trades and Labor assemblies of Quincy and Bloomington, the UMW of Illinois, and several locals of railroad brotherhoods. *Good Roads* 54 (Oct 19, 1918): 149; Municipal Journal 45 (Nov. 23, 1918): 413. Planning employment for millions of returning servicemen and workers expected to be laid off at war plants in conversion to a peacetime economy was widely discussed during and after the war. Many large cities had provided public works jobs in depressions of the late 1800s and early 1900s. In Illinois, requiring that work be given the unemployed also had been urged in 1909, Udo Sautter notes, “as a consequence of the preceding economic downturn.” Thus, a resolution that year “providing that cities with ‘more than ten or fifteen thousand unemployed’ must furnish work for ‘living wages’ on roads, waterways, and so on, was introduced in the legislature. The resolution died in committee for reasons that can no longer be established, but the idea lived on.” Udo Sautter, “Government and Unemployment,” 61-62.


52. Minnesota’s spending by the state highway department in 1920-22 peaked in 1921 at $17.7 million, of which $2.67 million was federal aid. Its federal-aid spending peaked in 1922 at $2.96 million, part of the department’s total spending of $15.5 million. Mileage rose steadily for graveling in the department’s work, from 723
miles in 1919 to 832 in 1920, 1,105 in 1921, and 1,335 in 1922; paving mileage remained less than 12% of graveling mileage each year. In the three years 1920-22, Minnesota spent $8.24 million in federal funds, more than its highway department's 1919 spending from all sources ($5.93 million). Minnesota, Commissioner of Highways, Report, 1922, 9. In Iowa, tax levies produced $7.5 million in 1919 for the state government's activities. Iowa Auditor of State, Report, 1920 (Des Moines, 1920), v.

53 A. R. Hirst, “Educating the Public to Highway Construction Needs,” Good Roads 63 (Nov. 8, 1922): 167. Wisconsin's highway department “is severely criticized” for relocating roads, a problem in improvements that departments of other states also were dealing with, Hirst said. Instead of putting roads in new routes in Wisconsin, “time after time, to the extent of dozens of miles we have bought back from the farmer the old right-of-way,” from an era before fields were squared. A. R. Hirst, Wisconsin state highway engineer, “Administrative and Economic Highway Improvement Problems.” 113-14.

54 Ohio's Automobile Association, having approved of the costs and construction, declined to participate in the investigation. The association said that the department’s method had made “exceptionally fast progress,” that building costs were lower than possible under a contract, and that the shortest route was best. Columbus (OH) Dispatch, Jan. 5, 6, and 11, 1922.

55 The county expected to put four to six inches of local gravel on the roads, dig drainage ditches, and improve bridges and culverts at low costs, averaging $3,000 a mile. Ibid., Dec. 14, 1921.

56 Ohio's seven “heaviest-traveled” highways set for paving in 1922 included three east-west routes (the National Pike, Lincoln Highway, and a Cleveland-Buffalo road), three north-south routes (the Dixie highway and Cleveland-Marietta and Sandusky-Portsmouth roads), and a Cleveland-Columbus-Cincinnati route. Ibid., Jan. 16, 1922. Illinois completed paving on 347 miles in 1920 and 405 miles in 1921. Illinois Department of Public Works and Buildings, Division of Highways, Fourth Annual Report, 6. The boycott that began in January ended in April. Initial participants were Illinois, Iowa, Wisconsin, Kansas, Michigan, Missouri, South Dakota and Minnesota. Columbus (OH) Dispatch, Jan. 22, 1922; Engineering News-Record 88 (May 4, 1922): 717. Iowa State Highway Commission, Report, 1921 (Des Moines, 1921), 14; Michigan State Highway Commissioner, Ninth Biennial Report, 9; Minnesota Commissioner of Highways, Report, 1922, 9.

57 In the federal-aid program’s work, totals for each of the Midwest's states show the mileage completed of several kinds of construction. Most work in those totals would have been completed during 1920-22, for during 1916-19 little in federal funds for roads was spent anywhere in the nation. The numbers of jobs created, rarely itemized in published records, may be indicated for comparison among states by totals for mileage completed and amount paid in federal funds. Gravel construction in completed federal-aid projects by mid-1922 totaled 1,453 miles in the Midwest, 1,514 miles in the Plains, and 994 miles in the South. Other gravel work completed by mid-1922 included that in Wisconsin (160 miles), Iowa (111 miles), Missouri (98 miles), and Michigan (73 miles). States' totals for work completed or under way in the federal-aid program by June 1922 are from Agriculture Department, Report, 1922, 477-78, 483-84. The eight kinds of road work compared in the states' totals for mileage and spending in federal-aid road work were: grading and draining projects and those of surfacing with gravel, concrete, bituminous macadam, water-bound macadam, sand-clay, bituminous concrete, and brick. Work also included building bridges, though for mileages not comparable with the other eight kinds of projects.

58 Using federal aid, Wisconsin had completed paving on 201 miles, Ohio on 161, and Iowa on 117. Other midwestern states' completed these paving mileages: Indiana 80, Michigan 74, Minnesota 59, and Missouri 48. Though brick paving amounted to only 167 miles in the Midwest's federal-aid work complete by mid-1922, it was 61% of the national total for that costly, slow kind of highway construction. Bridges were a low priority for midwestern officials in federal-aid construction of 1920-22. Such projects in the region totaled six-tenths of a mile. Ibid.

59 Gravel projects under way then in the region were for 1,541 miles of road, up 88 miles from the total in projects completed by then. Concrete paving projects under way totaled 901 miles, 384 miles less than in such midwestern projects completed. Projects of grading and drainage for roads grew from 593 miles completed by July
1922 to 1,201 miles under way. That included increases by Iowa (from 240 miles completed to 789 miles under way) and Minnesota (from 52 miles to 162 miles). Minnesota cut its graveling projects from the 1,011 miles completed by then to 727 miles under way. Gravel projects increased, though, in Wisconsin, Missouri, Iowa, and Michigan. Paving was begun by July 1922 in several midwestern states where little had been completed in 1920-21. Increases were in Michigan (from 73 miles completed by July to 213 under way), Indiana (from 80 miles to 172 miles), Minnesota (from 59 miles to 127 miles), Missouri (from 48 miles to 109 miles), and Iowa (116 miles to 151 miles). Illinois cut concrete projects from 546 miles in work completed to 31 miles in projects under way; Wisconsin cut them from 201 miles to 49 miles, and Ohio from 161 miles to 50 miles. Meanwhile, more paving was begun in several states where little had been done—Michigan, Indiana, Minnesota, Missouri, and Iowa. Few men in the Midwest, though, were working at paving with bricks; such slow, costly projects in the region were for only 36 miles of road. Brick paving relied heavily on skills of laying individual bricks quickly. Besides its cost, brick paving offered less work than graveling for unskilled labor and for farmers' horses, it was unnecessary for small roads, and it proceeded more slowly in improving mileage than paving with concrete.

Mail carriers in Iowa, through their state association, resolved in August 1922 that in their localities "carriers do their utmost to have the grading on the public highway done as early in the year as possible." The association endorsed "the good roads campaign that is being put on by the state highway commission" and requested "all rural routes be placed under their direct supervision." Des Moines Sunday Register, Aug. 13, 1922. The Minnesota town of Bagley was near several projects under construction early in the 1922 season by several contractors using much machinery for excavation and grading. In late April, a contractor was preparing to unload one steam shovel at Bagley for a grading project on Trunk Highway 65 and another for grading nearby at Clearbrook; 45 horses were to arrive for moving dirt, the terrain near Bagley being "too rough for use of a narrow gauge railroad," the newspaper reported. Before mid-May, the projects were "progressing rapidly," the Clearbrook project occupying "about 45 men, 40 head of horses, 18 dump wagons and a big tractor." About 45 men were working in the project north of Bagley. And east of Bagley on Trunk Highway 8 a grading project's contractor, employing about 45 men, was about to move his "steam shovel, narrow gauge railroad, three dinky engines and 30 dump cars," having finished taking dirt from a local pit. Also, men were building culverts to drain the road east of Bagley, and a crew had completed the eastern approaches to a new bridge east of town. By late April, more than 3,000 yards of dirt had been moved to the road east of Bagley to fill low sections; clearing of brush and timber had been completed north of town to prepare for grading, and carpenters were building forms for pouring concrete culverts and laborers were excavating culvert sites. Bagley (MN) Farmers' Independent, April 20 and May 11, 1922. In April, the newspaper had reported that the projects meant Bagley in another week would be a busier town. "Last week an ad in one of the Minneapolis papers called for over 200 men to go to Bagley for road work." Ibid., April 20, 1922.

The Midwest's federal-aid work (complete or under way by mid-1922) was mostly in gravel surfacing (2,994 miles), though much was in concrete paving (2,186 miles). Projects for grading and drainage (1,794 miles) prepared roads for surfacing later. Compared to the 7,976 miles in the Midwest, federal-aid work was completed or under way on 10,832 miles in the Plains; 8,114 miles in states of the South; 2,993 miles in the West; and 2,315 miles in the North Atlantic region. In their varied road improvements, most states of the region were relying more on federal money in the new program in mid-1922 than they had in their completed work. The federal share of funds in the program's road projects increased in Iowa 5.3%, in Wisconsin 3.2%, and in Missouri, Ohio, and Indiana, each by less than 1%. The federal share of funds declined in three states. The largest decline (3.2%) was in Illinois, which had completed federal-aid work costing more than any in other state in the nation and which by 1922 was relying more on state bonds to fund road work. The other two declines were for Minnesota and Michigan, both of which were expanding their work in 1922, using state and local funds for larger shares of the cost. Agriculture Department, Report, 1922, 477-78, 483-84. For the nation's forty-eight states, costs rose from $240.6 million for federal-aid projects completed to $322.8 million for those under way. Project costs declined in two regions: in the Midwest from $80.2 million to $69.8 million and in the West from $32.5 million to $25.5 million. In the Plains, costs tripled, rising from $36.7 million to $98 million. Costs of projects increased in the South from $46.2 million to $77.6 million and in the North Atlantic region from $44.8 million to $51.6 million. Ibid.

For projects completed by mid-1922, other large amounts received in federal road funds in the region were those of Ohio ($5.7 million), Minnesota ($4 million), Wisconsin ($3.9 million), and Iowa ($3.5 million). Party because early work in the program had been smaller, federal aid paid for completed work was less for Michigan ($1.7 million), Indiana ($1.7 million), and Missouri ($1.4 million). Yet when those federal amounts were com-
bined with the matching funds from states and localities, they supported completed projects in the program that cost $16.8 million in Ohio, more than $10 million each in Wisconsin and Minnesota, and $9 million in Iowa. In Michigan, Indiana, and Missouri, the combined funds in completed federal-aid projects totaled at least $5 million each. Data on federal-aid road work completed or under way by mid-1922 are discussed in note 7 of chapter 1, page 231.

In work completed by mid-1922, federal-aid projects created in Minnesota an estimated 10,402 jobs, in Wisconsin 9,907, and in Iowa 8,994. In Michigan, federal-aid projects completed by then created an estimated 4,302 jobs, in Indiana 4,294, and in Missouri 3,510. In describing federal-aid projects of 1920-22, published reports by state and federal agencies routinely specify spending, mileage, and materials, not number of men employed. Estimates of number of jobs use figures for earlier construction and employment, given by the chief of the federal program before a Senate committee in March 1922, as described above in note 41 of chapter 2, page 241. In early 1922, the program’s chief stated that 40 percent to 50 percent of roadbuilding funds went for labor at the project site and that 25 percent more went for labor off-site producing such items as equipment and materials. He said some $82 million in federal funds, being spent yearly, at the rate then of matching by state and local governments yielded about 210,000 construction jobs, each for a building season of 200 days. Because little federal aid was spent in the nation before 1920, the estimates would be of jobs created during 1920, 1921, and early 1922. The numbers indicate some proportions of jobs in the states, though events only approximated estimates. More jobs than estimated, for example, were likely in projects such as grading and graveling, in which equipment and material cost less than in paving. More or fewer jobs than estimated would have resulted from differing rates of matching the federal funds with those from state and local sources. Wages varied locally, departing from what the estimate uses as typical. And this estimate applies to only part of the era’s road employment. Besides men working at road projects, still others were employed off-site in related production, commerce, and shipping. In addition to the jobs from federal-aid projects, others were available to men at road projects that states and localities completed entirely with their own funds, more abundant because federal funds were relieving them of some tasks.

Federal road funds appropriated in fall 1921, after support from the President’s Conference on Unemployment then, were available in part in November 1921 and in part by January 1922. Rules for the appropriation required part of the funds to be in use within 90 days. Sioux City (IA) Journal, Nov. 17, 1921. Federal-aid projects under way in Illinois were approved to cost $1.8 million. In contrast, Missouri’s projects under way were to cost $10.3 million, up 237% from those completed. Michigan’s work also had expanded by that point in summer 1922, with projects under way valued at $11.6 million, 228% more than those completed. Construction, measured by federal-aid projects’ cost, declined in Ohio by 57%, in Wisconsin by 43%. Still, much federal-aid work continued. For Ohio’s projects under way were approved to cost $7.3 million, Wisconsin’s $6 million. Costs of projects under way by mid-1922 in other midwestern states were: Indiana $8.5 million, up 144%; Iowa $12 million, up 30%; and Minnesota $12.4 million, up 21%.

Illinois’ highway agency said its plan for 1922 “can be summarized by Governor [Len] Small’s slogan, ‘A thousand miles of completed pavement. State Bond Issue work prosecuted in every county of the State, and a dollar’s worth of roads for every dollar expended.’” Illinois Department of Public Works and Buildings, Division of Highways, Fourth Annual Report, 6. Illinois state highway officials reported that “during 1921 there was a very noticeable increase in the efficiency of all paving contractors. There were fewer paving mixers working during 1921, but a considerable increase in output was obtained.” Ibid., 21. Further tests of paving under truck traffic were conducted at an experimental track. Samples of surfacing at Illinois’ Bates test track included 63 sections of paving—Portland cement concrete, brick, and asphalt—in varied thickness and composition. Experiments were run also on “the action of pavements and subgrades under varying temperatures and loads.” The tests already had helped in designing cheaper, stronger pavement. Ibid., 7. The Bates test track was built from summer 1920 to early 1921. By late 1922, highway officials said, from its tests “the most important and far reaching development was that of the comparatively extreme weakness of the edges as related to the strength of the mid-portion of the slab” of paving. Various types of test paving broke first at edges, leading to design changes for concrete road in the state, including placing a continuous steel bar along each edge, reducing pavement’s thickness from 8 inches to 7 inches, and making a joint down the road’s center line. “A pavement of 18 feet in width is considered as the minimum width for a double traffic road on the State bond issue system and near larger centers of population this width is increased to 20 feet.” Comparing 1921 and 1922 building seasons, paving contractors declined from 111 to 102;
paving mixers in use increased from 102 to 213. Most concrete paving under the state's supervision in 1922 was 18 feet wide. Partly by using machinery better and stockpiling materials in advance, work in 1922 "brought forth a greater production per outfit by the contractors," despite coal and rail strikes' effects on shipping. The state highway agency's efforts to increase paving included naming the ten contractors with the 1922 season's largest average daily output of concrete; they ranged from one contractor at 672 feet to one at 528 feet. As in 1921, Illinois officials charted distances paved daily, acknowledging completion in 1922 of as much as 1,583 feet in a day by one contractor, 19,549 feet in a month by another. Though slightly fewer paving contractors operated in 1922, they operated twice as many mechanical concrete mixers as a year earlier. Officials noted that contractors used trucks to tend two-thirds of the cement mixers and small, industrial railroads to tend nearly one-fourth, indicating horses were rarely used for those parts of its paving projects. Illinois, Department of Public Works and Buildings, Division of Highways, *Fifth Annual Report*, 8-10, 19-20, 22. Like every state, Illinois used much war-surplus equipment distributed in the federal program. By late 1921, Illinois received war-surplus equipment including 1,065 trucks and 16 narrow-gauge locomotives. It also had received 80 narrow-gauge railroad flat cars, 12 standard-gauge locomotives, 204 autos, 134 motorcycles, and 750,000 board feet of lumber. Some of the equipment the state highway division rented to counties and contractors. *Ibid.*, 49.


Chapter 5

1 The seven other states had established the agencies earlier in the 1900s. Dearing, 54-55.

2 The ten Plains states are among the 19 lowest in 1920 population per square mile, partly because of their large area. Population per square mile in 1920 averaged 11.7 people for the Plains states, 48.3 for the other 38 states. The range of state totals is Wyoming 2 people per square mile, New Mexico 2.9, Montana 3.8, South Dakota 8.3, Colorado 9.1, North Dakota 9.2, Nebraska 16.9, Texas 17.8, Kansas 21.6, and Oklahoma 29.2. Census Bureau, *Census, 1920*, vol. 1, *Population*, 31. The ten states are those that were part of the Great Plains in a map produced in a federal study for the Resettlement Administration, published in U.S. Great Plains Committee, *The Future of the Great Plains*, 75th Cong., 1st sess., House Doc. 144 (Washington, 1937), 25. Population declined by 1920, before the depression, in some wheat areas. In Bottineau County in northern North Dakota, 1920 population declined 12.6% from the 1910 level. *Mandan (ND) Daily Pioneer*, July 19, 1920. The wheat crop in Kansas, reduced by bad weather and selling in late 1921 at less than half its price of a year earlier, totaled $175 million in value for the year, down from $431 million for 1920, said state agriculture officials. *Wichita (KS) Daily Eagle*, Dec. 16, 1921. Abandoned farm houses increased in number in 1920-22 in many rural areas, particularly in parts of the Plains and the Pacific Northwest. Henry C. Wallace, "The Wheat Situation," 120-22. The belt, identified by a line of changing levels of rainfall from the Dakotas into Texas, appears in a 1937 map defining the Great Plains. Using the 1937 border for the Great Plains complicates trying to describe a region by state, not county, totals. Yet in some Plains states, data on federally aided construction is available per county to indicate effects of varying conditions of weather on settlement and so on expanding roadbuilding in a brief period during a depression. Those Plains states and the effect of aridity on roadbuilding in their Great Plains counties are discussed in chapter 7. The 1937 Great Plains map is shown in figure 6, page 144. The border of the Great Plains, a belt running through parts of ten states, is from a Resettlement Administration map, published in Great Plains Committee, *The Future of the Great Plains*, 25. The area within the Great Plains border, said the committee, "is a sparsely settled region. In only a few counties in 1930 was the average density per square mile, including towns, greater than 45, while in large areas it was less than two." Building continuous stretches of highway in the large, arid belt would be difficult in 1920-22, as planning other kinds of programs would be, according to the committee, in the 1930s. "In view of the
vast area over which the population is scattered, distance is an important factor in planning any program for the Region.” Ibid., 39. Less-developed areas in 1920 also were part of the other regions—the northern counties of the Midwest and North Atlantic regions, wooded parts of Florida and of the rest of the South, and arid or mountainous sections of the West.

3Rankings are New Mexico 46th among the 48 states with 18,082 vehicles; Wyoming 45th with 21,371 vehicles; Montana 31st with 59,324; North Dakota 28th with 82885; South Dakota 22d with 104,628; Colorado 21st with 104,465; Oklahoma 18th with 144,500; Kansas 15th with 228,600; Texas seventh with 331,310. Agriculture Department, Yearbook 1920, 829. In 1919, South Dakota and Nebraska ranked 2d (after No. 1 Iowa) with a motor vehicle for every 7 people; Kansas 3d with one for 8 people; Wyoming and Montana 4th with 1 for 9; Colorado and North Dakota 5th with 1 for 10; Texas had 1 for 14 people; Oklahoma 1 for 17. Yet in New Mexico the ratio was 1 motor vehicle for 25 people. The average was a motor vehicle for 11.6 people in the Plains states, and one for 16.5 people in the nation. In New Mexico, auto registrations increased only 3% in 1919 over 1918, much less than in the rest of the Plains. Other increases were Texas and Wyoming (32% each), Colorado (26%), Kansas (21%), Oklahoma (19%), Montana (16%), the Dakotas and Nebraska (15.5% each). Agriculture Department, Yearbook 1920, 829. The Plains had urban proportions of population that resembled many in the South. Most Plains states had 1920 urban population of between one-third to one-quarter of the total, except Colorado (which had 48%), New Mexico (18%), South Dakota (16%), and North Dakota (13.6%). Census Bureau, Abstract of the Census, 1920, 75.

4In statute labor in rural Texas, men “worked under the watchful eye of the road overseer, but the greatest part of the efforts involved no more than clearing stumps and filling mudholes with dirt and rocks.” John David Huddleston, “Good Roads for Texas: A History of the Texas Highway Department, 1919-1947” (Ph.D. dissertation, Texas A & M University, 1981), 24. Poll-tax payments were small, unsteady revenue from which to plan street projects. In a large urban area, only about 3,800 residents of Fort Worth, TX, paid their poll tax in 1919, many partly to be eligible to vote in state and county elections. In 1920, about the same number paid the poll tax, and 1,500 were issued exemption certificates. The city’s tax collector predicted many would pay the tax before the city election of April 1921. Fort Worth Star-Telegram, Dec. 30, 1920. At Hereford, TX, county commissioners announced they would enforce the Texas road law and turn over road grading and repair to overseers, who were required to call for road work all men aged 18 to 45. Payment of $3 before February exempted a man from the work, which could last ten days a year. Dallas Morning News, Jan. 10, 1921. Payment of poll taxes in cash instead of in work was a growing practice in cities. In the example of Santa Fe, New Mexico, in the early 1900s, some men paid the tax in work, some paid in cash, and many others evaded payment. Collecting the small taxes was difficult in cities, where population was larger than in rural communities, people knew each other less, and few considered a city district’s street conditions their particular responsibility. In the depression, Santa Fe would change its tax system, seeking more revenue for streets. In Santa Fe before 1920, usually fewer than 25% of city residents owing the $3 tax paid it. said an alderman, “because the rest refused to pay it or weren’t asked to pay it. The fellow who looked like he had three dollars and it could be extracted from him paid the tax. Then he spent the rest of the time wondering where the money went” in street improvements. By early 1921, local officials changed the tax system to increase revenue for street improvements. The county agreed to let the city keep a larger proportion of collections from city residents, and the city planned more efficient collecting. It planned to enlist help from the businessmen’s association and the chamber of commerce and to open offices in city districts to take payments briefly, under the threat of bringing suits against delinquents. That effort emphasizes the difficulty of collecting such a small tax in a large urban area by some cost-effective method. Even more difficult would have been a cost-efficient way to collect the tax in work from urban men, whose numbers exceeded the need for street laborers. Santa Fe New Mexican, Jan. 11, 1921.

5Convict leasing had ended in several southern states by the early 1900s. It was abolished in Tennessee in 1893 “largely as a result of armed uprising by free coal miners,” in Louisiana by 1901, in Georgia by 1909, in Texas by 1910, and in Arkansas by 1913. Alabama set the close of convict leasing at January 1923, then delayed the change a year. Ward and Rogers, 132-33. Efforts of road agencies in several states to employ convicts amid postwar labor shortages are described in Public Roads 2 (May 1919). Montana convicts from the prison at Deer Lodge in 1920 were working at a “very extensive” project, using federal and county funds, in Granite County. The project through 8 miles of “difficult mountainside construction” would eliminate 13 railroad track crossings. The
had filed notice of their intention to "make final three year proof, to establish claim to the land above described,

carried five ads by the Interior Department announcing that five people who homesteaded land in the area 1916-19

farms in the Dakotas, Oklahoma, Nebraska, and Kansas. A New Mexico newspaper's front page in spring 1921

stale's land area, ranking 46th in the nation. Similarly small were the shares of land in farming in Wyoming (3%),

Colorado (12%), Montana (12%), and Texas (19%). Larger proportions of state area, 37% or more, were held in

farms in the Dakotas, Oklahoma, Nebraska, and Kansas. A New Mexico newspaper's front page in spring 1921

carried five ads by the Interior Department announcing that five people who homesteaded land in the area 1916-19

had filed notice of their intention to "make final three year proof, to establish claim to the land above described,

before the U.S. Commissioner, at Vaughn, N. M.,” that month. Vaughn (NM) News, April 15, 1921. Joan Jensen

notes an estimate of 30 million acres for farmland removed from public lands in New Mexico in 1900-46.
including some 19 million acres in homesteads. "The peak came between 1916 and 1923 when over seven million acres of land were homesteaded," much of it later sold to ranchers during droughts. Hispanic and Indian Americans, amid Anglo settlement of their traditional grazing lands since the late 1800s, turned to raising sheep on shares, often on small farms run by families' women while their men left to seek day labor. Homesteaders also found subsistence difficult. In one couple Jensen notes, the man worked on highways while the woman worked in the fields, raised chickens, turkeys, and hogs, and sold vegetables and eggs to local grocers in exchange for food. Joan Jensen, "New Mexico Farm Women, 1900-1940," 61-81 in Robert Kern, ed., Labor in New Mexico: Unions, Strikes, and Social History since 1881 (Albuquerque: University of New Mexico, 1983), 65-66, 68. Farmland was 37% of the total land in South Dakota, 41% in Oklahoma, 47% in Nebraska, 55% in North Dakota, and 58% in Kansas. Six of the Plains states were among the 20 ranking lowest in the nation. Census Bureau, Census, 1920, vol. 5, Agriculture, 34-35. Similarly, most Plains states had comparatively few farms per acre of their total land. The 21 states ranking lowest in the nation in 1920 included all ten Plains states. Ibid. Farmers of some Plains states in 1920 used less in implements and machines than those in other regions, though a few states here were leaders. The nation's top twenty states in value of those items included the Dakotas and four states of the Plains' eastern and southern areas. The nation's twenty states with smallest amounts for the value of those items in 1920 included New Mexico and Wyoming from the Plains, as well as many small states of the East. In 1920 value of farm implements and machinery, Kansas ranked 7th, Texas 8th, Nebraska 9th, North Dakota 15th, South Dakota 16th, and Oklahoma 17th. Census Bureau, Abstract of the Census, 1920, 600. Purchase of implements added to costs of producing wheat and corn on many farms. The top three crops in 1919 value included wheat in each of the ten Plains states and corn in six of them. Hay and forage were a crop valued among the top three in eight Plains states. Potatoes were in three mountainous states (Montana, Colorado, and Wyoming). Cotton was in Oklahoma and Texas. The top three crops in states in 1919 value are listed in Census Bureau, Census, 1920, vol. 5, Agriculture, 705-06. In a prosperous period for the nation's agriculture, Plains farms had added many implements and machines since 1910, at least doubling their value in each state by 1920. The smaller percentage increases among those on the Plains in that period generally were for states that already had large values by 1910. An exception was New Mexico, which had the smallest percentage increase and small 1910 values; still, New Mexico's farms increased those values by 136%. Another exception was Kansas, which in 1910 led the region and ranked 7th in the nation; agriculture there by 1920 increased the values by 246%. Montana, which had the region's third-lowest values in 1910, increased the values 422%. Ibid. North Dakota ranked 47th in average number of wage earners for 1919. New Mexico was 46th, South Dakota 45th, Wyoming 44th, and Montana 41st. The leader in the region, Texas, ranked only 20th in the nation. The average of totals for 1919 wage earners was 31,023 per state for the Plains, 230,938 per state for rest of the nation. Other national rankings for Plains states in average number of wage earners for 1919 were Oklahoma 38th, Colorado 36th, Nebraska 35th, Kansas 31st. Census Bureau, Manufactures, 1919, 19. Within the Plains, the 1919 total for average number wage earners varied widely; Texas, with most, had 25 times as many as North Dakota, with fewest. The totals are: Texas 107,522 wage earners, Kansas 61,049, Nebraska 36,521, Colorado 35,254, Oklahoma 29,503, Montana 17,160, Wyoming 6,634, South Dakota 6,382, New Mexico 5,736, North Dakota 4,472. Per square mile of area, the Plains in 1919 had .278 wage earners, the rest of the nation 4.59, and the entire nation 3.0. Per state, the average number of wage earners in 1919 was 31,023 for the Plains, 68,516 for the West, 92,900 for the South, 348,479 for the Midwest, and 399,402 for the North Atlantic region. Of the national total, 79% of wage earners in 1919 were in the North Atlantic and Midwest regions.

*Internal Revenue, Statistics of Income, 1920, 22+23; Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Totals for personal income from tax returns are for calendar years and for incomes of $1,000 and over. Individuals filed returns for incomes of $1,000 and over, couples for incomes of $2,000 and over. Population rankings are from Census Bureau, Manufactures, 1919, 18.

[Slightly more prosperous in 1920 than the populations of New Mexico and North Dakota were those of Oklahoma ($145) and Texas ($155). Ranking in the middle third of the 48 states in per-capita taxable income were South Dakota ($162), Kansas ($173), Montana ($197), Colorado ($233), and Nebraska ($236). Though ranking high in per-capita comparison because of sparse population, Wyoming's taxable income total, $52.5 million, was itself one of the smallest, exceeding that of only five other states in the nation. Despite Wyoming's per-capita taxable income of $325, its small population was a limit on capacity to pay for public works. The average of forty-eight states was per-capita taxable income of $200, higher than that of seven Plains states.](#)
South Dakota's incomes declined in 1919 by 12% and in 1920 by 22%. North Dakota's declined in 1919 by 10% and in 1920 by 17%. New Mexico's declined by 14% in 1919, and Nebraska's declined by 6%. The fifth state in the nation whose incomes total declined in 1919 from its 1918 level was West Virginia, where the decline was by 5%. Internal Revenue, Statistics of Income, 1920, 22-23; Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Totals are for calendar years and for incomes of $1,000 and above.

In 1921, incomes declined from 1920 levels in: Nebraska (by 41%); Oklahoma and North Dakota (35% each); Kansas (29%); Texas, Montana, and New Mexico (25% each); Colorado (20%); and Wyoming (19%). The depression cut incomes for South Dakotans to one-third their level during the war; their incomes on returns, $151 million for 1918, declined to $47 million for 1921. Ibid.

Montana, Wyoming, the Dakotas, and New Mexico ranked among the twenty lowest states in incomes reported for 1922, as they had for 1919, before the depression. South Dakota's 1922 total for reported incomes increased 3.9% from 1921. The total rose 4.1% in New Mexico, 5.7% in Colorado, and 13.4% in Oklahoma. Incomes in 1922 were among the nation's top 20 in three Plains states—Texas (ranked 9 among 48 states), Oklahoma (18), and Kansas (19). Other deficits in 1922 when totals then are compared to levels of 1920 ranged from North Dakota (34%) through Kansas (31%), Oklahoma (26%), Texas (24%), Montana (23%), and New Mexico and Wyoming (22% each). Colorado, whose residents' total was 16% below 1920, had recovered most. Ibid.


Auto Worker (Chicago), December 1920; Denver (Colo.) Labor Bulletin, May 28, 1921; Farmers' Advocate (Bottineau, ND), Jan 14, 1921-March 17, 1922.


Many of Tarrant County's smaller projects were to begin in winter, the rest within ninety days. During the next few weeks, work was planned on two bridges using small crews, a road using some seventy-five men, a second road using some forty men and teams and later other men, and a third road using about forty men at the start. The projects would help give the county a good road system and furnish work for the unemployed, said one county official. Fort Worth Star-Telegram, Dec. 28, 1920, and Jan. 10, 1921.


In an urban area near the Plains, Kansas City, KS, in early 1921 a rock pile had "been opened by which men out of work will be given employment. The rate of pay has not been made public, but it is said the wages will be paid in groceries." Labor Bulletin (Kansas City, KS), Jan. 26, 1921. Men who spent winter in Lincoln, NE, or Chicago often worked in summer in fields of northern Iowa growing sugar beets and other vegetables. Those growers often hired many Mexican nationals who arrived by train from Laredo, TX, or other cities near the Plains' southern border. D. H. Culver, "Truck Crops Labor," speech to Iowa State Vegetable Growers' Association, 8th Annual Convention, Feb. 1-3, 1922, at St. Ansgar, IA, 313-14 in Transactions of the Iowa State Horticultural Society, 1921 (Des Moines, 1922), 314; John Ramon Martinez, "Mexican Emigration to the United States, 1910-1930," (Ph.D. dissertation, University of California, Berkeley, 1957), 92.

Farmers' Advocate (Bottineau, ND), Feb. 25, March 18, and Dec. 30, 1921.

H.E. Nichols, delegate from Iowa State College and Iowa Fruit Growers Association, "Report of the National Fruit Growers' Meeting Called at Chicago, Illinois, April 5, 1921," speech before 56th Annual Convention of Iowa State Horticultural Society, Nov. 30, 1921, at Des Moines, 33-38 in Transactions of the Iowa State
Commerce Secretary Herbert Hoover said railroad rates had declined less than prices in some parts of the economy. In a letter to Sen. Arthur Capper of Kansas, Hoover said that “we are in a fair way to rewrite the whole commercial and industrial geography of the country in consequence of the present rate basis.” Hoover suggested that the Agriculture Department create within its Bureau of Markets a national food marketing board to affect marketing of fruits, vegetables, grains, and other produce. Hoover said an index of prices, based on 1913 levels as 100, showed farm crop prices were at 109, building materials at 212, and railroad rates at 166. Farmers’ Advocate (Bottineau, ND), May 6, 1921. In part, wheat regions suffered because the crop remained too large. “Farmers in the Corn Belt and other eastern States have made substantial progress in readjusting their crops” in acreage to postwar demand, Wallace noted in 1923. “The wheat area, however, is still in excess of the pre-war average.” Yet many farmers growing wheat, he said, “are restricted in their choice of alternative crops, and, furthermore, are not financially able to change materially their type of farming,” leaving economy and efficiency of production as ways to seek profit. Others in the spring wheat belt might change to corn, more profitable by 1921 prices, ending a one-crop agriculture that had produced for localities “heavy losses in years of crop failure.” Under the one-crop practice, farmers combated losses by growing more, which sometimes only increased their debt. Wallace, “The Wheat Situation,” 140-42, 144. Weather also affected wheat growing, particularly in semiarid areas, damaging the crop repeatedly when prices were high. “Although financial difficulty is widespread among farmers in many regions where wheat is extensively grown, the situation is no doubt at its worst in the semiarid sections extending from western Kansas and eastern Colorado to the Canadian border.” Some years “when wheat prices were at war levels, crops in many sections failed. On the other hand, production costs remained high and long hauls and high freight rates to market bore down upon the dry-land farmer with special weight.” Wallace, “The Wheat Situation,” 143. Wheat production, he said, had been more costly than prices could cover since 1920 for many farmers, since 1919 for some, from causes including higher taxes, production at levels exceeding peacetime demand, and bad weather. Such “dry-land areas during the last few years” had experienced increases in farm debt, delinquent interest and taxes, and foreclosures and bankruptcies. Also, farmers capital and credit had been depleted. Ibid., 143-44.

Notices of foreclosure sales increased during early 1921 in Bottineau County. Five notices appeared in the newspaper by mid-January, eight a month later, 13 in mid-March, 14 in late May, and 11 in July. By winter 1922, the notices totaled 27 in the issue for early February, 32 for mid-February, and 19 for mid-March. Farmers’ Advocate (Bottineau, ND), Jan. 14, Feb. 18, March 16, May 20, and July 1, 1921, and Feb. 10 and 17, Feb. 24-March 17, 1922. Problems preceded the depression in Bottineau County, for it lost population by 1920 from its level a decade earlier. Its 1920 population had declined by 12.6% from 1910 to 15,109. Mandan (ND) Daily Pioneer, July 19, 1920. North Dakota, Commissioner of Agriculture and Labor, Seventh Biennial Report For the Term Ending June 30, 1922 (Grand Forks, [1922]), 6; Farmers’ Advocate (Bottineau, ND), Feb. 4, July 8, and Nov. 4, 1921. In July, rain and bad roads were cited as reasons why the time for submitting recall petitions was extended where requested. Ibid., July 1, 1921. The nation’s wheat industry was “in a period of serious depression” even in the 1923 season, when prices for some other farm products and good farmers bought had recovered, said Agriculture Secretary Henry C. Wallace. “Although wheat prices have dropped to pre-war levels, prices of manufactured commodities and of services remain high. The costs which enter into the production and marketing of wheat are so high that, at present prices for wheat, the farmer can not continue to pay them and remain in business. Taxes, machinery, wages, freight rates, and prices of food and clothing are out of proportion to the price of wheat and the earnings of the wheat farmer.” Wallace, “The Wheat Situation,” 146. Among the nation’s worst areas for abandonment of farmhouses in 1922 were “several sections of the Great Plains region and the Pacific Northwest.” Ibid., 120-22.


Among seasonal improvements, workers in Colorado on farms at Florence were growing truck crops, hay, grain, and potatoes. In the mountains nearby, lettuce was nearly ready for a summer market. Denver (CO) Labor Bulletin, May 28, 1921. Farmers reported no shortage of laborers in the North Dakota wheat harvest. Fargo (ND) Forum, July 16, 19, 1921. The North Dakota harvest laborers included Floyd Kindle, who sought work at wheat farms while driving a "$2,000 roadster," for which he had missed making payments. His arrival in the auto at a
cheap lodging house in Fargo seemed suspicious, and soon authorities from South Dakota, where he had made a
down payment and registered the vehicle, asked that he be held for removing mortgaged property. Ibid., 25, 1921.
At Bottineau, North Dakota, plenty of labor was expected to follow the mid-summer harvest through work in
fields of the northern counties, particularly because the crop was small in the state's drier sections. Farmers'
Advocate (Bottineau, ND), Aug. 5, 1921; Vaughn (NM) News, Sept. 16, 1921; L. A. Gillett, New Mexico state
highway engineer, quoted in "Fall Lettings of Contracts Favored by Many State Highway Engineers," Engineering
News-Record 86 (Oct. 20, 1921): 664; Labor Herald (Kansas City, MO), Oct. 7, 1921. Work in many jobs in the
Plains and elsewhere might have been affected by a strike planned in October 1921 by some railroad workers. To
supply food if needed during such a strike, a labor journal reported, federal officials "placed orders for thousands
of flanged wheels, of standard railroad gauge." Under a plan by the Commerce Department for shipping on rails by
trucks and autos, it said, the wheels were to be fitted onto war-surplus motor vehicles, which earlier had been
distributed to states for use in federal-aid road work. Resolution of the railway dispute, though, averted a strike.
Labor (Washington, D.C.), Nov. 12, 1921. Fargo (ND) Forum, Oct. 5, 1921; "Unemployed in Texas To Do Road
Work," Engineering News-Record 87 (Oct. 20, 1921): 671. Kansas wheat was worth $23.50 an acre and $1.09 a
bushel in late 1920, declining to $9.43 an acre and 53 cents a bushel in late 1921, the state board of agriculture
reported. The crop was smaller in 1921, yet its aggregate value was $175 million, down from the $431 million for
to fields where farmers were hiring harvest workers. Many people were hired yearly as cotton pickers in Texas.
Yet "the activity which requires the largest fieldforce, because of its extensive territory, is the grain harvest, which
includes more than 45,000,000 acres of wheat, barley, oats, and rye," the service reported. "The wheat harvest
begins about the latter part of May in Texas and progresses gradually to the North and West as the season advan-
tces, ending about September 1 in North Dakota. Following the harvest in the North, demands for threshing help
continue throughout October." Labor Department, U.S. Employment Service, Report of the Farm Labor Division

26 Sioux Falls (SD) Daily Argus-Leader, quoted in Sioux City (IA) Journal, Jan. 23, 1922; Iroquois (SD)
Chief, reprinted in Sioux City (IA) Journal, Jan. 24, 1922; Alexandria (SD) Herald, reprinted in Sioux City (IA)
Journal, Jan. 24, 1922. The graveling project near Sioux Falls, SD, was conducted by a paving company on a
seven-mile stretch between Brandon and Valley Springs. The work, spreading some 11,000 yards of gravel, began
Dec. 28, 1921, and was completed by Jan. 11, 1922. Sioux Falls (SD) Daily Argus-Leader, Jan. 12, 1922. Taxes
were a concern for some farmers near areas where dairy income continued. At Webster in Day County in
northeastern South Dakota, a creamery's purchases in 1921 brought neighboring farmers about $65,000. "much of
this money being received by them at a time when they had no income from any other source." The creamery also
paid stockholders a dividend. In nearby Coddington County, some residents sought relief from lack of income by
cuts in local government spending. Eden township citizens signed a petition in favor of a 50-percent cut in
spending by the county from its road and bridge funds and urging abolition of county positions of agricultural
agent and public health nurse. Sioux City (IA) Journal, Jan. 21, 1922, and Nov. 4, 1921.

27 Applicants included a cooper, raised in Topeka, who had worked in Denver several years until a recent
layoff. Other winter jobs that day, some for only hours, included plowing a garden, cutting trees, washing win-
dows, and working in a dairy, hotel pantry, or restaurant. Topeka Daily Capital, Jan. 11, 1922. Winter's demand
for laborers contrasted that of summer's harvest season, for which Topeka's office estimated it sent 5,000 men to
wheat fields. Ibid., Jan. 7, 1922. At Topeka's employment office, hiring improved by mid-February as farm work
opened. Good weather would allow the start of construction in the next month, said an official at the office. Ibid.,
Feb. 21, 1922. Winter's unemployment in Topeka was a problem existing beyond times of economic depression,
said T. B. Garrett in a column of labor news he wrote for Topeka Industrial Council. "Year after year this same
question has confronted us," as the city in winter draws many of the "destitute and needy" until warmer weather.
Ibid., Jan. 29, 1922. Among the highway commission's projects were those for 116 miles of paving and seven
large bridges. Ibid., Jan. 1, 1922. By February 1922, a newspaper reported that at Casper "recently many former
miners of the Montana region left for Butte, Great Falls and other points on word that mining and smelting
activities had been resumed." Wyoming State Tribune (Cheyenne), Feb. 3, 1922.

28 "No other county in Texas has anything like this amount of hard surface mileage of roads and streets," San
Antonio Express said, "and no other large city in Texas is fostering as large a road building program for 1922 into
new territory as San Antonio." The 1,000 miles of paved roads in San Antonio and Bexar County included sections with bitulithic, asphalt, or macadamized surfaces. Also, on the city's streets were sections of brick and wood-block pavements. Some of the city's 378 miles of paved or macadamized streets had been damaged in a September flood, requiring repairs at which some men had worked during fall. San Antonio Express, Jan. 1, 1922. Seven counties near Dallas had approved road bond issues totaling $10.7 million by mid-1919. Besides those, road bonds were authorized for Dallas County for $6.5 million and Tarrant County (Fort Worth) for $3.5 million. "$6,500,000 for Dallas Roads." Public Roads 2 (June 1919): 5.

Omaha's spring paving program was estimated to cost some $2 million. Of the 500 men to be hired, some 300 would work at paving and grading city streets. The remaining 200 men would work near Omaha in rural parts of Douglas County, where about 19 miles of paving was planned. Omaha Daily Bee, Feb. 17 and March 3, 1922. From its active week of trading, Wessington Springs shipped out on the railroad "14 cars of cattle, 3 of horses, 4 of corn, 1 each of rye, oats and barley and 9 of wheat," a newspaper reported. Sioux City (IA) Journal, Feb. 19, 1922. Farmers sought higher incomes by forming marketing co-ops in locations including northern North Dakota's Bottineau area. Farmers there formed a cooperative cream-shipping organization, after considering figures indicating that the co-op would be able to pay shippers "five or six cents per pound more for butter fat than they would receive by shipping independently." Farmers' Advocate (Bottineau, ND), Feb. 17, 1922.

Montana State Highway Commission, Third Biennial Report 1921-1922 (Helena, [1923]), 28. Even in 1918, Montana farmers' low incomes had been a consideration for the Montana commission in selecting road projects. In 1919, the federal Bureau of Public Roads reported that the Montana commission "recently completed roads in Blaine and Hill Counties, Mont., selected not only to give improved highways urgently needed but to furnish work to farmers who met with losses of their crops last year through unfavorable weather." A state project there was for grading and gravel surfacing of six miles on one road, and for cutting a section through bluffs on another. "All the labor and teams were furnished by farmers residing in the immediate vicinity." The work was part of Montana's "State-aid plan, by which the State bore 40 percent of the cost." "Roads Give Work to Farmers," Public Roads 1 (January 1919): 26. Farmers' Advocate (Bottineau, ND), March 3 and April 28, 1922.

Montana State Highway Commission, Third Biennial Report, 1921-1922 (Helena, [1923]), 28. Even in 1918, Montana farmers' low incomes had been a consideration for the Montana commission in selecting road projects. In 1919, the federal Bureau of Public Roads reported that the Montana commission "recently completed roads in Blaine and Hill Counties, Mont., selected not only to give improved highways urgently needed but to furnish work to farmers who met with losses of their crops last year through unfavorable weather." A state project there was for grading and gravel surfacing of six miles on one road, and for cutting a section through bluffs on another. "All the labor and teams were furnished by farmers residing in the immediate vicinity." The work was part of Montana's "State-aid plan, by which the State bore 40 percent of the cost." "Roads Give Work to Farmers," Public Roads 1 (January 1919): 26. Farmers' Advocate (Bottineau, ND), March 3 and April 28, 1922.

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State road bond propositions failed in November 1920 elections in states including Montana, for $15 million, and New Mexico, for $2 million. "November Election Boost to Good Roads," Roadmaker, Excavator and Grader 15 (January 1921): 41-42, 43-44.

George E. Johnson, "Recommendations of Secretary," 248-51 in Nebraska Department of Public Works, Report 1921-1922 (Lincoln, [1923]), 248; Nebraska Department of Public Works, Report 1923-1924 (Lincoln, [1924]) 18-19. With the 1921 appropriation by Congress, other states would be able to spend, even if Nebraska did not. Indeed, Congress retained a time limit for spending the funds. New federal funds became available for use yearly, and states had three fiscal years in which to use funds allocated to them or have the funds reallocated among all states, as provided in the 1921 law, reprinted in U.S., Statutes at Large, Vol. 42, Part 1, 217.

The 1921 provisions for reduced matching applied to states where public lands exceeded 5% of area. In the Plains, Wyoming would provide in matching funds only 35 percent of the cost of federal-aid projects. New Mexico 37 percent, and Montana 47 percent. The reductions applied to federal funds still unobligated to projects or unmatched and retroactively to projects whose construction began after June 1921. Percentages of unappropriated federal lands in states and of federal matching required are from Floyd O. Booe, "The State As A Road Builder: A Survey of Finances both Federal and State in their Relation to Highway Development in Nevada," 17-26 Nevada Department of Highways, Third Biennial Report, 1921-1922 (Carson City, 1923), 20.

North Dakota State Highway Commission, Report, July 1, 1920 to June 30, 1922, 2257-58. The state commission distributed some equipment to aid counties in local road work. Some 30 war-surplus tractors the commission received from federal agencies were "mostly of the caterpillar type and were offered to practically all of the counties in the western part of the state where conditions were worst on account of repeated crop failures. Most of the counties in which these tractors were placed are using them very successfully in turnpicking county
highway systems that have been established." Of the more than 300 trucks the commission received as war surplus, many were used in state road maintenance and in counties' road-graveling projects. Ibid., 2259. The federal-aid project to make a Missouri River bridge between Bismark and Mandan is discussed in chapter seven, page 129.

Ibid. North Dakota's highway commission did receive small amounts from state sources. Its revenue from vehicle registrations totaled $209,262 in fiscal 1921 and $201,526 in 1922. It received appropriations of $242,500 in 1921 and $117,000 in 1922. Taxes on autos were being recommended in 1922 in a state where most owners drove Fords. Auto registrations in North Dakota in 1921 included 49,694 Fords, five times the number of the second-largest group, the 8,886 Overlands. In trucks also, Ford led other brands. Though only 1,484 Ford trucks were registered, the next-ranked brand was the International at 272 trucks. Ibid., 2302-05. The bridge was the largest federal-aid project yet completed in the state. Ibid., 2260-62. Work on the project had anchored three piers for the bridge in bedrock by March 1921, protecting them against damage from the flow of winter ice once it broke upriver, a newspaper reported. Apparently some work had proceeded in winter. Counties on each side of the river were building roads at the bridge's approaches to carry traffic onto it. "With the completion of the piers it is expected that the work on the structure will be begun shortly and there seems now every indication that the bridge will be completed before next winter or at least before the winter is over. Work on the approaches may be commenced in time to have them ready by the time the structural work is completed and we may be speeding across the bridge before January 1st of 1922." Mandan (ND) Daily Pioneer, March 1, 1921. Work was under way on the approach on the bridge's eastern side by May 1921, and surveying had started for an approach from the west. The bridge's "concrete piers and arches are being built out from the level of the bluff and will be completed before the bridge crew comes to the task of setting the steel structure." Ibid., May 4, 1921.

"U.S. Supreme Court Upholds State Taxation of Gasoline," Public Roads 4 (September 1921): 12. By 1923, gasoline was taxed also in Oklahoma and Texas. Trumbower, 7.


Oil prices declined in mid-1921 to $1 a barrel, the pre-war price in production fields of Kansas and Oklahoma. Wages of refinery workers had been cut 20%. Labor Bulletin (Kansas City, KS), June 29, 1921. In the Texas panhandle at Amarillo, Bobby D. Weaver notes, a gas well began producing in 1918, supplying the city by pipeline by 1920; the area's first oil well was completed in March 1921, and soon "several small oil producers appeared in northern Carson and southern Hutchinson Counties." Still, "after 1921, and extending on into 1924, Panhandle oil production was slow in developing because of limited capital and a lack of pipeline facilities to transport the oil north to a market." In 1925, several "big producers" were drilled, before the area's oil boom. Bobby D. Weaver, "The Discovery and Development of the Panhandle Oil and Gas Field," Journal of the West 28 (October 1989): 4. Oil prices per barrel were 61 cents in 1910, $1.10 in 1916, and $3.20 in 1920, according to Paul Bonnifield. At Amarillo in December 1918 a well was completed with "a tremendous flow of gas." At Texhoma, Oklahoma, drilling began in 1919, leading to a well by December 1922 with a large gas flow. By 1922, many gas wells were drilled between the Canadian and Cimarron rivers. Paul Bonnifield, "Energy Resources on the Southern Great Plains," Chronicles of Oklahoma 59 (Fall 1981): 350-51.

Some $2 million from oil revenues was used for roads in those approximately 33 oil-producing counties in the two years to June 1922. Oklahoma State Highway Commission, Report, 1924 (Oklahoma City, 1924), 32-35, 140-43, 151-53; William P. Corbett, "Politics and Pavement: The Formative Years of the Oklahoma State Highway Department," Red River Valley Historical Review 6 (1981): 104, 107. Of the $459,000 set for 1922 spending for paving in Kay County, only one-eighth came from county taxes. Also, the county's share of revenue from auto-registration fees amounted to some $45,000 in 1921 and was being used to maintain state roads in the county. Black Dispatch (Oklahoma City), Feb. 9, 1922.

Wyoming State Tribune (Cheyenne), Feb. 6, 1922. Production of crude oil in Wyoming in 1921 would exceed 19 million barrels, worth about $25 million at the wells, said G. B. Morgan, state geologist. In 1920, the production was some 17 million barrels, worth about $45 million. The share of oil revenue for schools would support maintenance costs for two months a year, which a Cheyenne newspaper considered enough to allow a tax
Yet oil prices had fallen in 1921, and the value of the Wyoming production was expected to be much less than in 1920. The 1920 price per barrel was twice that of 1921 in the amounts of oil and money above—$2.65 for 1920 and $1.32 for 1921. Ibid., Jan. 1, 1922.

Wyoming State Tribune (Cheyenne). Feb. 9, 1922.

In the installment plan for paying for the paving project near Topeka, a newspaper reported, “the county commissioners calculate the cost to the property owners at about 10 cents an acre per annum, which probably is somewhat too low. However, for some years there will be a saving of the present cost of road dragging” for maintenance. Topeka Daily Capital, Jan. 12, 1922. In special assessment for improvements to nearby roads, farmers’ payments declined by distance of their land from the road. Thus, for a federal-aid grading project near Sabetha, in northeastern Kansas, a farmer’s special tax declined to about one-seventh the average payment if his farm were a mile from the road. In the grading project, a newspaper reported, “the entire cost of the road was $38,000. The average cost for a 160-acre farm on the road was $84.50,” and the average for a farm a mile from the road in the benefit district was $9.60. Ibid., Jan. 3, 1922. Ibid., Feb. 26, 1922.

42Texas State Highway Commission, Third Biennial Report, Dec. 1, 1920, to Dec. 1, 1922 (Austin, 1923), 94. Seven counties near Dallas had approved bond issues totaling $10.7 million by mid-1919. Counties and amounts of bonds approved were: Collin $3 million; Hunt $2 million; Denton $1.65 million; Titus $1.5 million; Kaufman $1.45 million; Rockwall $800,000, and Ellis $250,000. In addition, Dallas County voters approved bonds May 24, 1919, for $6.5 million, and Tarrant County voters of the Fort Worth area nearby would soon approve bonds for $3.5 million. The ballot proposition in Dallas County specified bond funds would be used for a realtime around the county with 12 roads radiating from Dallas and six roads connecting them. Federal aid allocated by then to Dallas County totaled $250,000. “$6,500,000 for Dallas Roads,” Public Roads 2 (June 1919): 5. Counties continued to be important in Texas roadbuilding through the 1920s, according to John David Huddleston. Texas formed a state highway department in 1917 to participate in the federal-aid road program. “State control of road construction and maintenance did not, nevertheless, materialize overnight. The counties maintained a cooperative partnership with the state vis-a-vis the road program until 1932, when the state highway commission discontinued accepting count aid for construction purposes.” Huddleston, iii-iv.

43Montana State Highway Commission, Third Biennial Report, 48. Though federal-aid road work on Indian reservations in Montana was to begin in 1923, after the depression had ended for much of the nation, the projects could have offered work to offset seasonal unemployment.

44Kansas State Highway Commission, Report, 1919-21 (Topeka, 1921), 25. In Montana, the state supreme court ruled against the poll tax by early 1922. Council Bluffs (IA) Nonpareil, quoted in Sioux City (IA) Journal, Jan. 27, 1922. Increasing participation of women voters also diminished the sense that a poll tax, payable in road labor, was levied on all electors. The tax might have been paid by women in cash, yet in North Dakota the state tax commissioner ruled in 1922 “that women must pay the school tax but not the road poll tax,” a newspaper reported. Farmers’ Advocate (Bottineau, ND), April 21, 1922. In contrast, by 1921 a ruling applied the poll tax to Texas women between ages of 21 and 60 unless they were exempt. The state comptroller’s ruling in local tax assessment, said a newspaper, “held that community property should be listed to both husband and wife and the poll tax of each added where no exemption occurred.” Fort Worth Star-Telegram, Jan 7, 1921.

In Montana, the state highway commission said in late 1920 it had performed the “construction of practically no improvements with its own forces by day labor,” or using a workforce of its own, believing it less efficient than contracting with companies for construction. It planned some such work in 1921 to set a standard for contract prices. Montana counties had been allowed to build federal-aid projects with their own day-labor workforces, though they often lacked supervision, and sometimes the work cost counties more than they had agreed on when contracting to build a project. Montana State Highway Commission, Second Biennial Report, 19.

46North Dakota State Highway Commission, Report, July 1, 1920 to June 30, 1922, 2259.
War-surplus equipment was distributed by the war and agriculture departments to all states. By late 1920, Montana had already received 333 trucks, 22 touring cars, and 17 caterpillar tractors. Convicts built a repair shop near Deer Lodge for storing and repairing the items, which were then distributed to counties, cities, and state institutions for road work and “rented to contractors engaged in the construction of state highway projects.” Nine contractors by late 1920 were using many war-surplus dump trucks and some of the 120-horsepower caterpillar tractors, rollers, and ‘clam shell’ excavators. Montana State Highway Commission, Second Biennial Report, 11, 56-61. Montana State Highway Commission, Third Biennial Report, 35. Postwar road work employed many men yet rarely involved women directly, though a few women were part of such activities as running a company making machinery for Texas projects or managing city crews in South Dakota. Projects in Texas and other states were being completed using oil-spraying machines manufactured by an Everett, MA, company whose president and general manager was Miss Eva Cressey. And at Yankton, SD, Dr. Jennie C. Murphy was street commissioner, managing the city’s construction gangs and street cleaners. Contractors’ & Engineers’ Monthly 3 (December 1921): 45.

Warden Fenton said that “convict gangs have worked on state roads two years now. The first year there were a few escapes but last year not a man escaped.” In 1921, the 55 men were housed at three road camps. Each man got a day off his sentence for each day worked, besides getting 75 cents a day for a wage. That number would be available again in 1922 among the prison population of 375, after assignment of some 100 to do prison chores, 250 to work in a new shirt factory, and 100 in its furniture factory. The state’s department of public works fed the men, leaving the prison the costs of clothing and guarding them. “I don’t see how convict labor will cost more than $2 a day. I don’t believe there is any labor that could be obtained so cheaply.” Omaha Daily Bee, March 21, 1922.

In mid-1920, before wages had declined much from the boom, Nebraska was using convict labor on roads in Johnson, Seward, and Pawnee counties after bid on all their federal- and state-aid projects were rejected because of high prices for excavation. Service Bulletin 8 (May-June 1920): 15. Yet by early 1922 many men were available at low wages for unskilled labor in construction. The wage for common labor was $3 for a 10-hour day beginning Aug. 29, 1921 at U.S. Steel in its Pittsburgh district, though layoffs in the district had affected many men. The wage for the company there since 1913 had peaked at $5.06 per 10-hour day beginning Feb. 1, 1920. “Wages of Common Laborers 1913 to 1921, and Probable Future Wages,” Engineering and Contracting 57 (March 3, 1922): 216. Wages for common labor in road work in the nation were low in early 1922, according to the U.S. Bureau of Public Roads. The wages declined a cent in averages for January and February 1922, “the average prices for the whole country being 29 and 28 cents an hour, respectively, in the two months. Prices paid for skilled labor also showed a general decline.” Agriculture Department, Official Record 1 (April 12, 1922): 2. Wages varied, though, by region, the bureau noted. In federal-aid projects under way in January 1922, “the price for common labor ranged around 25 and 30 cents an hour in a great majority of the states, being somewhat lower in the Southern States and going up to nearly 50 cents an hour in the Pacific States. The prices of teams reported were in a great many instances as low as the 1914 level. It is probable, however, that there will be an increase when the farming season begins, as teams have always been cheaper in winter.” Agriculture Department, “Road Labor Costs Decline,” Official Record 1 (March 15, 1922): 5. The 48 portable bunkhouses—8 feet wide, 7 feet high, and 20 feet long and “drawn on low wheeled wagon beds”—were put at “the various gravel and clay camps” and at the state highway department’s convict-labor camps. Their equipment included two bunks, four mattresses, coffee pot and tea kettle, oil stove, water pail and two dippers, and a kerosene lamp, all war-surplus material provided by the federal government since 1919. “Report of the Secretary of the Bureau of Roads and Bridges,” in Nebraska Department of Public Works, Report, 1921-1922 (Lincoln, [1923]), 259, 262-63.

MacDonald spoke at Omaha to the American Association of State Highway Officials’ seventh annual meeting. Omaha World-Herald, Dec. 8, 1921. On ongoing program was considered necessary by federal officials.
partly to give states a framework within which to make changes in their laws and appropriations to allow them to participate. In November 1921, Congress had approved new funds. When another appropriation of federal funds was debated before a Senate subcommittee in early 1922, Thomas H. MacDonald, the federal road program’s chief, said new federal funds would have a sustaining if not immediate effect in a program that required considerable time for planning projects and raising revenue within states. He told the committee he agreed with a description of the situation offered by Sen. Lawrence Phipps of Colorado. Phipps had said that “if we are confining our road construction to the end of the fiscal year 1923, we will have enough money in sight with which to do it; but if it is to be a continuing program there is a necessity for an appropriation. because the States” in most instances “will not vote bond issues or provide for local taxation in any other way to meet Federal aid until that Federal aid has been assured. They will not lay out their money or enter into contracts.” Senate Subcommittee of the Committee on Post Offices and Post Roads, 67th Cong., 2nd sess., February 23, March 2, 1922, Hearings on H.R. 9859, Post Office Appropriation Bill for Fiscal Year ending June 30, 1923, Part 2, 172-73. Referring to legislatures’ sessions scheduled for winter 1923, MacDonald said the depression might reduce states’ willingness to spend in the federal program, particularly if the program itself were to slow. “We are certain to have next winter, in a considerable number of States, a reaction against public road building,” MacDonald said. “The situation which confronts us next winter is going to be a difficult one from the standpoint of action by the State legislatures. I anticipate that if the program of highway development is held steady and we do not lose much of the progress that we have made, it will be because of the influence and example set by the Federal Government in setting up a program to be carried on.” Ibid. The last six months of 1921, MacDonald said, had been a period of “great construction activity” producing completion of many federal-aid projects yet “one of almost complete stagnation with respect to the initiation of projects.” Bureau of Public Roads, “Report.” 461-503 in Agriculture Department, Report, 1922. 463-64.

Leaders in completed projects by mid-1922 were North Dakota (307 miles), Wyoming (317 miles), and the two largest Plains states, Montana (464 miles) and Texas (1,131 miles).

The Plains region’s federal-aid work under way in mid-1922 totaled 7,053 miles. In five states, the road projects under way expanded by large percentages over mileage of federal-aid work they had completed—Nebraska (by 767%, from 168 miles to 1,458), South Dakota (389%, from 155 miles to 757), Oklahoma (349%, from 86 miles to 387), Kansas (303%, from 140 miles to 566), and New Mexico (301%, from 185 miles to 742). Mileage of federal-aid projects, complete or under way by mid-1922, for Plains states are: Texas 3,110; Nebraska 1,625; North Dakota 1,213; New Mexico 927; South Dakota 912; Montana 731; Kansas 706; Wyoming 670; Oklahoma 473; and Colorado 463.

Graveling was the largest kind of federal-aid road work the Plains states completed by mid-1922, a period including the worst of the depression. Graveling had the largest mileage of any kind of road work in Texas. Of the Plains’ total of 1,514 miles of completed graveling for the ten states, half was in projects in Texas, and forty percent was in four other states. These states led in the Plains’ completed gravel mileage: Texas 761 miles; Montana 289 miles; New Mexico 134 miles; South Dakota 99 miles; and Wyoming 81 miles. The five remaining Plains states had completed little graveling; their combined mileages were 10% of the region’s total. Also, many men worked in Plains projects to grade and drain roadbeds, improving travel and preparing for later projects that might apply surfacing. Grading and drainage projects were the region’s second-largest kind of work completed with federal aid by mid-1922, totaling for the ten states 937 miles. Mileage was largest in North Dakota and four other states. In grading and draining projects, North Dakota completed 289 miles, Montana 132 miles, Nebraska 119, Texas 112, and Wyoming 104. Five other Plains states completed little work; their combined mileages were 19% of the region’s total. Some states led both in graveling and in road grading-drainage projects; in neither kind of work did the five states with lowest mileage include Texas, Montana, or Wyoming. Agriculture Department, Report, 1922. 473-83.

Paving completed by mid-1922 totaled 69 miles in Kansas, 64 in Texas, 47 in Colorado. 26 in Montana, and 21 in New Mexico. Of the region’s total for sand-clay surfacing, 95% was completed in Wyoming (124 miles), Colorado (36 miles), and Texas (27 miles).
Texas doubled its graveling work to 1,428 miles, continuing to gravel more than twice the mileage of any other Plains state, even South Dakota and New Mexico. Nebraska had under way grading and draining projects of 1,287 miles, nine times the size of its 119 miles completed in that work. Projects under way for sand-clay surfacing were for as many miles as those completed earlier, and mileage in brick surfacing, never large, declined. Bridge building increased to 9 miles, 50% above mileage completed, due largely to additional projects in Oklahoma. Agriculture Department, Report, 1922, 473-83. Kansas completed some paving with brick, more costly than concrete because of labor required; men completed a 12-mile stretch by laying some 4 million bricks. Brick paving in the project in Wichita, Kansas, was 18 feet wide, according to the county engineer. Wichita (KS) Daily Eagle, Jan. 11, 1922.

Federal payments for completed projects by mid-1922 totaled $2.6 million for Montana, $1.9 million for Kansas, $1.6 million for Colorado, and $1.1 million each for Wyoming and Oklahoma. Expansion of postwar roadbuilding was slower in the region’s four other states, as indicated in smaller totals for payments by mid-1922. The smaller federal payments were for New Mexico ($890,000), South Dakota ($670,000), North Dakota ($540,000), and Nebraska ($500,000). Data on federal-aid road work completed or under way by mid-1922 are discussed in note 7 of chapter 1, page 231.

Because little federal aid for roads was spent anywhere before 1920, the estimates would be of jobs created in 1920, 1921, and early 1922. In describing federal-aid projects of 1920-22, published reports by state and federal agencies routinely specify spending, mileage, and materials, not number of men employed. Estimates of number of jobs use figures for earlier construction and employment, given by the chief of the federal program before a Senate committee in March 1922, as described above in note 41 of chapter 2, page 241.

In Montana, the estimate is 6,637 jobs; in Kansas 4,846; in Colorado 4,177; in Wyoming 2,929; in Oklahoma 2,863; and in New Mexico 2,280. In South Dakota, federal-aid projects had created an estimated 1,791 jobs, in North Dakota 1,638, and in Nebraska 1,279. Local variations in wages would depart from what the nationwide estimate uses as typical. Further, the estimate applies to only part of the era’s road employment. Besides men working at road projects, others worked off-site in related production, commerce, and shipping. Other jobs were available to men at road projects that states and localities completed, without reimbursement, entirely with their own funds, more abundant because federal funds in the new program were relieving them of some tasks.

Montana’s federal-aid projects under way in mid-1922 were for half the cost of those completed by then. Costs declined from $5.2 million in those completed to $2.6 million in those under way. Yet the program expanded in the Dakotas, Oklahoma, and Kansas, reflected in cost of projects under way that in each state were triple the amount of those completed. In Nebraska they were more than six times larger. Costs nearly tripled in Texas, doubled in New Mexico, nearly doubled in Wyoming, and rose slightly in Colorado. In the Plains total for 10 states, costs tripled, rising $36.7 million for projects completed to $98 million for those under way. For the nation’s forty-eight states, those totals rose from $240.6 million to $322.8 million. They declined in two regions: in the West from $32.5 million to $25.5 million; and in the Midwest from $80.2 million to $69.8 million. Costs of projects increased in the South from $46.2 million to $77.6 million and in the North Atlantic region from $44.8 million to $51.6 million. Agriculture Department, Report, 1922, 473-83. Cost of the approved projects were to be met by federal aid and amounts at least as large from state and local governments. Federal road funds appropriated in fall 1921, after support from the President’s Conference on Unemployment then, were available in part in November 1921 and in part by January 1922. Rules for the appropriation required part of the funds to be in use within 90 days. Sioux City (IA) Journal, Nov. 17, 1921.

Seven of the Plains states were relying more on federal aid in their matching projects. Comparing completed projects to those under way, the percentage of federal funds in such projects declined after mid-1922 in only three states—Texas, Oklahoma, and Kansas. The other seven states were using federal aid to pay increasing shares of the projects of which it was part. That added jobs and spending while saving revenues from within states. Totals for population per square mile, 1920, are from Census Bureau, Census, 1920, vol. 1, Population, 31. In the region, Kansas ranked high in 1920-22 roadbuilding and in several measures of settlement and economic development. Kansas led the region in 1920 in percentage of land in farms and in value of farm implements and machinery; was second highest in population per square mile; second in the region in 1919 mileage of roads per square mile.
and second (after Texas) in 1919 average number of wage earners; led the region in 1919 railroad track per square mile, and ranked fifth in the nation in miles of track. Only Nebraska (second in the region in mileage completed) and Kansas, Oklahoma, and Texas had more than 15 people per square mile, and ranked fifth in the nation in miles of track. Only Nebraska ($10 million), and South Dakota, Montana, and Colorado ($8 million each). Near them in project costs were North Dakota and Wyoming ($7 million each) and New Mexico ($6 million).

With wheat prices remaining low, "the percentage of bankruptcies among farmers in 1922 was especially high in Iowa, Kansas, Nebraska, Colorado, North Dakota, South Dakota, Montana, and Idaho, ranging from 32.6 per cent of all cases in Nebraska to 78.5 per cent in North Dakota," reported Agriculture Secretary Henry C. Wallace. Many farmers left taxes on farms unpaid. "In some of the wheat-growing areas of Kansas, for example, delinquent taxes since 1917 have increased in volume several hundred per cent." Many people had left rural areas in the depression, and "from a survey of vacant farmhouses it appears that the percentage of all inhabitable farmhouses not occupied in the United States increased from 4.7 per cent in 1920 to 7.3 per cent in 1922. This abandonment of farmhouses was high in various sections of the country, but especially so in several sections of the Great Plains region and the Pacific Northwest." Wallace, "The Wheat Situation," 120-22.

Chapter 6

Federal aid for irrigation projects was authorized under the Newlands Reclamation Act of 1902. Irrigation had been established in southern parts of the West to rescue land from the California-Arizona desert; in valleys of central California, and east of coastal mountains in arid areas of central Washington, southern Idaho, central Utah, and west-central Nevada. Most of the nation's irrigated districts had developed in the Plains or the West. Maps of irrigation projects and rural population in the nation in 1920 are in Agriculture Department, Yearbook, 1921 (Washington, 1922), 416, 502. In Idaho by 1905, engineers and surveyors were preparing to build the Minidoka project of federally aided irrigation; highways and a townsite also were set out in the sagebrush area before construction began with steam shovels. The Minidoka project by 1920 was producing grain, beets, alfalfa, and potatoes, according to an article in Reclamation Record, published November 1920 by the U.S. Reclamation Service and reprinted in Boise, Idaho Daily Statesman, Nov. 18, 1920. Idaho had 2.5 million acres of irrigated land by 1920. Idaho Falls (ID) Daily Post, Jan. 4, 1921.

In nationwide rankings for the three elements combined, California surpassed most of the nation, ranking eighth among forty-eight states. Yet none of the West's six other states ranked in the top half. Indeed, four of its inland states were among the nation's lowest. Washington ranked 29, and Oregon 34. Much lower in rankings were Utah at 40, Idaho at 41, Arizona at 44, and Nevada at 48. Census Bureau, Financial Statistics of the States, 1919, 58; Agriculture Department, Yearbook, 1920, 829; Census Bureau, Manufactures, 1919, 18. Using advantages of size of population and road systems, states on the coast could expand work quickly in new road program compared to the rest of the West. In population per square mile, even California ranked well into the range of states at 32nd, Washington was 34th, and the region's five other states ranked among the nation's lowest. Western states had these values for people per square mile: California 22, Washington 20, Oregon 8, Utah 6, Idaho 5, and Arizona 3. Nevada's ratio was less than 1, the nation’s lowest. Census Bureau, Financial Statistics of the States, 1919, 58; Census Bureau, Manufactures, 1919, 18. In California, fifth-most urban state in the nation, 68% of population lived in such areas of at least 2,500 people. Similarly, in Washington 55% of people lived in urban areas. Other percentages were high—Oregon 49, Utah 48, Arizona 35, and Idaho 28. Even Nevada's population, smallest of forty-eight states, was 20% urban. Census Bureau, Abstract of the Census, 1920, 75. Other large cities of the region were Tacoma, WA, Salt Lake City, UT, Butte, MT, and Phoenix, AZ. A map of U.S. cities with population of 2,500 or more in 1920 is in Agriculture Department, Yearbook, 1921, 504.

The seven western states by 1904 had surfaced 14,470 miles of roads. Surfaced road in a 1914 count totaled 10,280 miles in California, 4,922 miles in Washington, and 4,726 in Oregon. Among the other western states, Utah led with 1,154 miles surfaced. Road surfacing types were: macadam, bituminous macadam, gravel, sand-clay, brick, Portland cement concrete, and miscellaneous materials. State totals for mileage of rural roads surfaced, 1904, 1909, and 1914 are from Anderson, 20. In the 1912 federal program to study improving post roads, states were allotted $10,000 on condition they provide twice that amount. Many states showed little interest in the pro-
gram, the first of federal aid for roads, approved by Congress to gather data for forming a larger program, begun later, in 1916. In the 1912 program, many states lacked funds or authority in their laws to cooperate in road work supervised by federal officials; many thought the allotment too small an incentive, federal officials said. Contracts were signed, however, for work in Oregon, Iowa, and Alabama. Some officials of states and counties objected to federal requirements limiting the workday to eight hours and banning convict labor, provisions set aside in federal-aid road work by rulings of mid-1913. The program was changed in 1913, when federal officials selected four road projects for detailed study to gather data for Congress. Those four projects, all outside the West, were in Alabama, Mississippi, Iowa, and Maine. Agriculture Secretary and Postmaster General, Joint Report of the Progress of Post-Road Improvements, 1913, 3-5. 10. Los Angeles Daily Times, Jan. 1, 1921, p. 7 (IV). Of the 1915 spending planned by seven Southern California counties, nearly half was to be by Los Angeles County, which already had 404 miles of asphalt boulevards. The seven counties' plans for 1915 included projects for 324 miles of concrete paving and 290 miles of desert highway. New York Times, Jan. 31, 1915, p. 8 (III). Earlier, southern California residents, in opposing road bonds, may have resisted paying for roads elsewhere in the state. In 1910, they voted 3-1 against California's first bond issue for roads, for $18 million, a proposal that narrowly passed in the statewide vote. A second bond issue, for $15 million, won approval by the state's voters in 1916. Funds from the first bond issue, spent by January 1917, had come mostly from counties, which had bought the state's bonds to permit construction to proceed. California Highway Commission, First Biennial Report, December 31, 1918 (Sacramento, 1919), 7-10.

4 From 1918 to 1919, the region's smallest increases in auto registration were in Nevada (14%) and Utah (9%). Because of the West's small population in many areas, its states ranked in the top half of states in the nation in the ratio of autos to people, despite having comparatively few autos. In motor-vehicle registrations in 1919, Washington ranked 17th, and Oregon 27th. State totals for autos registered 1919, the increase from 1918, and population per auto are from Agriculture Department, Yearbook, 1920, 829.

5 Commerce Department. Bureau of Census, Agriculture, 705-06, 710. Farm implements were of comparatively lower values in the West in 1920. Only California and Washington were in the lowest half of the 48 states in those values, even after western development for a decade that contributed to some of the nation's larger increases when measured by percentage of the 1910 values. Census Bureau, Abstract of the Census, 1920, 600.

6 In Washington, California, Idaho, and Oregon, improved land in farms ranges from 16% to 8% of area. Such land was 3% of area in Utah, and less than 1% in Arizona and Nevada. The corn-belt states and percentages of land in farms are Iowa 80%, Illinois 76%, Indiana 72%, and Ohio 71%; next in rank were wheat states and others older than those of the West-Kansas 58%, Missouri 56%, North Dakota 55%, and Kentucky 54%. Among five regions, the percentages of area in improved farm land were: Plains, 33.5, Midwest 32.4, South 21.4, North Atlantic 6.51, and West 6.26. Data on area is from Census Bureau, Financial Statistics of the States, 1919. 58; data on improved land in farms is from Census Bureau, Census, 1920, vol. 5, Agriculture, 34-35. Five states were among the nation's ten largest. The two smallest states were comparatively large; Idaho ranked 12th in area, and Washington 19th. Census Bureau, Financial Statistics of the States, 1919. 58. Enough road mileage was built by 1920 in Washington, Oregon, and Idaho to rank them at middle levels when comparing the seven states within the region. Surpassing them in mileage, California ranked 18th nationally. Yet in the rest of the West, road systems had remained smaller than in at least half the nation's states. When road mileage is measured against area, only two western states—Washington and California—avoided ranking among the nation's lowest ten. Rural road systems were small in arid states, ranking Arizona 44th in the nation in mileage, Nevada 45th, and Utah 46th. Agriculture Department. Yearbook, 1920, 829. Early in the depression, legislators from Idaho's panhandle counties continued to talk of seceding. Detaching the panhandle, putting it "in a new state with possibly part of eastern Washington and Spokane as the capital, would add another Republican state to the union," a newspaper noted. "Supporting the secession movement is a strong feeling among members of the legislature from the north—senators and representatives alike—that the north never gets a square deal either from the legislature or from the state and that the constant agitation against northern Idaho's educational institutions causes unrest and uneasiness, but what probably, is more responsible than anything else for this constant demand to secede is the natural barrier between the northern and southern part of the state, as yet unremoved either by a traveled highway or a railroad." Idaho Falls (ID) Daily Post, Feb. 20, 1921. Early state efforts in transportation in Idaho had been largely in building railroads. In highways, the state left most construction to localities. Idaho built some roads in its first 23 years of statehood, 1890-1913, though without forming a permanent commission for highways. During those years, said
state highway officials, "selection of each road project that used state funds required approval of the Legislature. Each project was administered by an individual commission that remained in authority only for the duration of the project." Fifteen of the commissions were formed in that period, including nine for bridge projects. American Association of State Highway and Transportation Officials, Moving America into the Future (Washington: the Association, 1990), 88.

Centralized highway agencies were created in these years: Washington 1905, Utah and Arizona 1909, California 1911, Idaho and Oregon 1913, and Nevada 1917. Years when states created their highway agencies are listed in Dearing, 54-55. Years when states adopted state-aid highway laws are noted in MacDonald, "History and Development of Road Building," 34. Unlike the rest of the region, Arizona attained statehood in the 1900s; it had remained a territory until 1912. Arizona’s state engineer noted that "prior to 1909 all expenditures for road improvement were made under the direction of the County Board Of Supervisors. From March 18, 1909, when the territorial road law was approved, a fund known as the territorial road law fund was expended under the office of the Territorial Engineer as directed by the Board of Control of the Territory." The fund was generated by property taxes in the counties. Arizona State Engineer, Third Biennial Report, July 1, 1916 to June 30, 1918 (Phoenix, 1918), 41-42.

California’s mileage ranked ninth in the nation and Washington’s eighteenth. State totals for railway track mileage, 1919, are from Interstate Commerce Commission, Statistics of Railways, 11.

It is doubtful if we can secure a sufficient number to maintain an economic number of men in the two camps," the state engineer said. Arizona State Engineer, Second Report, July 1, 1914 to June 30, 1915 and July 1, 1915 to June 30, 1916 (Phoenix, 1916), 582-83.

Ibid., 583-86. The director of Arizona’s prison labor camps, division engineer F. G. Twitchell, described a camp the state formed in December 1913, housing 29 men and eight teams, expanded by 1915 to 55 men and 24 teams. There, prisoners had no guards, were kept in camp on an 'honor system,' wore civilian clothes, slept in tents, and ate food "on a par with that in the best free labor camps, and better than that furnished in many." F. G. Twitchell, "Prison Labor," paper read at meeting of Association of Arizona Highway Engineers, July 27-29, 1915, 586-91 in Arizona State Engineer, Second Report, July 1, 1914 to June 30, 1915 and July 1, 1915 to June 30, 1916 (Phoenix, 1916), 587-88. Sense Arizona’s first use of prisoners on roads in 1909, while it was a territory, they had worked by 1918 in such projects as those in mountains and in deserts. Consistent with federal and state efforts elsewhere to improve convict labor conditions and make it a resource for highway construction, Arizona officials in 1918 emphasized the improved facilities at a state camp, in Gila County near Clifton, and, in some elements, at a local camp, run by Cochise County near Bisbee, close to the border with Mexico. Large tents with bunks housed men in the state camp, and a bunkhouse surrounded by a barbed wire fence did so at the county camp. Prisoners worked eight-hour days in both camps. One tent at the state camp contained a barber shop, another a dining room, kitchen, and bakery for feeding 100. Men improved in morale and physical condition working on roads instead of being at the prison, officials said. Their work was estimated as costing two-thirds the amount of labor for a contractor under a satisfactory contract. "Convict Labor on Road Work in the State of Arizona," 62-70 in Arizona State Engineer, Third Biennial Report, July 1, 1916 to June 30, 1918 (Phoenix, 1918), 62-68. Sometimes county prisoners worked for the state. Under an agreement by Arizona’s state engineer and Cochise County, "all prisoners convicted of misdemeanor acts (violation of the Prohibitory law, vagrancy, petty larceny, etc.) are turned over to the state highway department for use in construction of the state highways." Ibid., 76. By 1919, convicts had worked recently on road projects of such states as Arizona, Utah, Idaho, Oklahoma, Florida, Maryland, Illinois, Louisiana, Rhode Island, New Jersey, Wyoming, and Nebraska. The projects of each were described in articles on postwar labor needs in a new federal publication, Public Roads 2 (May 1919).

California ranked 11th nationally in number of wage earners in 1919, Washington 16th, and Oregon 32, while the other western states ranked among the nation’s lowest ten. Census Bureau, Manufactures, 1919. 18.

Data is for calendar years, for incomes $1,000 and over. For incomes below $1,000 for single people or below $2,000 for married people, filing income tax returns was not required. Exemptions and debt deductions allowed people with still higher incomes not to file returns. California residents as a group fared better in income than those of most other states in the nation. Their totals for net income ranked California 6th nationally in 1918-20, 5th in 1921 (the depression's worst year in the U.S.), and 4th in 1922. When measured by incomes in tax returns, the depression affected parts of the nation differently, favoring some states that had large, diversified economies. Even California's agriculture, profiting often from other crops than wheat, was less troubled by the depression. Thus, California's income total, already 56 percent of the region's in 1918, rose to 68 percent for 1922. Three states accounted for much of the West's income in the period. Combined, the totals of California, Washington, and Oregon were 77% of the region's income total in 1918, 80% in 1920, and 83% in 1922. The greatest contrast is with the total of Nevada, which remained 1% of the region's totals yearly during 1918-22. Ibid.

Though laborers usually made less than the $1,000 that required filing a federal tax return, the totals reflect incomes at higher levels, affected by federal-state road projects for skilled laborers, road contractors, and suppliers of material and equipment. The new federal-state program was one of many that employed men in roadbuilding in 1920-22. Counties, states, and special-purpose districts carried out road construction of their own, often stimulated by the federal-state work.

Totals for per-capita taxable income alter states' rankings among each other, though not the percentage change yearly within a state. Per-capita taxable income for 1920 is figured by dividing states' totals for individuals' returns to Internal Revenue by 1920 population. States' totals for 1920 per-capita taxable income are: California $388, Nevada $327, Washington $277, Oregon $247, Arizona $210, Utah $183, and Idaho $156. Ranking lowest in the West in per-capita taxable income for 1920 were Arizona, 21st nationally. Utah, 27th, and Idaho. 33d. totals for population 1920 are from Census Bureau. California's per-capita total presumes its large number of migrant workers in agriculture were counted completely in the census. If more of them were included in the population census, California likely still would have led the rest of the West by much, though its national ranking might have been reduced. Arizona and other western states also employed many migrant workers. Even so, the per-capita figures can indicate the size of a state's economy, from which taxpayers could support road work.

California's lead over the rest of the West, already great by 1918, increased steadily. From having 56% of the West's total for individual net incomes in 1918, California's percentage rose to 58 in 1919 and 62 in 1920. Spared the depression's effects more than the rest of the West, it further increased its share of the region's net income, to 66% in 1921, then 68% in 1922. Washington residents' share of the West's net income declined from 21% in 1918 to a low of 14.7% in 1921, before rising to 15% in 1922. In Idaho, the percentage declined steadily, from 4.5% in 1918 to 2.5% in 1922. Ibid.

In 1920, the declines from 1920 in state totals of net incomes were 30% in Washington, 28% in Arizona, 26% in Idaho, 24% in Utah, 18% in Oregon, 12% in California, and 11% in Nevada. Only three of the 48 states had smaller percentage declines 1920 to 1921 than California and Nevada. Illinois had smallest in the nation, followed by Missouri and New York. Ibid.

Nevada's 1922 total for incomes was lower than its level of 1920 by 12%, Oregon's by 17%, and Utah's by 18%. In Washington, residents' incomes at the taxable levels were still below those of 1920 by 20%, in Idaho by 27%, and in Arizona by 28%.

Wages were cut in late 1920 at mines in northern Idaho's Coeur d'Alene district. Boise, Idaho Daily Statesman, Dec. 14, 1920. Idaho's top 20 crops were valued at $94 million according to prices of Dec. 1, 1920, said Idaho Crop Reporting Service's statistician. That was 22 below their level a year earlier, even though 1920 harvests were some of the most abundant in the state's history. For wheat, Idaho's leading crop, the average price in the state Dec. 1, 1920, was $1.25 a bushel, down from $2.05 a year earlier. Idaho Falls (ID) Daily Post, Jan. 2, 1921. Ibid., Feb. 24, 1921. Lumber and cannery operations, described by officials of the 12th Federal Reserve District's office at San Francisco, were reported in Roseburg (OR) News-Review, March 30, 1921. Idaho Falls (ID) Daily Post, April 28 and May 8, 1921. At one Bingham, UT, copper mining company, some 700 men were
expected to be laid off in its reduction of operations announced in April 1921; only one mine in the district still was shipping normal tonnage. Salt Lake (UT) Tribune, April 3, 1921. At Tucson, AZ, mechanics and laborers in local yards of the Southern Pacific railroad were being laid off steadily in December; for the month, 200 to 300 men were expected to be affected. El Paso (TX) Morning Times, Dec. 4, 1920.

19 Imperial County was in 1920 “the third fastest growing county in the United States.” Los Angeles Daily Times, Jan. 1, 1921, p. 21 (V). Irrigation in the Imperial and Central valleys helped California lead the 47 other states in the value of vegetables raised in 1919. Census Bureau, Census, 1920, vol. 5, Agriculture, 819. Owners of irrigated land in Arizona’s Salt River Valley received savings in the depression when the governing council of Salt River Valley Water Users’ Association adopted a retrenchment program. That suspended members’ assessments of $1 per acre for 1920 construction charges and of $2 per acre for 1921 construction charges, reduction of the association’s yearly assessment to $1.74, and postponement of other payments. The changes in construction charges were expected to save members $600,000, and the change in yearly assessment another $600,000. Arizona Republican (Phoenix), June 11, 1921. Irrigating more land nearby was planned from financing arranged in early 1921 for an association of landowners in Arizona’s Paradise Valley. The association’s bonds, for funds to irrigate 85,000 acres, had been bought for $15 million by a New York banking house, which also would be preferred purchaser of electricity developed by the project’s several planned dams. The valley parallels the Salt River Valley, the location of Phoenix. Idaho Falls (ID) Daily Post, Jan. 2, 1921.

20 The shipbuilding used iron made in Los Angeles, though its steel came from states in the east. Public-school enrollment in Los Angeles grew 18% in 1920. A newspaper boasted that the city’s population, which had reached 576,000, ranked tenth in the nation and that its Chamber of Commerce, with 7,000 members, ranked first in size in 1920, only its thirty-second year. Los Angeles Daily Times, Jan. 1, 1921, p. 4 (IV), 7 (IV), and 1 (II); Ibid., Jan. 2, 1921, p. 3 (II); Ibid., Jan. 1, 1921, p. 6 (III). The plan to put vagrants to work on the municipal farm was adopted by City Council’s Finance Committee in January. The municipal farm was on 120 acres beside Griffith Park. Ibid., Jan. 6, 1921, 12.

21 Los Angeles Daily Times, Jan. 1, 1921, p. 15 (V), 22 (V), 18 (V). Sixty percent of California’s citrus crop was cooled for rail shipment at a San Bernardino plant. Ibid., p. 19 (V). Residents of San Luis Obispo County voted $1.5 million in road bonds 1920; those in Fresno County by late 1920 had recently approved road bonds totaling $4.8 million. Ibid., p. 23-24 (V).

22 Auto Worker (Chicago), August 1920; Los Angeles Daily Times, Jan. 14, 1921.

23 Before officials at Roseburg, OR, opened their town’s campground for the season, in mid-March 1921, it already had been in use, though the water had not been turned on. Roseburg (OR) News-Review, March 22, 1921. Martinez, 90-92. Tourism by auto in the West grew in the early 1900s, particularly from 1914, when war first reduced vacationing by Americans in Europe, and 1915, when San Francisco and San Diego held expositions celebrating the Panama Canal. The 1916 National Park Service Act put federal parks under the Interior Department, which began advertising their attractions. Robert G. Atearn, The Mythic West in Twentieth-Century America (Lawrence: University of Kansas Press, 1986), 146-47. Autos helped move American vacationing westward, Atearn argues. By the early 1920s, the West’s main highways “were reasonably well supplied with auto camps and cottages,” for “there was hardly a town that had not joined the most recent gold rush” of attracting “tin can” tourists by establishing auto camps. Ibid., 143.

24 Morning Oregonian (Portland), June 25, 1921. The Legion post planned to introduce its resolution at the group’s state convention. Reports of resolutions passed at the convention mentioned none on road work, though some opposed foreign-language newspapers and German-made films. Ibid., July 4, 1921. Jobs were scarce in December 1920 in Boise, whose public employment office in a week found work for forty of the 102 people applying. Boise, Idaho Daily Statesman, Dec. 14 and 19, 1920. In a rural area near Idaho Falls, men worked in January at a road project to “cut out a large section of lava rock,” leveling a road-bed to prepare for spring paving. Idaho Falls (ID) Daily Post, Jan. 23, 1921.
The letter to Roseburg's mayor from Charles R. Ducker, Legion state director, is reprinted in Roseburg (OR) News-Review, April 15, 1921. Lack of immediate support for the requested preference may be indicated by omission of the issue in a report of the next city council meeting. Ibid., April 19, 1921. The preference for ex-service men in federal-aid road work, provided for by Congress, was specified also in that work by states including Pennsylvania. Pennsylvania State Highway Department, Report, 8.

Feeling against residents who were Mexicans could grow as others reacted to events in the context of a depression. Competition among workers in Twin Falls, Idaho, likely declined at least briefly in spring 1921 when more than fifty Mexicans were driven from town by a mob that had stirred at first against one person. Earlier, a Mexican man, a one-year resident of Twin Falls, after allegedly stabbing and killing a traveling salesman, was arrested. Authorities removed him from town when a mob of 250 men gathered at the courthouse and demanded custody of him. After several officials warned the group, a newspaper said, “the mob turned attention to rounding up all Mexicans” nearby, “who were ordered to leave Twin Falls by night.” Idaho Falls (ID) Daily Post, March 16, 1921. Ibid., April 30, 1921.

Utah’s Gov. Mabey said also that similar reports of unemployment from other parts of the state had come to state officials and had been referred to the state’s industrial and road commissions. Also responding to the delegation at the capitol, a member of the industrial commission said the state lacked funds for starting public works “and suggested that the counties might be able to help in the matter.” A Salt Lake County commissioner said his county had no funds and that a referendum to authorize bonds would have little chance of succeeding. Boxelder County’s planned federal-aid project for 5 miles of concrete paving was for the road from Brigham City to Corinne. Salt Lake (UT) Tribune, April 14, 23, and 2, 1921. At the conference, estimates of the unemployed included those of 1,200 in Ogden (mostly railroad men who were residents), about 400 migratory workers traveling through Ogden daily, and some 6,000 in Salt Lake City. The copper company’s employment total was estimated by L. F. Cates, assistant general manager of Utah Copper, who presided at the conference. Cates said the company had been operating at a loss for the previous nine months. Sheep farmer Hugh W. Harvey of Wasatch County criticized the copper company. “I am only a small sheep owner, but I could not afford to close up my business and discharge my men at a time like this. The Utah Copper company, during the fat years of the war and immediately preceding the war made million of dollars. Now the times are not so prosperous, and this great company would shift the responsibility to the farmers and others to provide for the men whom it has discharged.” Ibid., April 23, 1921. In efforts for relief in May, the governors of Utah, Washington, and Idaho traveled to the East seeking support for congressional aid for a proposal to irrigate 20 million acres for the benefit of war veterans. Boise, Idaho Daily Statesman, May 19, 1921.

At ceremonies starting the Ukiah project on a section of the road to Lake Tahoe, commercial organizations helped with planning, and towns in Mendocino and Lake counties sent boosters. “Supervisors and other county and town officials were much in evidence. As for the merchants and professional men, many of them considered the occasion of sufficient importance to warrant closing their offices and stores and taking a half holiday.” Sacramento Union, June 28, 1921. The photo of tents for road construction crews is from California Highway Commission, Biennial Report, November 1, 1922 (Sacramento, 1922), 152.

New York Times, Aug. 21, 1921; Labor World (Spokane, WA), Sept. 2, Nov. 25, Dec. 2, and Dec. 30, 1921; Washington State Highway Commissioner, Eighth Biennial Report, Oct. 1, 1918 to Sept. 30, 1920 (Olympia, 1921), 9. By mid-November, despite snow nearby in the higher coastal mountains, at Roseburg, on the Pacific Highway between Portland, OR, and California, the local “auto camp grounds still attract a large number of automobile tourists who brave the elements and pitch their tents regardless of the cold nights.” The average there
was ten parties a night. "Most of these tourists are families working from place to place. They find work in a locality and remain there for a few weeks and then go on to another stop. Most of these are working into California for the winter." Roseburg (OR) News-Review, Nov. 16, 1921.

31 Roseburg (OR) News-Review, April 9, 1921.

32 The district attorney said bonds would let the county share costs with the state, which had $5 million for projects on roads other than the Pacific highway to share with counties that could pay half of project costs. Roseburg (OR) News-Review, March 30, 1921. During winter 1920-21, road work with funds from the earlier bond issue of $550,000 was considered, after more than 100 people attended a meeting of county government to seek repairs after bad weather. Yet the bond market was sluggish, and only in a few districts would the funds be available, for in the measure authorizing bonds "it is expressly provided that the bond fund is to be matched with federal and state aid." Ibid., Jan. 6, 1921.

33 Ibid. Farmers in Lane County bought their county's road bonds in two groups, from the Crow and Hadleyville areas. One group bought $21,500 in bonds, the other $20,500. A man from near Springfield bought $10,000. Morning Oregonian (Portland), April 29, 1921. Difficulty in selling bonds had reduced funds since World War I near Roseburg, in Douglas County. The county's officials had sought a three-year tax for revenue to buy its own bonds, though voters defeated the question. Roseburg (OR) News-Review, April 2, 1921. Ibid., May 14, 1921. Oregon's legislature authorized the state highway commission to loan funds "to the counties on cooperative projects, taking their bonds as security," which speeded construction. Thus, seven counties and the city of Ranier deposited bonds with the state. "In the latter part of 1921 when interest rates declined and par could be secured for the bonds," most counties paid their state debt; the others paid by selling their bonds in July 1922. Oregon State Highway Commission, Fifth Biennial Report, 1921-1922 (Salem, 1922), 12-13.

34 Roseburg (OR) News-Review, May 16 and 11, 1921; Morning Oregonian (Portland), May 23, 1921; Roseburg (OR) News-Review, May 30, 1921. In Wasco County, "prominent" citizens of Mosier and residents in other sections of the county organized a "citizens welfare league," which published circulars saying taxes for all purposes in the county had increased much more in the past five years than assessed valuation, so that the "need of the hour is economy" in spending, to cut taxes. "The sheepmen, farmers, fruit raisers and business men of Wasco County are passing through an ordeal of hard times," leaving them unable to pay higher taxes resulting from bond issues, it said. Morning Oregonian (Portland), May 29, 1921.

35 Counties and amounts of road bonds approved were: Douglas $1.1 million; Wasco $800,000; Grant $440,000; Hood River $350,000; Lincoln $348,000; Coos $300,000; Curry $165,000; Wheeler $140,000, and Deschutes $50,000. Voters rejected bonds in one county, Yamhill, in the amount of $50,000. Morning Oregonian (Portland), June 25, 1921. The vote on Douglas County's road bonds was 3,288 for, and 1,598 against. Ibid., June 8, 1921.

36 Roseburg residents learned at least by late June that funds from the new bonds would be available no sooner than mid-summer, after they had been printed, advertised, and sold. The ballot measure had limited officials to issuing up to $500,000 of the bonds in any year. Roseburg (OR) News-Review, June 20, 1921. Ibid., June 23, 1921.

37 Arizona State Engineer, Fifth Biennial Report, July 1, 1920 to June 30, 1922 (Phoenix, 1922), 15-16, 14. If Arizona were to hold a referendum on state road bonds in fall 1924, said the state engineer, "we believe that by that time the financial condition of the country will be better and that a bond issue will carry." Ibid., 9. To distribute Arizona's federal aid among counties, state and county officials met Sept. 21, 1919, and agreed on a plan. For raising funds to match federal aid, "while the counties were no better prepared than the state to immediately pay out large sums of money, they had the advantage of being able to issue bonds, when authorized by the people at a bond election." Quickly many counties did so. By December 1920, twelve counties held elections that approved road bonds in a range of amounts. Two others, Cochise and Gila, could use other funds and bonds already approved. Capacity for roadbuilding and its employment in a depression are indicated by counties' preparation of their resources to match federal funds. The twelve counties and amounts of bonds approved are:
Maricopa $8.5 million; Pima and Yavapai $1.5 million each; Yuma $1.2 million; Pinal $1 million; Mohave $300,000; Graham $250,000; Greenlee $200,000; Navajo, Apache, and Coconino, $150,000 each; Santa Cruz $100,000. Arizona State Engineer, Fourth Biennial Report, July 1, 1918 to December 31, 1920 (Phoenix, 1921), 26-27. Maricopa County planned to put concrete paving on 284 miles of county roads, "mainly within the Salt River Valley" and "providing a gridiron of roads that will serve practically all the county's farming areas." Some of the early work had been done with state and federal aid. The county's population was "about 70,000" and its taxable valuation was about $100 million. About $1 million of bond funds had been used, leaving large amounts from the total authorized. Los Angeles Daily Times, Jan. 4, 1921, p. 11 (i).

38 Los Angeles Daily Times, Jan. 1, 1921, p. 7 (IV).

39 Salt Lake (UT) Tribune, April 9, 23, and 29, 1921.

40 Idaho's voters approved a $2 million bond issue in the November 1920 election. "The National Election and the Highways," Concrete Highway Magazine 4 (December 1920): 206-07. In addition to revenue from the bonds, Idaho's funds for state road work included a statewide 2-mill highway tax. Idaho Falls (ID) Daily Post, Jan 4, 1921. Short of cash in late 1920, Idaho had been paying for road construction by issuing to contractors state certificates of obligation, bonds called financial warrants. When Idaho received more than $200,000 due from the federal government in December as reimbursement for work in approved road projects, state officials said the money would allow the state to issue another call that warrants be submitted for payment in cash in early 1921. Already, a newspaper reported, "a call involving the payment of two hundred eighty thousand dollars' worth of highway warrants has been made for December 20." Boise, Idaho Daily Statesman, Dec. 14, 1920. Despite the boom's spending by Nevada, at the close of 1920, with the depression becoming worse, the state had a balance in its general account of nearly $1 million. That, a Carson City newspaper said, "hardly bears out the prediction of some of its citizens that Nevada is fast approaching the brink of bankruptcy." Carson City (NV) Daily Appeal, Jan. 21, 1921.

41 Contributions to Nevada through the Lincoln Highway Association by 1920 included $100,000 from General Motors Corporation. Work on the Lincoln Highway, with funds from various sources, was a large part of highway spending in Nevada in 1920. Grading 29 miles in White Pine, Lander, Churchill, Washoe, and Ormsby counties cost $267,611. Graveling 20 miles in White Pine and Churchill counties cost $174,201. And concrete paving of 15 miles in Washoe County cost $296,424. The 1920 work costing $738,237 on Lincoln Highway was done in what a writer for the association called "a state so poor that its total bond issue for good roads was $1,000,000." The statement is from "a recent issue of the Lincoln Highway Bulletin," quoted in an article by Carson City's newspaper on the bulletin's account of the group's activities in Nevada. Carson City (NV) Daily Appeal, April 8, 1921. The association used funds from various contributors to improve the transcontinental highway in the West. Utah in 1919 improved a 17-mile section near its western state line using "funds appropriated by the state and the Goodyear Tire Company." Salt Lake (UT) Tribune, May 18, 1921.

42 Other states with more than 5% of area in unappropriated lands were Wyoming (29.3%), New Mexico (23%), Oregon and Arizona (22% each), California (19%), Idaho (16%), Colorado (12.2%), and Montana (6%). Booe, 20. Idaho's public lands could decline further if homesteaders near Montevideo who left for winter were to return in summer, as some expected. A newspaper noted that from Montevideo "it is reported that about three hundred homesteaders will return to their claims in this vicinity to complete the improvements required by law during this year and also reside on their homesteads as required, preparatory to making final proof." Idaho Falls (ID) Daily Post, May 31, 1921. Other Idaho settlers were expected in a group of 128 families set to travel from Brooklyn, NY, beginning July 15, 1921. Organizers of the trip had an option on land in an old irrigation project near Buhl, ID. Boise, Idaho Daily Statesman, May 29, 1921.

43 The bill's author was Sen. Lawrence C. Phipps of Colorado. Boise, Idaho Daily Statesman, May 18, 1921. Ibid., May 28, 1921. Land apparently lacking enough farms to tax was located on a road that Nez Perce County officials, near Lewiston, ID, discussed improving in summer 1921. "The increasing amount of travel over this road and the impossibility of creating a highway district to finance construction combined to make necessary the immediate assistance of the county in completing the highway," a newspaper reported. County officials were
discussing using funds from a $400,000 county bond issue approved earlier and upheld by the state supreme court recently. "It is estimated that for $70,000 of county money the federal government would provide one hundred six thousand dollars and the state $35,000," enough to excavate and level a section of the road. Boise, Idaho Daily Statesman, May 24, 1921.

"An investigation of the state highway department's activities in the preceding two years was begun as recommended by the governor and the highway commission's chairman. During those years, "the cry went forth that work must be found for the returning soldier, that idleness should not be, and this state, through the agency of the highway department, in a large measure, covered this situation." Carson City (NV) Daily Appeal, Jan. 19, 1921. The investigation by a legislative committee, a newspaper said, found "no excessive extravagance, and in fact, commends the work so far undertaken." Ibid., March 17, 1921. The cut in highway fund revenues is mentioned in "Financing Federal Aid Projects," Nevada State Highway Department, Nevada Highway News 2 (Feb. 4, 1922): 1. Of the governor's proposal for new revenues, a newspaper said that "the gasoline tax will not be an incentive toward making travel through Nevada popular." Carson City (NV) Daily Appeal, Feb. 9, 1921. By early March, the state senate tabled a bill for a gasoline tax of 2 1/2 cents a gallon. Ibid., March 2, 1921. In an era of relatively small state governments, a large share of Nevada's 1920 spending was for roads. Of a total for state spending of $4.32 million, spending from state highway funds totaled $1.69 million, or 40%. To those state funds were added for roadbuilding $515,700 in federal aid and $428,710 from counties. Ibid., Jan. 21, 1921. Ibid., April 11, 1921. Nevada had only 3,163 farms, and irrigated farms in the county around Carson City had declined over the previous decade, the Daily Appeal noted in an editorial. It supported a decision at a recent meeting of the Greater Carson Club for "forming some sort of association to go after the development of water for the lands" nearby in Eagle Valley. "Any proposition that will bring in additional families, and create additional taxation, must appeal to the property holders of this city and county. It is figured that each family added to the population means at least $2,000 per year to the community." Ibid., April 29, 1921.

A newspaper described their day as "the big fight on top of the Sierras with snow banks six feet deep," at times also resembling an auto rally between points on the road. Carson City (NV) Daily Appeal, April 11, April 4, 1921.

Ibid., May 3, 31, April 16, May 14, 1921. The Rupert, ID, campaign to clear the main road of rocks was initiated by a Minidoka businessman and supported by Rupert's chamber of commerce. Announcing plans for the effort, a newspaper said that "it is expected that 100 carloads of people will be on hand with picks and shovels." Businesses in Rupert were to close for the day, the Monday of Memorial Day weekend, "to give to every person an opportunity to take part in the enterprise." Boise, Idaho Daily Statesman, May 29, 1921. The tourist camp at Yerington, NV, was "a block of ground" on which "water and conveniences are to be supplied." Carson City (NV) Daily Appeal, April 16, 1921. "Highway Improvement in Southern Counties," Nevada Highway News 2 (Nov. 25, 1922): 3. Many towns opened auto camps during and after the war to beckon the "tin can" tourist, according to Robert G. Athearn. "The West, in general, was quick to see the potential of this new source of income. The business of nursing along a few rich tourists had been rewarding in a limited way; now, with a mass market before them, westerners got downright hospitable and held out the latchstring to anyone who wanted to soak up some of that fabled western atmosphere." The camp might be a vacant lot, tent frames, or cabins. Athearn, 148-49.

In 1920 in Nevada, mining employed 7,578 people, railroads 7,066, and farming and stock-raising 4,046, the state labor commissioner reported. Employment totaled 23,085 people, of which 2,092, or less than 10%, were women working for wages. Carson City (NV) Daily Appeal, Jan. 15, 1921. Ibid., April 1, 19, 15, 12, and 14, May 7 and 13, 1921. Fifteen new families were expected to live by spring on land provided at the town of Metropolis, in Elko County. "Land has been provided for the newcomers. Several of the families come from Ely, forced out of the copper camp by the closing down of the mines and smelter." Ibid., April 19, 1921. In Nye County, cattle that had ranged for winter on southern Nevada's deserts "came out in good order" by May and were shipped in fourteen railcars to market. Ibid., May 13, 1921.

Ibid., May 27 and May 25, 1921. With the state-federal agreements to begin further projects in Nevada, state highway officials said, "there is thus no immediate danger of the loss of Federal aid to the State of Nevada through failure to execute project agreements within the specified time limits." "News Items," Nevada Highway


Provisions of the bill are reprinted in “Passage of the Phipps Bill.” Nevada Highway News 1 (Nov. 12, 1921): 2. Provisions of the original Phipps-Dowell bill, scaling federal aid for roads according to the amount of public lands in a state, were “amended and arranged in the form of the Federal Highway Act approved on November 9, 1921,” Floyd O. Boo notes. Boo. 20. The act’s sections providing a scale for aid in public-land states are reprinted in U.S., Statutes at Large, vol. 42, part 1, 214. Under the new law’s scale, federal aid could pay as much as 65% of construction costs in Wyoming, 62% in New Mexico, 56% in Colorado, and 53% in Montana. Ibid. “Financing Federal Aid Projects,” Nevada Highway News 2 (Feb. 4, 1922): 3. Of nearly $7.5 million allotted Nevada in federal funds for highways and forest highways by July 1922, more than $5.25 million “remain after the completion of all the contracts now under way,” at least leaving funds for future use, the state highway department reported. “The Future of Highway Building in Nevada,” Nevada Highway News 2 (July 8, 1922): 5.

States’ totals for work completed or under way in the federal-aid program by June 1922 are from Agriculture Department, Report, 1922, 477-78, 483-84. Methods of federal-aid projects for graveling likely were similar to one for a county project near Boise, ID, in which local farmers were working in summer 1921. County officials, planning 100 miles of graveling for the season, in May had “64 teams at work graveling roads and 15 other teams grading roads preparing them for the gravel.” A local rancher was selling the county gravel from a pit on his land, and “the county commissioners and some of the farmers have joined in the pool and considerable road work near Meridian will be graveled within a short time.” Boise, Idaho Daily Statesman, May 20, 1921.

Agriculture Department, Report, 1922, 477-78, 483-84.


Oregon State Highway Commission, Fifth Biennial Report, 1921-1922, 9, 10. Funds spent in 1921 and 1922 by the state highway commission in Oregon, excluding those for market roads, totaled $30.9 million, of which state funds were $22.8 million, county funds $4.8 million, federal funds $3.2 million, and railroad funds $79,719. Ibid., 7-8.

California Highway Commission, Biennial Report, November 1, 1922, 9, 30-32. “The state is securing excellent roads from convict labor,” used most in “isolated and remote sections where free labor costs would run above the average.” Convict labor’s costs increased in 1922 because camps “were located in more remote places than in the earlier period, and the cost of taking in supplies was accordingly greater.” Ibid.. 32. Growing revenues for road work came from vehicle-registration fees. Other California road funds came from state bonds, which
voters had approved in November 1920 for sale at flexible interest rates, fortunate in the depression's slowed bond market. California's remaining road-bond funds by July 1922 totaled $23 million, including $16 million in unsold bonds. Offering bonds at reduced rates had brought sales in 1920-22 that enabled the state "to proceed with highway construction without interruption." Ibid., 10.


57 Ibid., 61. Even before the war ended, Arizona had operated road construction camps for prison labor and others for paid labor. It specified methods of accounting for both kinds of camps. Items for both kinds of camps included food supplies, operation of mess halls, operation of stables (with costs of hay, grain, shoeing and harness repairs. Some local men may have traveled daily to work at the paid-labor camps, besides men who stayed there. For, at the paid-labor camps, monthly statements were to include "number meals to employees allowed board, number meals to employees charged board and cost per meal." Arizona State Engineer, Third Biennial Report, 189.

58 Ibid., 8. Arizona's Office of the State Engineer also had been changed. Recently it had "become in reality the Arizona Highway Department," though "certain duties still exist in regard to the irrigation of land," said Thomas Maddock, state engineer. Operating within the office, "the highway work has so greatly increased that the Highway Department has become the largest single business in the State of Arizona." Ibid., 7.

59 Nevada's highway department planned a "large construction program in Nye, Clark and Lincoln" counties in southern parts of the state in winter 1922-23. "Highway Improvement in Southern Counties," Nevada Highway News 2 (Nov. 25, 1922): 1. At a project from Elko to Halleck, in which grading was nearly complete, work in applying gravel surfacing had begun and would "probably continue through the winter unless the weather becomes too bad." "News Items," Nevada Highway News 2 (Nov. 25, 1922): 5.

60 Agriculture Department, Report 1922, 477-78, 483-84. In proposing road projects, states specified how much in federal funds they wanted to use in their construction, as discussed below in note 4 on page 311.

61 Construction with federal aid was slowing by mid-1922 in Oregon by 88%, leaving federal-aid projects under way that cost one-ninth the total of those completed; in Washington by 85%; and in Idaho by 83%. By contrast, California, which had completed federal-aid projects costing $3 million by mid-1922, had under way then projects in the program that were approved to cost $12.9 million, an increase of 319%. Greater still was the expansion in Utah, by 649%, from having completed federal-aid projects by mid-1922 costing $548,904 to having such projects under way then that were approved to cost $4.1 million. Nevada's projects under way in mid-1922 totaled 13% less in cost than those completed by then; Arizona's project costs rose 2%. For the nation's forty-eight states, costs rose from $240.6 million for federal-aid projects completed to $322.8 million for those under way. The costs declined in two regions: in the West from $32.5 million to $25.5 million; and in the Midwest from $80.2 million to $69.8 million. In the Plains, costs tripled, rising from $36.7 million to $98 million. Costs increased in the South from $46.2 million to $77.6 million and in the North Atlantic region from $44.8 million to $51.6 million. Agriculture Department, Report 1922, 473-83.

62 Oregon, Washington, and Utah were the only western states by mid-1922 to have less than $1.5 million remaining in their allotments of federal funds. Western states and balances in their allotments (not yet paid for completed projects or due for those under way) are: Idaho $1.27 million, Washington $1.29, Oregon $1.48 million, Arizona $3.1 million, Nevada $3.6 million, Utah, $3.7 million, and California $9.4 million.

63 Completed projects by mid-1922 brought reimbursement in federal aid totaling $4 million to Oregon, $3.8 million to Washington, and $3 million to Idaho. At lower levels were Arizona, which received $1.7 million in federal aid by then, and California, which received $1.4 million. Nevada received $877,660, and Utah $266,500. State totals for federal aid paid for completed highway projects by June 30, 1922, are from Agriculture Department, Report 1922, 473-78, 479-83. Using data on federal-aid road work to compare projects completed or under way by mid-1922 in discussed in note 7 of chapter 1, page 231. The West ranked higher among regions in residents' income than in federal-aid road work completed, likely because aridity in large areas reduced rural
settlement, and so taxpayers and auto owners needing roads. In every region, though, the cost of federal-aid road work was a small part of the economy, indicated by the total for individuals’ incomes, in 1921, the depression’s worst year. The West ranked third among the five regions in 1921 net income reported by individuals on federal tax returns. Regions’ income totals for 1921 were: North Atlantic $8.7 billion; Midwest $5.4 billion; West $1.77 billion; South $1.74 billion; and Plains $1.55 billion. The national total for the net incomes in 1921 was $19.3 billion, lower than the total of 1920 ($23.45 billion) or 1922 ($21.1 billion) yet higher than the total of 1919 ($19.6 billion). The totals understate net income, for they include only individual net incomes at levels of at least $1,000 at the levels at which they were taxable. Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Despite ranking third among the five regions in 1921 income, the West had the lowest total for cost of federal-aid projects completed by mid-1922. Regions’ totals for the projects’ cost were: the Midwest $80.2 million; the South $46.2 million; the North Atlantic $44.8 million; the Plains $36.7 million; and the West $32.5 million. The national total for cost of federal-aid projects complete by mid-1922 was $240.6 million, which was 1.2 percent of the national total for 1921 income reported by individuals on federal tax returns. The cost of such completed projects in the federal-aid program included shares paid from federal, state, or local governments. The federal share of the projects was paid to states either as advances during construction or reimbursement when the projects were completed and approved as meeting federal standards.

64 In other western states, federal aid paid by mid-1922 for completed work yields these estimates for jobs created: Arizona 4,440 jobs; California 3,647; Nevada 2,248; and Utah 682. In describing federal-aid projects of 1920-22, published reports by state and federal agencies routinely specified spending, mileage, and materials, not number of men employed. Estimates of number of jobs use figures for earlier construction and employment, given by the chief of the federal program before a Senate committee in March 1922, as described above in note 41 of chapter 2, page 241. The estimates indicate proportions of job totals among states, though more jobs than estimated were likely in projects such as grading and graveling, where equipment and material cost less than in paving. More or fewer jobs than estimated could result from differing rates of matching the federal funds with those from state and local sources. Indeed, the matching rates used in the estimate were not those permitted in the West under late-1921 provisions for public-lands states. Under the new provisions, the number of jobs created would be lower than estimated, for state and local funds were permitted to match less of their funds to obtain federal aid. Actually, the provisions might have increased work in the program by making more participation possible for public-lands states. Also, wages varied locally, departing from what the nationwide estimate uses as typical.

65 Federal road funds appropriated in fall 1921, after support from the President’s Conference on Unemployment then, were available in part in November 1921 and in part by January 1922. Rules for the appropriation required part of the funds to be in use within 90 days. Sioux City (IA) Journal, Nov. 17, 1921. Other funds were appropriated in June 1922.

66 Totals of federal aid paid for completed projects are used in the five chapters on regions to estimate employment. Here, comparison of projects’ cost (paid by federal aid and revenue from states and localities) is made for those projects and others—projects completed and those still under construction. The cost of federal-aid projects, completed by mid-1922 as well as those under way then, totaled in California $16 million. Other leaders in the region were Oregon ($10 million), Washington ($9.2 million), Idaho ($7.4 million) and Arizona ($7 million). Despite having the nation’s largest proportions of public lands, two states were able to use the program to help begin public works costing large amounts—$4.7 million in Utah and $3.6 million in Nevada—once federal matching requirements were reduced. Agriculture Department, Report, 1922, 473-78, 479-83.

67 A state would obtain funds from its allotment of federal aid as advances during work on projects whose plans and construction state and federal agencies had approved. Final federal payments on a project were made as reimbursement of further state spending, once federal officials inspected and approved the completed project.

Chapter 7

Planning and approval processes of state and federal agencies required time for considering projects, raising chances that some projects completed by mid-1922 were not yet paid for by federal officials. That helped raise totals for 1922, by which more completed projects had time for approval and payment by federal officials. The data on federal-aid road work completed or under way by mid-1922 are discussed in note 7 of chapter 1, page 231.

2The jobs at construction sites, estimated from federal aid paid for projects completed by mid-1922, are: the Midwest 83,263 jobs; the South 52,391; the North Atlantic 47,089; the Plains 40,552; and the West 38,789. Estimates are derived as described above in note 41 of chapter 2, page 241. Also, estimates allow ranking 48 states in three groups. Sixteen states with largest totals provided 67% of the national total; sixteen other states, with mid-level totals, provided 23% of the national total; and the remaining sixteen, with lowest totals, provided 10%. The 16 states with largest estimated number of jobs are: Illinois 27,374 jobs; Pennsylvania 21,441; Ohio 14,479; Georgia 14,434; Texas 12,108; Minnesota 10,402; Oregon 10,328; Wisconsin 9,907; Washington 9,689; Iowa 8,994; Idaho 7,756; North Carolina 6,672; Montana 6,637; Maryland 5,819; Kansas 4,846; and South Carolina 4,745. The next-ranked 16 states, with mid-level totals, are: Massachusetts 4,507 jobs; Arizona 4,440; Arkansas 4,392; New York 4,318; Michigan 4,303; Indiana 4,294; Colorado 4,178; Alabama 3,767; Mississippi 3,723; California 3,647; Louisiana 3,550; Missouri 3,510; Virginia 3,339; Kentucky 3,137; West Virginia 3,053; and New Jersey 2,974. The 16 states with lowest number of jobs, estimated from federal funds paid for projects completed by mid-1922, are: Wyoming 2,930 jobs; Oklahoma 2,863; New Hampshire 2,322; New Mexico 2,280; Nevada 2,248; Maine 2,195; South Dakota 1,792; North Dakota 1,639; Tennessee 1,503; Rhode Island 1,409; Nebraska 1,279; Delaware 1,008; Utah 682; Vermont 676; Connecticut 420; and Florida 76. In every state, other jobs were provided at construction sites in the federal-aid program, though in uncompleted projects, under way by mid-1922. The estimates are for the period of the worst of the depression in many parts of the nation. Of the 48 states' totals, the total for jobs is 262,084; the average 5,460; and the median 3,744. Actual spending and number of jobs were higher than estimated by these figures, which are for work in projects completed and paid for by June 30, the close of the federal fiscal year. Other spending and jobs were in federal-aid projects still under way by mid-year in 1920, 1921, and 1922. Still, these figures, tabulated at the close of fiscal year 1922, offer a way to compare efforts in the 48 states. A later tabulation, in the 1940s, indicates higher levels of federal spending for highways occurred in 1920-22, reflecting better the amounts being spent in projects under way at mid-year tabulations done each fiscal year. The 1944 tabulation found federal highway spending totaled $12 million during 1918 and 1919, $36 million in 1920, $87 million in 1921, $75 million in 1922, and $75 million in 1923. National Interregional Highway Committee, Interregional Highways. A Report of the National Interregional Highway Committee, Outlining and Recommending a National System of Interregional Highways, House doc. 379, 78th Congress, 2d sess. (Washington, 1944), 179-83. Other totals in the 1944 tabulation are mentioned in note 33 on page 368.

2Of 48 states' totals for federal aid paid to them for completed projects by mid-1922, the average is $2.13 million, the median $1.46 million. Because a few states received much of the funds by completing projects by then, 14 states had totals above the average, and 34 below it. With additional time to begin projects, the funds increased on average and were spread more widely among the states. Thus, of 48 states' totals for federal aid due for projects under way by mid-1922, the average is $2.91 million, the median $2.4 million. When those two kinds of federal funds—those paid for completed projects by mid-1922 and those due for projects under way then—are combined, the average for totals of the 48 states is $5.04 million, the median $4.34 million. The 16 states with largest combined totals for those two kinds of federal funds, and their amounts, are: Texas $15.2 million; Pennsylvania $13.8 million; Illinois $11.4 million; Minnesota $8.9 million; New York $8.8 million; Iowa $8.7 million; Ohio $8.1 million; Kansas $8 million; California $7.9 million; Georgia $7.6 million; Michigan $7.2 million; Tennessee $6.7 million; Wisconsin $6.3 million; North Carolina $6.1 million; Missouri $6 million; and Indiana $5.8 million. The next-ranked 16 states and their amounts are: Oklahoma $5.5 million; Virginia $5 million; Nebraska $4.8 million; Kentucky $4.7 million; Oregon $4.6 million; Alabama $4.5 million; Mississippi $4.5 million; Arkansas $4.4 million; Washington $4.3 million; South Dakota $4 million; Montana $3.9 million; Colorado $3.9 million; South Carolina $3.9 million; Louisiana $3.8 million; North Dakota $3.6 million; and Idaho $3.5 million. The lowest-ranking 16 states and their amounts are: Arizona $3.5 million; Wyoming $3.4 million; West Virginia $3.4 million; Massachusetts $3.3 million; New Mexico $3.3 million; Florida $2.9 million; Maine $2.8 million; Maryland $2.5 million; Utah $2.5 million; New Jersey $2.3 million; Nevada $1.9 million; Connecticut $1.3 million; New Hampshire $1.2 million; Vermont $880,000; Delaware $736,000; Rhode Island $637,000. Of 48 states' totals for ratio of allotment that was obligated by mid-1922 to specific projects, both the
average and median are 82%, indicating that planning for use of most remaining funds in federal allotments was completed by then by most states. State totals for federal aid are from Agriculture Department, Report, 1922, 477-78, 483-84.

In the program's development process for new projects, plans from states for specific projects were called by federal officials "project statements." After consultation and possible adjustment by state and federal officials, the plan could lead to a "project agreement," in which the agriculture secretary obligated the federal government to pay a share of the project's cost. Federal funds so obligated were set aside from a state's allotment balance. An incentive to plan and spend was that states lost the parts of allotments that were not spent within time limits. Under the federal law of Nov. 9, 1921, for example, federal officials noted that "the federal-aid money will be available to the states for two years after the close of the fiscal year for which the money is appropriated." Thus, in the 1921 law, "the new appropriation must be expended by June 30, 1924." Spending in the new program had presented some states with problems, for under the 1921 law, officials said, "the time allowed for the expenditure of the balance of the previous appropriation which remains in some States is extended to June 30, 1923." "The Federal Highway Act," Public Roads 4 (December 1921): 17-18. The approval process itself required time, in which state and federal agencies considered project proposals. In early 1922, the federal program's chief, Thomas H. MacDonald, described the process. "Before any Federal aid work is placed under construction it passes through two principal initial stages; first, the project statement, second, the approval of the plans, specifications, and estimates. The project statement filed by the State describes the location and character of work it is proposed to do and the amount of Federal funds to be allocated to that particular project...Of the project statements arriving in Washington it has been necessary to hold up for further information 21 per cent. During the year 1921 there have been 2,128 plans, specification, and estimates received in the Washington office, of which it has been necessary to hold up about 30 per cent for further information, for correction, or for revision." MacDonald statement in Senate, Subcommittee of the Committee on Post Offices and Post Roads, 67th Cong., 2nd sess., Feb. 23, March 2, 1922, Hearings on H.R. 9859, Post Office Appropriation Bill for Fiscal Year ending June 30, 1923, Part 2, 188.

The lowest 16 states and percentages of their area in improved land for farms are: Texas (19%); Massachusetts (18%); Washington (17%); New Hampshire, California, Montana and Colorado (each 12%); Maine (10%), Idaho and Oregon (each 8%); Florida (7%), Wyoming and Utah (each 3%); New Mexico (2%); Arizona (1%), and Nevada (.8%). In the group of 16 states with highest percentages of their area in farmland, leaders included four states in a belt producing corn and pork—Iowa (80%), Illinois (76%), Indiana (72%), and Ohio (71%). Other values in the top group ranged from Kansas (58%), through several states of the eastern Plains, upper South, and North Atlantic regions, to Oklahoma (41%). A third group—16 states ranked at mid-level in percentage of their area in improved farm land— included five states ranking in the low third of states in federal-aid spending, seven ranking at mid-level, and four in the top third. State totals for area are from Census Bureau, Financial Statistics of the States, 1919. 58. State totals for improved land in farms are from Census Bureau, Census, 1920, vol. 5, Agriculture. 35.

In figure 6, the Great Plains belt's border is from a Resettlement Administration map, published in Great Plains Committee, The Future of the Great Plains, 25.

Wyoming counties are ranked in three groups, each with seven members, by their levels of using federal aid in projects by October 1922. The median level of spending federal aid among the 21 counties with such projects is $133,049. A few counties had large amounts, and several had small ones. Of the 21-county total, four counties with largest amounts represented 39%, and seven counties with smallest amounts 15%. Largest amounts were for Natrona, Sheridan, Platte, and Goshen counties. County totals in Wyoming for federal aid paid or obligated by October 1922 are from Wyoming State Highway Commission, Third Biennial Report, Oct. 1, 1920, to Sept. 30, 1922 (Laramie, 1922), 32-86. Natrona County, including Casper, forms a square near the center of Wyoming. Sheridan County is north of Natrona County and on Wyoming's northern border; parts of its western sections were in Big Horn National Forest in 1922. Lincoln County, a rectangle stretching north on Wyoming's western border, included four national forests. Hot Springs County touches the northwest corner of Natrona County; to the west, it extends to national forest land and Yellowstone National Park.
Wyoming State Highway Commission, Third Biennial Report, 67-68. Surveys for sections of the Yellowstone Highway were carried out in Wyoming counties of Park, Hot Springs, Big Horn, Natrona, Fremont, Converse, Laramie, and Platte. Lincoln Highway surveying was done in Albany, Carbon, Sweetwater, and Uinta counties. Ibid., 18-32.

Texas counties are ranked in three groups, nearly equal in number of members, by their levels of spending federal aid in projects completed in 1921 and 1922. The median level of spending federal aid among the 88 counties with such projects is $69,846. The 88 counties completing federal-aid projects those two years were 34.6% of the state's 254 counties. Totals for federal aid for projects completed in Texas counties in 1921 and 1922 are from Texas State Highway Department, Third Biennial Report, 21-24.

Participating North Dakota counties are ranked in three groups, nearly equal in number of members, by levels of spending federal aid in projects completed or under way by mid-1922. The median level of spending federal aid among counties with those projects is $19,104. Such federal-aid work occurred in 40 counties. North Dakota State Highway Commission, Report, July 1, 1920, to June 30, 1922, 2290-2292. The commission offered war-surplus tractors it received from federal officials to "practically all of the counties in the western part of the state where conditions were worst on account of repeated crop failures." Ibid., 2259. Construction on the Missouri River bridge began in September 1920 and was 80% complete by mid-1922. Burleigh and Morton counties had paid a total of some $140,000 toward the bridge project. Ibid., 2261-212, 2310. By May 1922, local officials were considering further spending to complete the bridge. The two counties may have shared one-third the cost of the project. For, at Mandan, said a newspaper, "a new plan involving a one-sixth 'ante' by Morton county and the balance by the state and federal highway commissions, is being worked up to insure the completion of the west approach to the new Missouri River bridge by the time the bridge is ready to use." Bottineau (ND) Farmers', Advocate, May 5, 1922. The bridge between Mandan and Bismarck would provide the northernmost crossing over the Missouri River for automobiles. Thomas H. MacDonald, "Report of the Chief of the Bureau of Public Roads." in Agriculture Department, Report, 1922, 466. Farmers in western counties of North Dakota, delayed by bad weather, were later than others in the state in completing the fall 1921 wheat harvest and threshing. Fargo (ND) Forum, Oct. 11, 1921. Drought raised the problem of hunger in fall 1921 in some of North Dakota's southwestern counties. Sioux City (IA) Journal, Nov. 11, 1921. By then, a two-year drought had dried up many North Dakota lakes. Agriculture Department, Weekly News Letter 9 (Oct. 26, 1921): 7. Retrenchment affected local weather services at Amidon, where a man who was considered by some a rainmaker, said a newspaper, "canceled his contract with Slope county for this year because he wanted a straight $5,000 and the commissioners wanted to pay so much per inch above average rainfall." Bottineau (ND) Farmers' Advocate, April 21, 1922. Relying on counties to match federal aid slowed roadbuilding in North Dakota, for in many localities incomes had begun declining years before the depression. Besides effects of aridity, the falling price for wheat reduced taxpayers' capacity to support roadbuilding. The Dakotas experienced a trend unlike the postwar economic boom of many states. In incomes stated on individuals' federal tax returns, the total for North Dakota and that for South Dakota declined yearly during 1918-21 and rose slightly for 1922. Internal Revenue, Statistics of Income, 1920, 22-23. Internal Revenue, Statistics of Income, 1921, 38-39; Internal Revenue, Statistics of Income, 1922, 30-31. Fewer taxpayers were left in some localities. Population in 1920 was 12.6% below its 1910 level in Bottineau County in northern North Dakota. Mandan (ND) Daily Pioneer, July 19, 1920.

Chapter 8

Some farm groups argued that bonds when issued were held by the wealthy, for whom they provided tax-exempt income, which required raising taxes of other people. Others contended bonds left a mortgage for later generations to pay, much as a farmer did when he borrowed. Farmers' experiences of bonds varied with their interest (whether they were seeking road work or lower taxes, whether rural or urban residents were being served by the county's bonds) and with changing provisions states set for issuing bonds. Minnesota, for example, in 1911 allowed six or more landowners to petition a county to establish and build a road. For its share of such costs the county could issue bonds; the state and landowners near the road paid other shares. State highway officials noted the law, before repeal in 1915, gave counties unlimited powers to issue bonds and required no vote of constituents,
only the “petition of a very small portion of those interested.” Minnesota, Report of the State Highway Commission, 1912-1913, 6; Minnesota, Report of the State Highway Commission, 1915-1916, 11-12. In North Carolina before World War I, many “counties went on issuing forty-year bonds to build roads to wear out in two years for want of maintenance,” Cecil Kenneth Brown notes. Despite frequent bond issues and few lasting results, “prior to 1927 few of the counties had made any provision whatsoever for the payment of the principal.” Cecil Kenneth Brown, 49-51. Motor vehicles by 1920 produced large revenues in many states through registration fees, which helped “to shift the burden of highway finance from property owners to the road users.” Hal S. Barron observes. Bonds also were increasingly used to add funds for road construction, for “after World War I and the mass purchase of Liberty Bonds, many states were more willing to pass them.” Barron, Mixed Harvest, 38. Local control was maintained by issuing road bonds in subdivisions of counties in South Carolina, where they were used by townships, according to William L. Suttles. Soon after the war, “some of the counties had already turned to bond issues to finance their roads and borrowing was often necessary to match federal funds. In many cases, these were not county bonds, but were issued by townships after approval in a township election. This fact illustrates the extreme isolation of communities and resulting parochial attitudes that dominated much of the state.” Suttles, 20.

At least by the early 1900s, opinion divided on whether to build main roads or farm-to-market roads, Charles Dearing notes. Conventions on roads were sponsored jointly by the Grange, American Automobile Association, and auto manufacturers in 1908, 1909, and 1910. Sponsors of the third meeting included the Farmers’ Union, the federal Office of Public Roads, American Society of Equity, American Roadmakers’ Association, and National Civic Federation. At the 1910 meeting, two groups differed on how federal funds should be used. Automobile interests “advocated the concentration of funds on the creation of main trunk highways. The agricultural and railroad interests favored improvement of farm to railroad or farm to market roads.” Dearing, 255-56. In November 1921, Congress limited activity by counties in the federal-aid road program, an action some local officials may have opposed as further reducing their authority over roads. The Federal Highway Act of 1921 stated that federal funds “were to be matched by state, not local money, although states were given a grace period of three years in which to revise their appropriation procedures to meet this requirement,” John Hammond Moore observes. John Hammond Moore, 57-58. Similarly, John David Huddleston notes effects in Texas of the new requirement of greater state authority. Federal officials under the 1921 act would approve projects “provided that the state highway department controlled all funds raised within the state. Texas Highway Department administrators immediately recognized the problems inherent under the new law. In Texas, the counties controlled the actual disbursement of road funds. To remain eligible for federal matching funds after November 1924, the State of Texas would have to amend its road building procedures to deny county control of funding and to place exclusive control of funds within the Texas Highway Department.” Huddleston, 47. The 1921 act also reduced local authority by requiring a statewide system of highways be designated by officials of each state, according to William L. Suttles. That system, for up to 7 percent of the state’s mileage, would include primary and secondary road systems. Altering the 1916 plan of improving roads used in mail delivery, the 1921 law sought to create systems of linked, improved roads. In South Carolina, the 1921 law “provoked a controversy between the rural and urban areas with the farmers claiming their interest had been sacrificed for that of the cities.” The law also meant that the “South Carolina highway department would have some control over the application of Federal aid, as it determined where State highways would be located.” In 1922, “county legislative delegations began to appear before the highway commission seeking to have roads in their counties included in the State system in order to obtain Federal aid.” Suttles, 25-26. During debate on the proposed federal law in 1921, according to James H. Shideler, farm interests had argued for farm-market roads and against building main highways, a division the bill’s final form sought to compromise. Shideler, 162-63. The 1921 law’s requirement that states designate a 7-percent system of main rural roads, Charles W. Wixom observes, was “the first move toward a national integrated road system.” Wixom, 86-87. The law’s changes in federal practices left to efforts of opposing groups in many parts of the nation a redefinition of authority between states and counties over roads. Interests of rural residents or officials might have been served by retaining county influence in initiating federal-aid projects. Rural residents often valued county influence in state or federal programs that affected their locality. Yet in South Carolina and other states, the counties most likely to have road systems already improved by 1920 and to have resources for matching funds in 1920-22 to participate in the federal program were urban counties. Many rural counties might gain road projects sooner if, instead of waiting until counties could raise more in taxes, states developed funds for matching federal aid, using revenues from statewide taxation. Suttles notes a wide disparity among South Carolina counties in assessed value of property. Suttles, 28. Other states, in the South and elsewhere, reflected similar disparities, which had limited
road work that depended on local resources. In North Dakota, counties had provided the funds to match federal aid, said the state highway commission. Yet "under this method it will be impossible to ever complete a state highway system for the reason that the poorer and sparsely settled counties are unable to furnish the necessary funds." North Dakota State Highway Commission, Report, July 1, 1920 to June 30, 1922, 2257-58. In 1922, federal aid was available for not only rural roads but also portions of the primary road system passing through city and towns, and several municipalities in Montana had used the provisions. Montana State Highway Commission, Third Biennial Report, 31. The Federal Highway Act of 1921 is reprinted in U.S., Statutes at Large, 212-19.

3Hal S. Barron describes increasing support among organized Illinois farmers during the mid-1920s for state bonds and a gasoline tax, revenue measures for farm-to-market and county roads. There and in states nearby, "by the 1930s, when it came to roads, many rural northerners had stopped bemoaning the diminution of self-government and local autonomy or worrying about costs." They had organized as pressure groups and obtained accommodations in taxes and services in roads earlier than in farm programs of the New Deal, and in this rural participation in "the organizational revolution" through roads, "the state, in addition to the federal government, provided a critical arena." In roads, rural people affected how government functions developed, Barron contends. Rural "attachment to local control," from ideology and from interest in controlling costs, "forced compromises that limited the government's power and created the need for state involvement in order to overcome those limitations, propelling the issue of road administration to progressively higher levels. As townships and counties proved unable to plan larger highway systems or fund macadam roads, state aid emerged as a solution, but the states were often unable or unwilling to ignore their rural constituents, prompting increased pressures for a greater federal role. In this sense, then, the battle between rural localism and cosmopolitan priorities helped to create the modern state." Barron, Mixed Harvest, 41-42.

Two large groups, with chapters organized in many counties of the Midwest and South by 1920, were the Farm Bureau and Farmers' Union. By mid-1921, the Farmers' Union had strong organizations in states including Iowa, Nebraska, Kansas, Oklahoma, Texas, Washington, and Idaho. In the depression, Minnesota farmers of Wright County organized their state's first unit of the Farmers' Union. Organizers in the county were planning a county convention in fall 1921. Wisconsin Farmer, Nov. 3, 1921.

Thomas H. MacDonald, chief, Bureau of Public Roads, statement to Senate Subcommittee of the Committee on Post Offices and Post Roads, 67th Cong., 2nd sess., Feb. 23, March 2, 1922, Hearings on H.R. 9859, Post Office Appropriation Bill for Fiscal Year ending June 30, 1923, Part 2 (Washington, 1922), 165. Hal S. Barron argues midwestern states were unlike those of the East in their strong belief in local control of roads in the early 1900s, partly from differences in urbanization and wealth. In New York, for example, an issue of state highway bonds passed in 1912 by a wider margin than one approved in 1905, partly because more of its funds were designated for rural counties. Thus, about highways farmers "were less insistent on completely local control because of the sizable influx of state funds. In contrast to the comparatively wealthy and urbanized states of the Northeast, rural opposition to macadamized roads and other road reforms and the rural commitment to local control were even more pronounced in the Midwest, causing state aid and state control to come later and on a smaller scale." Barron, Mixed Harvest, 33-34.

More land was in farms in states from the Midwest and South that were near the nation's center. In the Midwest, the share of area that was in farms exceeded 70% in four states (Ohio, Indiana, Illinois, and Iowa), and was 56% in Missouri, though northern counties of lumbering and mining left acreage in farms at 42% in Minnesota, and 35% in Wisconsin and Michigan. In the South, the percentage of area that was in farms was greatest for Upper South states such as Kentucky (54%), Tennessee (42%), Virginia (37%), and West Virginia (36%). It exceeded 30% in the twelve southern states except Arkansas, North Carolina, Louisiana, and Florida. State totals for improved acreage in farms are from Census Bureau, Census, 1920, vol. 5, Agriculture, 132. Where agricultural development closely preceded the postwar roadbuilding, farmers had debts and higher taxes from expansion of operations and had roads that could serve until a depression ended. Yet areas of potential development could be brought to market by building roads in the depression. In many Florida counties, roads were of interest in increasing production of fruits and vegetables. Since the late 1800s, amid improving transportation in states to the north and increasing use of commercial fertilizer, those crops had led to development of land there for farming instead of timbering. Florida Department of Agriculture, Seventeenth Biennial Report, 1921-1922 (Tallahassee, [1923]), 37-
38. Florida’s Orange County, a shipping center for citrus and vegetables, still had a half million acres of uncleared land and was building roads with a county bond issue of $3 million. Karl Lehmann, “Orange County, The Heart of Florida,” 168-71 in Florida Department of Agriculture, Seventeenth Biennial Report, 1921-1922 (Tallahassee, 1923), 169-70. In West Virginia, “with the elaborate road building program under way in the state an aggregate of several million acres of cut-over lands are opening up for use and benefit of the people, and the state department of agriculture is engaged in a campaign to secure development of these acres. These vast areas may be purchased at a minimum price and at a small cost made ready for agricultural purposes.” Ohio Farmer (Cleveland), May 27, 1922. In the lower South, “the enhancement of land values in the middle sections of Georgia, Alabama and Mississippi by reason of motor transportation, has been particularly marked. Splendid farms, at a distance of twenty miles from the nearest railroad, formerly could be bought for as little as $3 to $6 an acre....That these isolated farmlands formerly found no purchaser was entirely due to their inaccessibility.” Land that “formerly sold for $3 and $5 an acre is now fetching $25 an acre in the remote districts, and small farms adjacent to the villages, situated on the railroads, are selling for as much as $100 an acre.” Using autos, plantation owners could act as overseers, supervising work of tenants on large and scattered tracts, many of which had been vacated in the war as blacks left for urban jobs. New York Times, Jan. 9, 1921, p. 8 (VII). In Michigan’s newer cutover regions, settlers, many with little capital, were arriving in the early 1920s. Michigan Bureau of Agricultural Industry, “Report,” 26-27. In Minnesota, using federal aid mostly for low-cost projects of putting gravel on roads extended improvements to more miles of road, not only reaching more rural communities but also bringing farming and markets nearer more undeveloped land. Minnesota Republican party’s platform, adopted in March 1922, favored “continued highway improvements to give farmers better access to markets, make our undeveloped lands accessible to settlers and attract increasing numbers of tourists to our lakes and forests.” Bagley (MN) Farmers’ Independent, April 13, 1922. At the community of Virginia, MN, the county agent arranged “with the agricultural college of the University of Minnesota to conduct a county-wide land clearing field day next month. According to present plans, a land clearing train from the university will make a tour of northern Minnesota May 8 to 20.” Ibid., April 27, 1922. In summer, “the landclearing that is being done by farmers in the northern part of the state” seemed “one of the signs of returning prosperity.” Ibid., May 25, 1922. And Minnesota’s highway department said tourism increased in summer 1922 from better travel, benefiting rural communities. Ibid., June 22, 1922. Many autos were on farms near the center of the nation by 1920. The nation’s highest proportions of farms with autos were in twelve states between Pennsylvania and the Rocky Mountains and in California. In each of those states, autos were on at least 45 percent of farms. The states and proportions of their farms with autos are: Nebraska 75.6%; Iowa 73%; South Dakota 69%; Kansas 62%; Minnesota 57%; North Dakota 56.6%; California 53%; Illinois 53%; Wisconsin 49.6%; Colorado 47%; Ohio 46.6%; Indiana 46%. Census Bureau, Census, 1920, vol. 6, pt. 1. Agriculture, p. 50.

7Particularly in the East, many farmers grew fruits and vegetables for sale nearby to urban customers. Lettuce was a large crop in New Jersey, yet in fall 1921 much of it was left wasting in the fields. Farmers could not sell it for cost of production because of price increases by urban dealers, according to New Jersey Agriculture Department. Denver Labor Journal, Nov. 12, 1921. Yet generally in the state’s farming, despite losses and limits on profits, the agriculture secretary said, “it is a matter of congratulation that New Jersey’s agriculture has not suffered in any such degree as that of the great agricultural states of the Central West and South.” Noting low prices for wheat, corn, cotton, and livestock in summer 1921, particularly affecting “land-owners west of the Allegheny Mountains,” he said New Jersey’s “proximity to the 11 millions of people in and near her borders is a big cash asset. It is partly for this reason that the best farm bargains today are in New Jersey and states adjacent, rather than in states of the great Mississippi Valley.” Some operations there were large, though “twenty-four percent of New Jersey farms contain less than 20 acres.” Land that “formerly sold for $3 and $5 an acre is now fetching $25 an acre in the remote districts, and small farms adjacent to the villages, situated on the railroads, are selling for as much as $100 an acre.” Using autos, plantation owners could act as overseers, supervising work of tenants on large and scattered tracts, many of which had been vacated in the war as blacks left for urban jobs. New York Times, Jan. 9, 1921, p. 8 (VII). In Michigan’s newer cutover regions, settlers, many with little capital, were arriving in the early 1920s. Michigan Bureau of Agricultural Industry, “Report,” 26-27. In Minnesota, using federal aid mostly for low-cost projects of putting gravel on roads extended improvements to more miles of road, not only reaching more rural communities but also bringing farming and markets nearer more undeveloped land. Minnesota Republican party’s platform, adopted in March 1922, favored “continued highway improvements to give farmers better access to markets, make our undeveloped lands accessible to settlers and attract increasing numbers of tourists to our lakes and forests.” Bagley (MN) Farmers’ Independent, April 13, 1922. At the community of Virginia, MN, the county agent arranged “with the agricultural college of the University of Minnesota to conduct a county-wide land clearing field day next month. According to present plans, a land clearing train from the university will make a tour of northern Minnesota May 8 to 20.” Ibid., April 27, 1922. In summer, “the landclearing that is being done by farmers in the northern part of the state” seemed “one of the signs of returning prosperity.” Ibid., May 25, 1922. And Minnesota’s highway department said tourism increased in summer 1922 from better travel, benefiting rural communities. Ibid., June 22, 1922. Many autos were on farms near the center of the nation by 1920. The nation’s highest proportions of farms with autos were in twelve states between Pennsylvania and the Rocky Mountains and in California. In each of those states, autos were on at least 45 percent of farms. The states and proportions of their farms with autos are: Nebraska 75.6%; Iowa 73%; South Dakota 69%; Kansas 62%; Minnesota 57%; North Dakota 56.6%; California 53%; Illinois 53%; Wisconsin 49.6%; Colorado 47%; Ohio 46.6%; Indiana 46%. Census Bureau, Census, 1920, vol. 6, pt. 1. Agriculture, p. 50.

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corn and chickens, but the proceeds amounted to $14.60." Markets were operating also in Spartanburg, Kershaw, and Marlboro counties. Nineteen markets had been formed recently in the state by Extension-related clubs. Mrs. W. N. Hutt, in her column, "The Progressive Farm Woman," Progressive Farmer [Mississippi Valley Edition, for Mississippi, Tennessee, Louisiana, Arkansas], Aug. 27, Oct. 15, 1921. By 1921, home-demonstration agents, such as those active in forming local markets in towns of the Carolinas, were at work in about one-fourth of the nation's counties. They were a new resource—besides such others as improving roads and growing numbers of autos and trucks—that rural people could use to add income in a depression. Government agents intervening in the economy, as were county agricultural agents advocating new practices or supporting formation of coops to market staple crops, home-demonstration officials acted locally to organize parts of farming, particularly in a depression, in ways widely acceptable in the early 1920s. Authorized by the 1914 Smith-Lever Act, extension work by November 1921 in rural areas of the nation's some 3,000 counties included 2,425 county agents in "approximately 2,000 of the 2,650 counties having enough agriculture to employ an agent." In home-demonstration work, 950 people worked in 725 counties. Wallace, Report of the Secretary of Agriculture, 1921, 34. Intervention in the economy had been practiced by the federal government since the mid-1800s in farming. Such measures included establishment of many agencies (a department to improve agriculture, colleges, and research stations) and homesteading and land sales that increased production. In North Carolina in 1920-22, curb or stall markets began in nine counties from efforts of farm women working as home-demonstration club members and agents. Jane S. McKimmon, state home demonstration agent, "Home Demonstration Work," 108-49 in North Carolina Department of Agriculture, Biennial Report, Dec. 1, 1920 to Nov. 30, 1922 (Raleigh, 1923), 121-22. Black women began working through home-demonstration clubs in North Carolina in 1922, when groups formed in six counties in the state's eastern half. Ibid., 148. Commercial production of fruits and vegetables had developed by 1920 in many states near the East Coast. Largest 1919 value of commercial vegetable production was for California, followed by New York, Florida, New Jersey, Ohio, Maryland, Pennsylvania, and Massachusetts. Census Bureau, Census, 1920, vol. 6, pt. 2, Agriculture, 286-90. Commercial producers, whether of fruits and vegetables near the East Coast or of commodities in the Mississippi River Valley, had to ship to distant markets, paying high rail freight rates. For fruits and vegetables, though, a market offering profits remained during the depression in cities, particularly those of the North, home to many food consumers. Shipping by rail was costly for vegetable growers in states including South Carolina in 1922. South Carolina Agricultural Extension Service, Annual Report for 1922 (Clemson College, SC, 1923), 25. Buyers using trucks increased demand for the 1921 apple crop of Massachusetts, further raising prices paid to some farmers after bad weather. The small crop in Franklin County, in northwestern Massachusetts, was sought by many new buyers, said a state agriculture official. "Many of these came with auto trucks and purchased in bulk, thus eliminating the grading of a large part of the crop and deflecting the shipment of probably half the crop from the railroad to the highways." More of the crop than usual went to small buyers, and "many of these were peddlers from central and western Massachusetts cities speculating in apples for the first time." Massachusetts Department of Agriculture, Division of Markets, "Report," 45-64 in Massachusetts Department of Agriculture, Report, Year ending November 30, 1921 (Boston [1922]), 53-54. Where traffic was heavy enough to bring customers, roadside stands selling fruits and vegetables to motorists developed in states including Massachusetts and Pennsylvania. "The fact that such stands are being appreciated by the buying public which frequents the automobile highways is indicated by the great number of these markets to the mile in some sections of the state," said a Massachusetts agriculture official. Massachusetts Department of Agriculture, Division of Markets, "Report," 31-50 in Massachusetts Department of Agriculture, Report, Year ending November 30, 1922 (Boston, [1923]), 45-46. In south-central Pennsylvania near Altoona, a young man sold his farm's produce in 1922 from a tent and about ten barrels, set up beside a straight section of paved road where vehicles had room to pull out of traffic lanes. The farmer, Gilbert Watts added a permanent roof to his stand later in the 1920s. Photos of the market in 1922 and 1927 are in Gilbert S. Watts, Roadside Marketing (New York: Orange Judd Publishing Co., 1928), 33. Urban dealers of fresh foods had costs (including spoilage, rent, heat, light, delivery) sometimes exceeding 25 percent of sales, compared to dealers at roadside markets, whose overhead often was 3%-10%. Watts said. Ibid., 11-14. In Florida, growers were increasing production of fruits and vegetables, many of which were shipped to urban markets in the North. Though Broward County growers in earlier years had tried to produce a train carload of vegetables, said an official of Fort Lauderdale's chamber of commerce, in 1921-22 the county "has been the largest shipping point of vegetables on the East Coast." The county's roads carried farm traffic often, for local farms produced "a fresh fruit for every month," and "packing houses in each town run to capacity during the winter." The county was building roads under a $600,000 bond issue. P. H. Thompson, secretary of Ft. Lauderdale Chamber of Commerce, "Broward County," 58-63 in Florida Department of Agriculture, Seventeenth Biennial
Many Florida counties were building roads to develop land for such production. Ibid. Large crops of fruits and vegetables were produced by 1919 in East Coast areas including Florida, Georgia, South Carolina, and the Chesapeake region. Also producing such crops since the late 1800s were many areas near the Ohio and Mississippi rivers and the Great Lakes and in California. Such growers made frequent trips and particularly benefited from better roads. States where vegetables were the smallest share of 1919 crop production were on the Plains, in the nation's wheat belt. Vegetables were valued at from 1.3% to 1.1% of the total for all crops in Kansas, Nebraska, and the Dakotas. Census Bureau, Census, 1920, vol. 5, Agriculture, 710. Shipping was cheaper by truck where markets were close. General increases in rail freight rates took effect in August 1920, Clifford C. Matlock notes. "The impact upon the general economy of the 1920-21 depression, which was imminent when the above increases became effective on August 26, 1920, not only thwarted the efforts of the carriers to realize the expected additional revenues, but finally compelled reduction of rates in January and July 1922." Clifford C. Matlock, Index Numbers of Railroad Freight Rates on Perishable Agricultural Shipments, United States, 1913-38 (Washington: Agriculture Department, Bureau of Agricultural Economics, March 1941), 15-16. Producing fresh food for sale in urban markets did provide income for some in the central states. Some people shipped livestock to nearby markets by truck. Yet many central states' producers paid to ship farm grain or livestock by rail to distant markets. Among those affected most by low market prices and high production costs, including shipping, were growers of wheat, particularly in arid areas. Wallace, "The Wheat Situation," 143-44.

Of farms in the nation, 30.7% had autos in 1920. The eight states that reported autos on more than 50% of their farms in 1920 were Nebraska, Iowa, Kansas, Minnesota, North Dakota, South Dakota, California, and Illinois. Those states also reported the most tractors, and their total accounted for half of the tractors in the nation. Fargo (ND) Forum, Aug. 30, 1921. Nearly a year after 1920's harvest-season drop in farm prices, the National Implement and Vehicle Association in summer 1921 put off for at least a year the tractor-demonstration shows it usually sponsored in midwestern cities. Only shows already scheduled, in Minneapolis and Kansas City, would be held, and the association planned to decide later on holding demonstrations for 1922. Fargo (ND) Forum, Aug. 1, 1921. Wheat areas of the Plains states would continue to be depressed past 1922. By late 1923, in the nation's wheat regions, farm debt was a problem, said Agriculture Secretary Henry C. Wallace. "Within every community there are farmers who have very little or no debt, while others are deeply involved. The situation on the average appears to be most serious in the semi-arid regions where wheat farming is conducted as a specialized industry and under conditions of high crop risk." Farm bankruptcies were high in 1922 in wheat areas including Kansas, Nebraska, Iowa, Colorado, the Dakotas, Montana and Idaho. Tax payment declined in many wheat areas. "In some of the wheat-growing areas of Kansas, for example, delinquent taxes since 1917 have increased in volume several hundred per cent." Wallace, "The Wheat Situation," 120-21.

Of the county's paving project's cost, totaling some $100,000, the newspaper reported, federal aid had paid $16,000, and the rest was assessed in special taxes on land beside the road. Nebraska State Journal (Lincoln), Jan. 8, 1922.

Omaha Bee, Jan. 13, 1922.

Ibid., Jan. 13, 1922. At Sutton, NE, members of Sutton Community Club unanimously adopted resolutions that opposed the special session, called the proposed gasoline tax "obnoxious" and an addition to tax burdens, and said the "enormous expenditures" in highway building were "entirely incommensurate with the result obtained." Omaha World-Herald, Jan. 21, 1922. Near Lincoln, NE, Prairie Home Co-Operative Company, a farmers' organization, adopted a resolution against the gasoline tax as an "undue hardship upon farmers and not on transient motorists." Ibid., Jan. 20, 1922. Nearby, South Side Community Club adopted a resolution that the governor's call for a special session was "a wrong step in the direction of economy." Ibid. At Ord, NE, members of Ord Community Club said the state legislature was "responsible for increases in local taxation on account of state supervision and regulations," a newspaper reported. At their meeting, talk of the proposed gasoline tax led to a discussion of taxes in general. Ibid., Jan. 24, 1922.

Ibid., Jan. 12, 1922; Nebraska Farmer, Jan. 21, 1922. Nebraska Farmers' Union claimed to represent 40,000 farmers. Omaha World-Herald, Jan. 12, 1922. The editor of Nebraska Farmers' Union's newspaper, L. S. Herron,
said, "Every farmer to whom I talked is bitterly opposed to the gasoline tax" of 1 cent a gallon, proposed by Gov. McKelvie. Ibid., Jan. 12, 1922.

James Auten, who had represented Farmers’ Union members of the Albion area in the state group, said the gasoline tax would increase farmers’ costs and ease taxes of railroads and other corporations. Nebraska State Journal (Lincoln), Jan. 21, 1922. The convention’s legislative committee proposed a resolution on roads that also stated, “We contend that the county should be given greater authority in the expending of automobile license money. Furthermore we favor a reduction in the amount of the auto license tax.” The resolution on roads was proposed, a newspaper reported, “because of popular demand for investigation of the methods of the state in the application of federal aid funds and the requirement that the county in which road work is done where such funds are used contribute an equal amount to be placed at the disposal of the state engineers.” After “bitter verbal attacks” on the state highway agency’s activities in discussion in subcommittee, the resolution was presented to the legislative committee and adopted unanimously. Omaha World-Herald, Jan. 11, 1922. The convention approved the legislative committee’s proposed resolutions, including those urging amendment of the federal Esch-Cummins law guaranteeing a profit to railroads and opposing the special session, the proposed gasoline tax, and the state’s methods of road administration.

One of 15 states that had adopted taxes on gasoline for revenue for roads was neighboring South Dakota, the only Midwest state with such a tax by late 1921. Service Bulletin 9 (November-December 1921): 14. Nebraska Farmer, Jan. 21, 1922. Nebraska Farm Bureau Federation’s tax committee had endorsed the gasoline tax; the one dissenting member, Watson Purdy of Madison, seemed to object to taxation generally. “Every time the legislature has met the last four years it has increased appropriations,” Purdy said. “Why should we in advance endorse another tax the special session proposes to pass, before we know whether appropriations will really be reduced or not?” J. O. Lawrence of Platte Center contended a gasoline tax would not lower other taxes. And he seemed skeptical of bonds as alternatives to taxing land: “All taxes come from the first six inches of soil and when it comes in any other form the farmer pays interest for it.” Among the convention’s delegates, a newspaper reported, a motion to strike the gasoline tax from the meeting’s endorsements “carried by an overwhelming vote.” Also stricken by delegates from the resolutions, it reported, was a clause “on a condemnation of matching dollars with the federal government for federal aid to roads.” Omaha World-Herald, Jan. 7, 1922. Gov. McKelvie, speaking to 1,000 men at Norfolk, said cuts in state appropriations would require cuts by counties, cities, and school districts. On highways, he told the group that “I have been receiving many letters asking that the general state road program be eliminated, but most of these requests come from those parts of the state where the road work has already been completed.” Ibid., Jan. 21, 1922. Commenting on county officials’ requests for an investigation of state highway work, Nebraska’s state engineer, George Johnson, said most of the cheaper road work in Nebraska had been done with equipment from and supervision by the state. And the state, he said, kept better records of spending than many local officials. “While we are in a position to show where every dollar of the $7,000,000 state and federal aid money has been expended it would be difficult for the counties to show what they have done with the $17,500,00 they have spent as individuals for road and bridge work.” The state engineer wrote Loup City officials to offer to provide half the staff for an investigation and to pay half the cost. Omaha Bee, Jan. 21, 1922. Despite an investigation, sentiment in many areas of Nebraska favoring local authority for road work might persist, according the Omaha Bee. “As long as a belief prevails that a precinct can do better work than the county, and the county can do better work than the state, just that long will we have the hodge-podge of highways that has proved so costly in the past.” State and county methods of accounting and roadbuilding varied, the paper said, noting that “the Bee has consistently advocated central control of highway construction under the state engineer” for uniform methods and results. “Only through some such scheme will the taxpayers finally get the worth of their money.” If counties decide what and how roads are built “our highway system will be a mosaic of varying notions and fail of attaining the serviceability of a well planned unified construction.” Counties built differently from federal-state projects, said the director of the federal program, Thomas H. MacDonald. If counties were to build roads to permanent form, he said, they probably would not cost less than federal-state projects, which did that. He held that the road at Loup City was not costly. Ibid., Jan. 23, 1922; Ibid., Feb. 9, 1922.
"McKelvie said, "the tax on real and personal property has become unreasonably high and, in some instances, is out of proportion to the benefits that accrue to such property." McKelvie proposed cuts of $2.7 million in spending for state agencies and activities, nearly half to come from road and bridge construction. Nebraska Farmer, Jan. 28, 1922.

Before 1922, Nebraska's legislature already had cut funds for roads that were appropriated from property taxes. Its two-year appropriations totaled $640,000 in 1917, increased after the war to $3.1 million in 1919, then declined to $2.2 million in 1921, and $1.5 million in 1923. Much of the federal-state road work in 1920-22 was delayed in some western counties, where traffic was light and sandy soil made building roads of federal standards for sand-clay surfacing difficult, a problem that continued, for lack of state funds, into at least 1924. Nebraska Department of Public Works, Report, 1923-1924, 18-19. Nebraska Farmer, Feb. 11, 1922; Omaha Bee, Feb. 1, Jan. 30, Feb. 3, and Jan. 28, 1922. By summer 1921, in North Dakota, retrenchment efforts included those of the Republican and Democratic parties. Both had joined the Independent Voters Association in opposing state bonds under a Nonpartisan League administration, which had used bond funds to build homes and grain elevators and to make rural loans. In fall 1921, the IVA won a campaign for recall of the governor and two other NPL state officials. Farmers' Advocate (Bottineau, ND), Feb. 4, July 8, and Nov. 4, 1921. The Nebraska unit of the Nonpartisan League tried to block a "$75,000 Fat Crook road" project in summer 1921. A district court judge in Lancaster County, NE, denied its request for an injunction against the project, ruling the group was not a taxpayer or resident of the state. Seward (NE) Journal July 28, 1921.

"Omaha Bee, Feb. 1, 1922; Topeka Daily Capital, Feb. 13, 1922. Increases in farm prices lasted past March 1, when many farmers were to make payments on rent or mortgages. Fewer farmers sought federal farm loans amid late March's higher produce prices, said Nebraska officials. They predicted federal farm loans, to be offered by the WFC until July 1, would soon be unnecessary, Mason City (IA) Globe-Gazette and Times, March 2, 1922.

Omaha Bee, March 2 and 5, 1922. Omaha Bee reported that building 1,512 miles of federal-state roads in Nebraska since 1917 had cost the state $4.1 million, and that the federal government for its share in Nebraska roadbuilding had provided an equal amount. The work ranked Nebraska in good-roads mileage after only Texas and Minnesota, and slightly ahead of Iowa, it said. And in federal aid Nebraska, unlike states in the East, received much more than it paid in taxes, it argued. State aid had just been cut to $833,000, lower than the $1 million appropriated in 1921. Ibid., March 21, 1922. Motorists on main routes included many farmers, in contrast to efforts among county officials to retain community authority on roads. Soon, Nebraska Farmer published photos of a Farm Bureau picnic of July 1921 at Battle Creek, attended by some 20,000 people, who arrived in 4,304 autos. Nebraska Farmer, March 25, 1922. In 1924, Nebraska highway officials were seeking to use additional funds on roads in the western counties, where "traffic is very light and standard highway construction is very expensive on account of sandy soil." Exceptions to state rules might allow more funds for those roads in counties of less than 4,000 population. Nebraska Department of Public Works, Report, 1923-1924, 18-19.

In Nebraska, revenue from property taxes for roads, collected by counties and sent to the state treasurer, were, upon appropriation by the legislature, distributed according to a formula similar to that for states in receiving federal aid, "namely under the ratio that each county bears to the state in the following three ways, area, population and miles of mail route." Nebraska Department of Public Works, Report, 1923-1924, 18-19. Thus, some counties may have objected in part because they received a smaller share than they paid. Since the legislature's resolution against continuing federal aid programs, Congress had approved new appropriations "by a vote of more than three-fourths majority," said Nebraska's chief highway official. The state would need to find ways to match its share of federal funds, for "the entire appropriation must be used in four years or it will be taken up by other states." George E. Johnson, "Recommendations of Secretary," 248-51 in Nebraska Department of Public Works, Report, 1921-1922 (Lincoln, [1923]), 248.

"Waterloo (IA) Times-Tribune, Nov. 19, 1921.

"Public Works 50 (Feb. 19, 1921): 174. Paving with concrete was much costlier than graveling or leaving a smoothed dirt surface. Many farm groups urged graveling, using local materials if available, to cover more mileage. Graveling provided more of the funds for wages than the more-mechanized work of paving, also of
interest to highway officials advocating spending to reduce unemployment. Hauling and spreading gravel on roads also used skills familiar to farmers, employed horses farmers could spare from fields, and made a local grain market for horse feed. And projects for work other than paving were the only ones justifiable by the light traffic on farmers' roads. In 1921, by fall, when jobs in farming and construction usually declined until spring, the unemployed were estimated by federal officials for several Midwest cities. In Kansas, they totaled 4,000 in Kansas City, 1,500 in Topeka, and 1,000 in Atchison. Outside the state, 9,000 were unemployed in Kansas City, Missouri, according to the federal estimate, together with 69,000 in St. Louis, 5,000 in St Joseph, 8,000 in Omaha, 9,500 in St Paul, 7,000 in Duluth, 5,000 each in Minneapolis and Des Moines, and 3,000 in Davenport. *Fargo (ND) Forum*, Oct. 15, 1921.

23Ibid., Jan. 21, 1922. Kansas created its state highway agency in 1917, when states were required to have such agencies to participate in the new program of federal aid. Nebraska created its state agency in 1911. Dearing, 54-55.

24Kansas Agricultural Council's five members were from these Kansas groups: Board of Agriculture, Livestock Association, Farm Bureau Federation, Farmers' Union, Grange, Horticultural Society, Farmers' Co-Operative Grain Dealers Association, and Equity Union. *Wichita (KS) Daily Eagle*, Jan. 12, 1922. Kansas City Star, Jan. 19, 1922. Kansas Nonpartisan League's annual meeting a week later in Salina, its state headquarters also, produced little discussion of roads, according to a newspaper report. The group called for farm organizations to unite for political activities. It recommended the state establish a price-fixing commission, and it condemned trusts and monopolies. *Topeka Daily Capital*, Jan. 27, 1922. One resolution offered support for the League's national president, A. C. Townley, serving a ninety-day jail term at Jackson, Minnesota, after conviction on a state charge of espionage. *Kansas City Star*, Jan. 27, 1922.

25The Sedgwick County group adopted a resolution objecting to "the constantly increasing amount of taxes on property in this county," favoring economy in county government, and urging tax cuts by "the township and district boards." It called for county officials to make "a reduction of wages and salaries corresponding to the reduction in the prices of farm products." *Wichita (KS) Daily Eagle*, Dec. 15, 1921. In the vote on $1 million in school bonds at Wichita, "considerable interest had been aroused in the election due to the efforts exerted by those favoring the bond issue and those opposing." Supporters said the city needed a larger high school; those who opposed "did so on the theory that a smaller sum should have been asked at this time." Results reported were 3,146 votes for bonds and 2,262 against. Ibid., Jan. 29, 1922. The objection at Concordia to using war-surplus trucks might have been intended to save jobs in local road work done earlier by men and horses. The group there also agreed not to vote in 1922 for county officials seeking more than two consecutive terms. *Topeka Daily Capital*, Feb. 9, Feb. 27, and Feb. 26, 1922. The depression's low prices for farm produce were a change for many farmers. Kansas farmers had increased their number of tractors 35% in the year ending March 1, 1921, which included periods of good farm prices in 1920. "Every county in the wheat belt has over 100 tractors," according to a report of figures from the Kansas Board of Agriculture. *Wallaces' Farmer*, Jan. 13, 1922. The worth of Kansas grain crops of all kinds for 1921 was estimated at $175 million, down $256 million from 1920, down $162 million from the five-year average, according to the state Board of Agriculture. *Wichita (KS) Daily Eagle*, Dec. 16, 1921. Some Kansas men still were paying poll taxes in woods on roads, though the poll tax "is one that is only partially enforced throughout the state," the state highway commission reported in late 1920. To aid in roadbuilding, the law should be changed and enforced, it said. The $3 poll tax, paid by two days' work on roads, should be collected in cash or worked under better comparison to postwar wages, it said. "It is ridiculous to expect a man to work his team" of horses under present prices for the amount required. Kansas State Highway Commission, *Report, 1919-21*, 25.

26*Topeka Daily Capital*, Jan. 29, Jan. 6, Jan. 11, and Jan. 5, 1922. In May 1921, Kansas Federation of Labor at its convention at Chanute, KS, adopted a resolution "urging the president and Congress to start a building program of roads and other public improvements to relieve the unemployment situation," a journal reported. Labor Bulletin (Kansas City, KS), May 18, 1921. By early 1922, in Topeka, an agency combining efforts of the mayor, a newspaper, and state and federal governments was finding jobs for some. The jobs included road work, though winter weather prevented much construction. Jobs on one January day included working as cook at a road contractor's nearby construction camp, mixing mortar for improving the city's streets, or posts for a man and wife in cooking for and running a road camp of a county-road contractor. Topeka's unemployed were seeking day jobs.
and some were subsisting on $1 a day, considered enough for lodging and three meals. Jobs were available for
some on highways or bridges being built during winter by Kansas and by Nebraska, Missouri, Illinois, Wisconsin,
and Minnesota. Topeka Daily Capital, Jan. 11, 1922. The employment agency was increasingly used for hiring in
1921, when it placed more than 5,200 men in jobs, compared to about 3,000 in 1920. Those numbers did not
include some 5,000 men sent in summer to the wheat harvest, it announced. Ibid., Jan. 1 and 7, 1922. As Topeka
Auto Club had planned, representatives of the state's chambers of commerce were invited to form a Kansas auto
association. In the Topeka club, some believed that "thousands of dollars collected in taxes and other fees each
year are not used to give the greatest benefit to auto owners," a newspaper reported. At the state group's formation
in February, speakers included the state highway engineer, M. W. Watson. He told them the 6,500-mile system of
federal-state roads in Kansas "can be built within the next twenty years without levying one cent of tax on either
land or personal property," using instead only the auto-license fund and federal aid. He recommended removing
personal property taxes from autos by a constitutional amendment and increasing the license fee. Taxpayers'
leagues would not be opposed to the highway commission, Watson contended, if they realized how the highway
commission saved money for counties. Under Kansas laws requiring counties to pay part of federal-state road-
building, building a statewide system was being delayed, he said, because some counties refused to pay their share.
Topeka Daily Capital, Jan. 1 and Feb. 9, 1922.

27Wichita (KS) Daily Eagle, Feb. 4, 1922. According to the state tax commissioner, of the total taxes among
all Kansas governments, taxes for roads and bridges were 16%, and they had increased very little in 1921. In the
statewide figures, a Topeka newspaper reported, "the total increase of all taxes over 1920 was 11.6 per cent, and of
that amount .5 of 1 percent is represented in the increase in road and bridge taxes over the preceding year." The
commissioner, it said, had prepared the figures "for the sole purpose of overcoming the general misinformation
which exists regarding the disposition of taxes collected." Topeka Daily Capital, Jan. 2, 1922. The secretary of
state said many people believed the vehicle-registration money was sent to the state, though an $8 fee provided 50
cents for the state, $4.50 for maintaining county dirt roads, and $3 for the county-state aid road fund. Ibid., Feb. 13.
1922. At the Kansas Democratic party convention, Sedgewick County's chairman was moderator of some sessions
and one of several speakers from Wichita. The delegates from throughout the state approved a statement favoring
abolition of the highway commission "created by the Republican administration" in Kansas. The delegates hedged,
though, pledging on road authority to "reserve to the counties the largest possible amount of control of road build­
ing consistent with the federal laws and regulations upon that subject." Wichita (KS) Daily Eagle, Feb. 23, 1922.
Federal law since 1916 had required states to have highway agencies to receive federal aid. Contracts awarded in
March for Sedgewick County's project were much lower than expected; county officials opted for paving and
economy. Bids had been taken for paving using brick or concrete. Required to choose between those materials,
county officials "decided quickly after the bids were in, for the lowest brick bid was a quarter of a million dollars
over the concrete bids which won the contract," at $612,000. The work was expected to "give employment to at
least 250 men this summer." Ibid., March 15, 1922. Before the bids were received and near the state Democratic
party's convention, some 50 landowners in the benefit district (where special taxes would be levied on land
benefited by a better road) in February had petitioned Sedgewick County not to proceed with the federal-aid
paving project. Ibid., Feb. 22, 1922. Delegates at the first meeting of Kansas State Taxpayers' Organization also
adopted a resolution opposing further issuance of state or municipal bonds "as a tax to industry." Ibid., March 10,
1922.

28On the special taxes for the project of road grading using state and federal funds at Sabetha, a newspaper
said that "the entire cost of the road was $38,000. The average cost for a 160-acre farm on the road was $84.50." The
average tax for a farm a mile from the road yet still in the benefit district was $9.60. Topeka Daily Capital,
Jan. 3, 1922. Capper's publishing of farm journals and his opposition to the Nonpartisan League are noted in
Nonpartisan Leader, Jan. 24, 1921.

29Missouri, like most midwestern states, had urban population in larger proportion than Plains states such as
Nebraska and Kansas. Urban population in 1920 was 46.6% for Missouri, 31.3% for Nebraska, and 34.9% for
Kansas. Only Colorado among ten Plains states had more than 40% urban population; of eight Midwest states,
only Minnesota and Iowa had less than 45% urban population. Plains states also differed from those of the Mid­
west in population per square mile. Plains population was scattered thinly, averaging 16.9 people per square mile
in Nebraska, 21.6 in Kansas. Still, only Texas (17.8) and Oklahoma (29.2) had similarly high levels for people per
square mile among the ten Plains states. In contrast, the eight Midwest states ranged from 29.5 people per square mile in Minnesota to 141.4 in Ohio. Totals for percent urban population, 1920, are from Census Bureau, *Abstract of the Census, 1920*. 75. Totals for population per square mile, 1920, are from Census Bureau, *Census, 1920*, vol. 1, *Population*, 31.

30 State totals for net income for 1918, 1919, and 1920 as reported on individual returns for federal income tax are from Internal Revenue, *Statistics of Income, 1920*, 22-23. Totals for net income for 1921 are from Internal Revenue, *Statistics of Income, 1921*, 38-39. Totals for net income for 1922 are from Internal Revenue, *Statistics of Income, 1922*, 30-31. Totals are for calendar years; individuals were required to file for incomes $1,000 and over. Totals for population 1920 are from Census Bureau, *Manufactures, 1919*, 18. In November 1920, voting in Missouri on several questions, only one of the 15 ballot propositions had a wider margin in returns from St. Louis than that on whether the state could issue $60 million in road bonds, a newspaper reported the day after the election. Opposition appeared as expected in Nodaway and Sullivan counties “because the farmers’ clubs up there fought against it, but the majority against it was not as great as we expected,” said Raymond Walsh, headquarters manager in St. Louis for Federated Roads Council of Missouri, *St. Louis Post-Dispatch*, Nov. 4, 1920. Missouri had more federal aid available to use than the two Plains states because of one of the three elements in the federal formula for allotting those funds; similar in area and mileage of rural roads, Missouri had nearly twice the 1920 population of Kansas or Nebraska. Many people were motorists in the three states, creating both a demand for roadbuilding and a revenue base in registration fees for road costs. Auto registrations in 1919 totaled 244,000 in Missouri, 229,000 in Kansas, and 200,000 in Nebraska. Totals for autos registered 1919 are from Agriculture Department, *Yearbook, 1920*, 829.

Missouri completed more federal-aid projects than Kansas and Nebraska combined by mid-1922. By then, federal aid paid for completed projects totaled $3.1 million for Missouri, $1.89 million for Kansas, and $449,523 for Nebraska. In other work, projects still under way in mid-1922, Missouri was building roads for which it was due federal aid totaling $4.67 million; the total for Kansas was $2.2 million, for Nebraska $4.26 million. State totals for federal-aid road work completed and under way by June 30, 1922, are from Agriculture Department, *Report, 1922*, 477-78, 483-84. Missouri voters approved in November 1920 issuing $60 million in state highway bonds, *Des Moines Register*, Feb. 16, 1921. Missouri highway officials planned to meet July 25, 1922, to arrange for issuing the first bonds of the $60 million approved in November 1920. “The first issue probably will be 3 million dollars, of which two million will go for secondary roads and 1 million for the primary roads,” a newspaper reported. Theodore Gary, the highway commission’s chairman, said the first contracts using funds from the $60-million bond authorization might be let in August 1922, if no court challenges were to delay such plans. *Kansas City Star*, July 12, 1922. “Missouri Still Legislates,” *Good Roads* 61 (July 27, 1921): 47; “$60,000,000 Road Measure Passes Missouri Legislature,” *Good Roads* 61 (Aug. 17, 1921): 91; “Missouri Will Build Roads,” *Good Roads* 61 (Oct. 19, 1921): 195.

32 *Kansas City Star*, Jan. 19, 1922. Missouri road engineers, including those employed by counties, met in January to discuss problems in road improvement and how to spend funds from the $60 million in bonds. Ibid., Jan. 5, 1922.

33 *Missouri Farm Bureau News*, Dec. 30, 16, and 9, 1921. The new member of state highway commission, S. S. Connett, Buchanan County Farm Bureau’s president, seemed in accord with elements of the legislature’s plan for building a varied highway system. “I am in favor of building roads according to the requirements of traffic,” Connett had recently told a newspaper. “It is a waste of money to put heavy roads where little use is made of them, and it is an equal waste to build lighter roads where traffic is heavy.” Connett’s comment to *Kansas City Star*, reprinted in *Missouri Farm Bureau News*, Dec. 9, 1921. Farmers of some communities remained divided over the legislature’s settlement. Among Holt County Farm Bureau members surveyed on the legislature’s roadbuilding plan, many were interested, for “a little less than half of the membership” mailed replies. From communities near Mound City, 305 farmers replied by early January 1922. “Out of this number 127 or 42 percent are in favor of going ahead with the road building program outlined by the last session of the legislature, and 179 or 58 percent are against it,” the state Farm Bureau journal reported. “In this return there has not been any section of the county which was sol-idly one way or another on the questions. Near neighbors have differed. Neither has the negative side been confined to Farm Bureau members who are members of the Farm Clubs as has been reported nor has the
affirmative side been confined to those who are only members of the Farm Bureau.” Missouri Farm Bureau News, Jan. 6, 1922.

34Gary advised further legislative efforts if farmers were unsatisfied with the new law. “Since the law is not adequate, and I agree with you that it is not, let the different factions come together, and with the common needs in mind, let them prepare the proper amendments.” Theodore Gary, speech at Farmers’ Week, Jan. 16, 1922, 103-13 in Missouri Board of Agriculture, Missouri Year Book of Agriculture, 1922 (Jefferson City, 1922), 113. Farmers’ Week activities, sponsored by University of Missouri and the State Board of Agriculture, were held at the university. In its road work, the state should favor graveling instead of costlier paving, highway commissioner Theodore Gary said. “If the state could afford them, I would be glad to have properly built cement roads.” Still, the cost of maintaining a mile of gravel road was only about $500 a year, he said, and gravel construction cost “$10,000 to $20,000 less per mile than the so-called high class of roads” paved with cement. Gary said yearly maintenance of gravel roads steadily improved them. Maintaining gravel roads would offer work for farmers accustomed to smoothing dirt or gravel on roads regularly in their neighborhoods. Ibid., 107-08. For many rural people, local control of roads offered a chance for them to deal with familiar officials. Further, spending was most efficient when done from local funds and by a community’s government, some argued. Farmers felt they could better depend on familiar, local officials than on those outside the community to keep to a minimum the taxes on land, including those for roads. Contests over local or state authority in roads formed often in the early 1900s as states had developed highway agencies.

35Kansas City Star, Jan. 3, 1, 2, and 24, 1921.

36Harry Truman and his father, John Truman, “worked hard in Washington Township” in the 1912 campaign of a machine candidate to be a member of the county court, Alonzo L. Hamby observes. Soon after the candidate took office, John Truman “was campaigning vigorously to be appointed township road overseer. The job carried some public recognition and a small extra income; the road overseer could bill the county for work done by his teams and wagons when they were not needed on the farm.” Appointed to the post, Truman pursued with zeal such tasks as getting farmers to cut roadside weeds and hedges, and he put Harry to work on weekends. John Truman “may actually have considered running for political office in the next election,” and soon “Harry also became a political activist,” attaining appointment as postmaster nearby and in 1915 as road overseer, succeeding his father. Harry Truman’s “work notes for the spring of 1915 indicate that he devoted at least ten days to his responsibility during the months of March, April, and May” on the roads. A 1915 letter Truman wrote yet left unsent would have told the county engineer, who had the support of the local state senator, of the need for more funds to hire men and the use of their horses, as shown from experience in “farm work or day labor.” Alonzo L. Hamby, Man of the People: A Life of Harry S. Truman (New York: Oxford University Press, 1995), 40-41. Road overseers there worked hard for low pay, David McCullough notes, and Harry Truman had “immediate misgivings” when his father sought the post. “The upkeep and repair of country roads was a task performed by local men with their own teams of horses, either for hire or as a way to work off a six-dollar school tax. The work was never-ending and the job of overseer, an appointed political post, was one that paid two dollars a day and that almost nobody wanted. It was his father’s incurable love of politics that made him go after the job.” David McCullough, Truman (New York: Simon & Schuster, 1992), 89. Truman worked as road overseer while continuing to farm 200 acres of wheat. McCullough, 95. When the Trumans’ patron in county government died in 1915, Truman, working less by then on roads and more on a mining project outside the state, was soon replaced as road overseer. Hamby, 44-45.

37Jackson County, whose three-member administrative body, called the county court, met alternately at courthouses in Independence and Kansas City, had revenue problems the postwar era of roadbuilding would increase, Hamby observes. The machine’s excessive spending in the term before Truman won office in 1922 “obscured a fundamental underlying problem: the Jackson County property tax system did not provide enough revenue” to meet an increasing “demand for public services—foremost among them adequate roads—no matter how frugal and efficient the court might be. Few taxpayers were prepared to face that conclusion, especially in the hard economic climate of the early 1920s. Machine politics— an army of patronage appointees.” many “sham roads, rigged contracts—made it easy to believe that the county needed only honest government.” Hamby, 116. Hamby describes the county’s methods (likely similar to those of many others in the early 1900s) of relying on property taxes and operating frequently in deficits. “County finances were rickety. Property taxes, the only significant
Truman began selling memberships for Kansas City Automobile Club on commission, clearing $5,000 in a year. Truman's experience. "Years of mismanagement and crooked contracts had produced roads so poorly constructed in 1927 to January 1935, during which he helped win voters' approval in May 1928 of the county's first bond issue for roads. McCullough, 163, 171, 173, 176-77. Nearly half the state's increase was in two urban areas, Kansas City and St. Louis, whose residents in 1921 added a total of 21,233 vehicles. The two cities had a total of 122,461 vehicles, 35% of state's total. Kansas City Star, Jan. 3, 1922. Motor vehicles licensed in Missouri rose by 49,339 during 1921, bringing the total to 346,347 vehicles.
Missouri would have to complete its part of main routes, a farm group heard in January 1922 from the state’s highway commission chairman. “One can get on a hard surface road in East St. Louis and drive to the Atlantic Ocean, drive to the Lakes on the North or the Gulf on the South on hard surface roads,” Theodore Gary said on Jan. 16, 1922, at a meeting during Farmers’ Week. “But when one is ‘headin’ West’ it’s different. It is Missouri’s duty to do its share,” completing a route across the state. Theodore Gary, Speech at Farmers’ Week, 113.

Prairie Farmer, May 31, 1922.

Ibid., April 8, 1922.

Road work could provide postwar jobs, according to Superintendent S. E. Bradt of Illinois. Bradt, 49-51. Illinois voters approved the bonds at November 1918 elections near the close of the war. Municipal Journal 45 (Nov. 23, 1918): 413.

For Poindexter, “any plan to create more jobs should be looked upon with disapproval.” Instead, easing the depression’s problems might result from providing localities more of revenues from vehicle fees, he said. “Let’s spend more of our funds at home, the auto license fees, for instance. Why not have the town clerk issue the licenses and put the money in the road and bridge fund?” Prairie Farmer, April 8, 1922. Ibid., April 1, 1922; Ibid., March 25, 1922.

Prairie Farmer argued that “we need a common sense road policy in Illinois, under which our road money will be spent in such a way as to give us the greatest possible mileage of usable roads for our money.” Bureau County’s work of draining, grading, and graveling its roads in north-central Illinois and patrolling them to locate problems and make repairs was a good method for counties, it said. “For the price of six miles of concrete road Bureau County has patrolled over 200 miles of road, brought 100 miles to permanent grade, and graveled 70 miles.” Costs were paid from a 60-mill tax county voters approved in November 1920 to last four years. Before that, “the local good roads boosters, like those nearly everywhere else, had been rushed off their feet by concrete propaganda, and it was planned to vote a special bond issue to build a county sys-tem of concrete roads.” Yet “the state highway officials frowned on the idea, so it was abandoned,” and the 60-mill tax and work other than paving were adopted instead. Ibid., Nov. 5, 1921.

Ibid., May 13, 1922. Belief that bonds for public works took capital from businesses was widely held before the war, even by Otto T. Mallery, a Pennsylvania official and wartime federal labor official, who “elaborated a prewar ‘pump-priming’ proposal,” according to Joseph Dorfman. Mallery’s theory, Dorfman notes, was “that a depression, occurring as it did every ten years, could be considerably alleviated if an annual appropriation for necessary public works was set up as a reserve for use in depression years.” But Mallery “put limits on the possibilities and did not regard this as a cure-all. Thinking closely in terms of the gold standard and a scarcity of capital, he argued that direct expenditures of public works must not exceed the surplus of capital funds beyond the requirements of private enterprise. Furthermore, in a long, serious depression, the greatest conceivable program of public works would not restore the balance, since such expenditures were relatively small compared to those of private business. Finally, since local public-works expenditures greatly exceeded those by the federal government, the latter’s function in the scheme should be primarily to co-ordinate the operations of the local units so that the works could be performed speedily at the proper time.” Dorfman, 8. Similar functions were performed by the federal-aid road program, which accumulated a reserve of funds and construction plans during the war, gained additional funds from Congress in 1919 and 1921 to reduce unemployment, and by offering grants for matching funds stimulated and coordinated state and local spending for public works in the relatively brief depression that began in 1920. Federal credit was being made available to farmers in late 1921. In Illinois, about 20 banks had received farm credit totaling $738,000 through the War Finance Corporation by December, and applications were being considered by the program’s state committee for $700,000 more. The credit for three years would allow country banks to pay off debts to city banks and Federal Reserve banks, a Chicago banker explained. That would put a country bank “in shape so that it doesn’t have to be paid for three years,” allowing it to lend to its customers and to extend to three years its repayment period for prior debts. Tenant farmers also could benefit from the program if their credit was good with a local bank. Prairie Farmer, Dec. 3 and Nov. 11, 1921. Besides roads, the tax
issues of concern among some Illinois farmers in early 1922 included schools. Illinois Farmers Institute, attended by more than 300 people in February, said that, because the property of farmers included more land than that of most city residents, taxation under the state’s law on consolidated high schools was unfair to farmers and should be changed in favor of a tuition system. Even among rural residents, taxes differed by location of consolidated school districts, said Henry Jones of Iroquois County in east-central Illinois. “My taxes are $446.96, while my neighbor with the same amount of land pays $260.26. I am in a high school [district] and he isn’t.” Jones wrote Prairie Farmer. Resolutions of the farmers’ institute also called for all officials to reduce the cost of government, favored semi-annual payment of taxes, and demanded immediate reduction of railroad freight rates. Schools more than roads were an issue for many of Prairie Farmer’s readers seeking tax cuts. Near election time in spring 1922, an edition of the journal printed seventeen letters, including nine discussing school taxes, and one opposing letting big trucks tear up roads. Before the election the journal itself listed several ways to cut taxes and advised readers to vote. “You can’t stay away from the polls on election day and hope to make up for it by signing tax reduction petitions later.” Ibid., March 4, April 29, and April 8, 1922.

Illinois ranked third among the 48 states in the income totals, 1918-22. Income totals of 1921 were down 41% from 1920 in Nebraska and down 29% in Kansas; for 1922 both states’ totals were slightly below those of 1921. Totals are for incomes individuals reported for federal income taxes. Returns were required for incomes of $1,000 or more for individuals, $2,000 or more for couples. Though that left many people out of the totals who had smaller incomes, the same economic trends affected them, likely more so. Totals are for calendar years. State totals for incomes from the returns are from Internal Revenue, Statistics of Income. 1920.22-23; Internal Revenue, Statistics of Income. 1921. 38-39; Internal Revenue. Statistics of Income. 1922. 30-31. Illinois state highway officials noted with pride that “Illinois greatly surpassed the world’s record breaking accomplishment of the year 1922 by building during 1923 a total of 1,080 miles of durable hard surfaced roads.” Farmers continued benefiting from road work by hiring out their horses, of which the state’s 1923 projects used 3,000 teams. Illinois, Department of Public Works and Buildings, Division of Highways, Sixth Annual Report. Jan. 1. 1923 to Dec. 31. 1923 (Springfield, 1924). 4. Illinois Agricultural Association, the state’s Farm Bureau federation, objected to road authority given to the state by 1922, Hal S. Barron notes. From its efforts for redress, “provisions for a secondary network of farm-to-market roads dominated the $100 million bond issue in 1923. Similarly, the IAA lobbied successfully for a gasoline tax that exempted gasoline for agricultural purposes, and was used instead of property taxes to fund county roads that would not be administered by the state highway department. This tax passed in 1927 with near unanimous support from rural legislators regardless of party, and near-unanimous opposition from those representing Chicago and Cook County. The passage of this tax is significant, for by the 1930s, when it came to roads, many rural northerners had stopped bemoaning the diminution of self-government and local autonomy or worrying about costs.” Instead, “they themselves became organized” and “went after their share in competition with other factions in the political process.” Barron, Mixed Harvest, 41-42.

Vehicle registration fees were to go to the state for building and maintaining the state’s trunk road system. “New Basis for Motor Vehicle Fees in Minnesota,” Engineering News-Record 86 (June 2, 1921): 964.

Notices of mortgage-foreclosure sales in the Bagley, MN, area appeared in these numbers in selected 1922 editions of Farmers’ Independent: three on Jan. 5; one each on Feb. 16, April 13, and June 1; three on Aug. 17, and two on Oct. 12. Earlier, in late 1921, four notices appeared in the Farmers’ Independent edition of Dec. 22. In two months, farmers had sold Madella, MN, merchants “more than 35,000 bushels of corn at 30 cents a bushel, or a total of $10,500,” which was “new money” in the community and “relieved the financial pressure on merchants.” The plan, to accept farmers’ corn at 10 cents above local market price, was copied by merchants of other towns in the area. Farmers had sold some corn as fodder and used some for fuel. Sioux City (IA) Journal, Feb. 22, 1922. In rankings among 48 states in total amounts for income their residents listed on federal tax returns, Minnesota ranked for 1918 (at 17) between Nebraska (14) and Kansas (20). Then, Minnesota ranked above them for four years. Their rankings by years: 1919 Minnesota 15, Nebraska 19, Kansas 20; 1920 Minnesota 18, Kansas 22, Nebraska 23; 1921 Minnesota 17, Kansas 20, Nebraska 27; 1922 Minnesota 20, Kansas 23, Nebraska 31. Minnesota and Kansas held their rankings much better than Nebraska. Still worse, Nebraska’s larger decline was taken from a smaller population. The 1920 populations were 1.3 million for Nebraska, 1.8 million for Kansas, and 2.4 million for Minnesota. State totals for incomes from the returns are from Internal Revenue, Statistics of Income. 1920. 22-23; Internal Revenue, Statistics of Income. 1921. 38-39; Internal Revenue. Statistics of Income. 1922. 30-31.
That also would affect owners of horse teams working on roads and sellers of grain for the horses' feed. Public and in Pennsylvania "the number would be nearly as great" Where roadbuilding slowed, the report noted, so also did work in related industries such as quarries, cement plants, gravel pits, and industries making road machinery. If Minnesota's 1921-22 winter program and that of Pennsylvania were cited as examples of public works suggested to Congress by the President's Conference on Unemployment, they agreed, because work to use them had been planned. Farmer (St. Paul MN). Jan. 14, 1922.

Minnesota's Farm Bureau groups in 1922 included about 70,000 people. The federation's members at the convention resolved that "improved and permanent systems of highways are essential to the broadest development of agriculture." They agreed that "roads must be made adequate to bear the traffic," yet contended that any plan for "hard surfacing must be adjusted to the actual needs for such improvement." Federal appropriations for rural roads should continue, they agreed, because work to use them had been planned. Farmer (St. Paul, MN). Jan. 14, 1922.

Bagley (MN) Farmers' Independent, Dec. 29 and 22, 1921. In projects for winter 1922-23, intense competition for Minnesota contracts included that for one project on which officials received 60 bids. In addition to projects for which contracts were awarded, bids would be sought on nine bridges on trunk highways. Ibid., Dec. 7, 1922. One estimate of employment in the 1922-23 projects was "more than 1,000 men and teams, or proportionate numbers of trucks and drivers, during the greater part of the winter." Earlier, the 1921-22 winter projects had showed such road work, "notably graveling, can be carried on advantageously and at lower cost than during regular construction seasons." "Winter Work Will Speed Good Roads in Minnesota," Good Roads 63 (Nov. 22, 1922): 185. In contracts awarded for winter 1922-23, bids were 20 per-cent below engineers' estimates. Competition for winter contracts by early December 1922 brought "many bids from local contractors in many parts of the state," said John H. Mullen, Minnesota's chief highway engineer. Bagley (MN) Farmers' Independent, Dec. 7, 1922.

Missouri's 1921-22 winter program and that of Pennsylvania were cited as examples of public works suggested in fall 1921 by the roads committee of the President's Conference on Unemployment. They and programs of other states might slow amid congressional delay that fall in acting on road appropriations, according to a highway advocate's report, which indicated that some such construction employed many men and horses. If Minnesota's winter construction stopped "more than twenty thousand men and hundreds of teams will be thrown out of work," and in Pennsylvania "the number would be nearly as great." Where roadbuilding slowed, the report noted, so also did work in related industries such as quarries, cement plants, gravel pits, and industries making road machinery. That also would affect owners of horse teams working on roads and sellers of grain for the horses' feed. Public Works 51 (Nov. 5, 1921): 359. Other central states providing work on roads in winter 1921-22 were Nebraska, Missouri, Kansas, Illinois, and Wisconsin.
Kansas, Missouri, Illinois, Wisconsin, and Kentucky. Elsewhere, states operating winter roadbuilding included Alabama, New Jersey, North Carolina, Rhode Island, Washington, West Virginia, Delaware. *Topeka Daily Capital*, Jan. 7, 1922; *Fairfield (IA) Daily Ledger-Journal*, Jan. 9, 1922. Congress in November 1921 approved road funds for use immediately and during 1922. Minnesota then planned winter work “larger than it has ever been before,” according to a report in a contractors’ journal. In late November many road contracts were awarded for work throughout the state. The work, mostly graveling, “is being pushed at the present time mainly with the idea of relieving the unemployment situation.” Companies sought the winter contracts, for “an exceedingly large number of bids were received and prices on an average were very low.” Thus “about 8,500 men” were expected to have winter work on Minnesota roads. They would be grading 50 miles of dirt road into permanent form, paving roads for 50 miles, and graveling 300 miles. *Excavating Engineer* 16 (January 1922): 21; Ibid., (February 1922): 50.

Wheat harvests required many laborers, including some who followed operations northward in late summer from Texas to Canada or worked in the Pacific Northwest. Other men, from towns and farms nearby, joined wheat harvests in their area. Though winter created problems for many methods of road work in 1920-22, Minnesota officials had found some tasks could be pursued. At the August awarding of contracts, state officials identified in them several kinds of work for months ahead. A newspaper reported that “grading operations are to be well advanced this fall and the gravel surfacing, guard rail and other improvements completed before heavy highway travel opens next season.” *Bagley (MN) Farmers' Independent*, Aug. 17, 1922. Awarding some road contracts in fall, instead of in spring, was an unusual practice urged in 1921 by federal officials seeking to reduce unemployment in winter. That effort failed, according to an engineering journal’s editorial writer, because construction, though contracted in fall, “did not begin until about the usual time in the following spring.” Early contracting did allow more time for planning and for contractors to order equipment and prepare for spring. But it “will not change the time of beginning work nor extend the season of actual construction over more months unless means are developed for doing work in cold weather. This is true even for the task of accumulating construction material.” “Seasonal Road Contracting,” *Engineering News-Record* 89 (Nov. 30, 1922): 914. Minnesota and several other states offered some exceptions to such an opinion, having identified work that could be done and laborers seeking it. In 1922, in Oregon, harvest and roadbuilding noticeably drew from a supply and laborers. Laborers were plentiful for road projects there in 1921. Yet “in 1922, the previous surplus of labor became a shortage, particularly during the harvest season, and wages were generally higher.” *Oregon State Highway Commission*, Fifth Biennial Report 9. In wartime, Vermont officials urged in a summer 1918 letter to selectmen and road commissioners in the state that most road work “should be temporarily suspended as soon as can be, without injury to the work, until after haying and, perhaps, until after the crops are harvested.” *Good Roads* 54 (Aug. 3, 1918): 43. In western Nebraska, the harvest of sugar beets employed laborers in early fall. In 1921, the crop, on some 70,000 acres in the North Platte Valley, was expected to bring about $5 million to farmers “and as much more will be paid for labor.” *Seward (NE) Journal*, Sept. 29, 1921. Virginia officials reduced competition with farmers from contractors’ road construction by using convict labor. They put convict road camps “in the localities where labor was scarce and wages high and at other points where by letting the work to contract it would interfere with local farming operations.” “Report of the Chairman of the Virginia State Highway Commission, for Two Years Ending Sept 30, 1923,” 19-101 in Virginia State Highway Commission, Fifteenth and Sixteenth Reports, Two Years Ending Sept 30, 1923 (Richmond, 1924), 32.

“Taxes on real estate should be reduced 50 per cent in most all localities,” the man wrote. He urged working for tax reductions in 1922 elections, saying he hoped “every county will organize and see to it that the next men we send to make our laws” are “men who can not be led to do things contrary to the best interest of the people.” *Farmer* (St Paul, MN), April 29, 1922.

Minnesota Commissioner of Highways, *Report, 1922*, 9. In 1921 and 1922, Minnesota counties graded farm-to-market roads into permanent form throughout twice the mileage of their work for 1919 and 1920, when road work was less needed for jobs. Their graveling on those roads in the depression greatly increased, and no county paved farm-to-market roads. Minnesota counties during 1921 and 1922 completed 2,064 miles of grading, compared to 1,084 miles of grading for 1919 and 1920. Graveling increased to 1,445 miles completed, compared to 150 miles for the earlier period. Ibid. Sentiment about particular routes brought advocates and state officials together. Some citizens of Clay and Becker counties in west-central Minnesota met state highway officials in St.
Paul in fall 1921 to propose building an all-weather road from Moorhead to Detroit, Michigan. State officials said
the route would be surfaced in a year, according to F. H. Peterson of Moorhead, a member of the group and state
senator. The work could have been done sooner, he said, if Clay County had issued bonds for work on main routes,
as had been permitted earlier. “Many counties” had done so, he said, and the state had used federal road funds to
pay off most of their bonds and related costs, leaving counties to pay 1 percent of their interest. Such payment of
county debts for work on main routes, using state and federal funds, relieved landowners of taxes. Further protec­
tion from taxation came from Minnesota’s legal limits on main routes’ paving. Surfacing on some of the Moorhead
route might be with gravel, for the state was limited by law to using not more than 20 percent of its permanent
construction fund on hard surfacing, highway commissioner Charles M. Babcock told the group. Fargo (ND)
Forum, Nov. 2, 1921. In mid-1922, Babcock rode by train from St. Paul to Lengby, in north-central Minnesota, to
meet with residents on trunk-highway routing. “The survey for the highway would bring the road 2 miles from the
village of Lengby, to which the citizens of that village protested to the state highway department.” To meet
Babcock while he was in the area, a group from nearby Bagley went by auto to Lengby to request designation of a
road through their town as a trunk highway. Bagley (MN) Farmers’ Independent, May 4, 1922.

55Bagley (MN) Farmers’ Independent, April 20 and Sept. 14, 1922.

56Using low-cost kinds of projects to extend improvements to more rural areas was also a way of building
roads that benefited rural businesses generally, those in towns as well as the farms in the countryside.

57Reflecting the federal road program’s purpose of improving rural mail service, its funds were allotted to
states according to a formula including mileage of rural postal roads. That was true also in 1921 legislation on
additional funds for the program and the formula for allocating them to states. “The three factors governing the
money remain as before--area, population, and the mileage of rural delivery and star routes. Dividing the net ap­
propriation into three parts, one-third is to be apportioned in the ratio which these three factors in each state bear
changes to rural schools, including consolidating them, was a goal of many in the Country Life Movement.
Danbom, 76-79. Other reformers sought changes in rural areas in sanitation, diet, child care, and disease preven­
tion. Ibid., 84. The 1916 federal road law, authorizing state activities instead of a national highway system, Hal
Barron notes, required states “to establish their own highway departments and get approval from the Federal
Bureau of Public Roads, and these stipulations generally escalat ed conflicts within the states over highway
spending.” Barron, Mixed Harvest 38.

58Projects for grading and draining widened, leveled, and sometimes straightened roads, often by cutting
away earth to make a roadway and keep it from washing from rain. Such projects could be low in cost per mile
where terrain was level, where the old roadbed needed little rerouting. Yet costs would be higher from additional
excavation in mountainous terrain or when preparing approaches to bridges. The five more costly kinds of projects
were those to apply surfaces of water-bound macadam, bituminous macadam, bituminous concrete, concrete, or
brick.

59How much a state emphasized low-cost work in its federal-aid projects may be measured by mileage
completed and by the amount of aid paid for the projects. In mileage, for the ratio of three low-cost kinds of road
work for projects completed by mid-1922, the median of the totals of the 48 states is 63.8%. In 28 states, the low-
cost kinds of work produced more than half the mileage of the projects completed by mid-1922. Yet eight states had
no such mileage. In spending, for the ratio of three low-cost kinds of road work for projects completed by mid-
1922, the median of the 48 states’ totals is 39% of aid received by a state. The three low-cost kinds of road work
accounted for these shares of the spending of federal aid in these states: Florida 100%; South Dakota 92%; Louisi­
a 91%; North Dakota 90%; Mississippi 87%; Wyoming 82%; Idaho and Minnesota 74% each; Montana and
New Mexico 67% each; South Carolina 65%; Oregon 64%; Alabama 62%; Nebraska 56%; Texas 55%; and New
Hampshire 52%. Those 16 states were the top third of the nation’s states in ratio of low-cost kinds of work in fed­
eral aid projects, measured by spending. State totals for federal aid and mileage of those projects, completed or
under way by June 30, 1922, are from Agriculture Department, Report 1922, 477-78, 483-84.
In Nebraska, a state that increased a percentage already high, the three low-cost kinds of work were 91% of mileage completed by mid-1922 and 99% of work under way then.

The twenty-seven states where percentage of low-cost work in federal-aid projects increased, when complete projects are compared to those under way by mid-1922, and the increase, expressed in percentage points, are: Utah 78; Vermont 36; Kansas 29; Arizona 21; Wisconsin 18; California 17; Iowa 15; Nevada and Georgia, 13 each; Tennessee 12; Ohio and West Virginia, 11 each; New Mexico 10; Indiana and Nebraska, 9 each; Maryland, Oklahoma, Arkansas, 8 each; Montana 7; New Hampshire and Kentucky, 5 each; Colorado 4; Louisiana 3; North Carolina 2; and less than 1 each for South Carolina, South Dakota, and North Dakota. Elsewhere, the values were declines in 15 states and unchanged (at zero) in six. Of such values for the 48 states, the median is an increase of 2%. State totals for federal-aid road work are from Agriculture Department, Report, 1922. 477-78, 483-84. The six North Atlantic states without any mileage of the three low-cost kinds of work in their federal aid programs in 1920-22, completed or under way, were New York, Pennsylvania, Massachusetts, all with many miles of rural roads surfaced by 1914, and Connecticut, Delaware, and Rhode Island, where small state area and numerous urban centers made auto traffic heavy on many rural roads. State totals for surfaced road mileage in 1914 are from Anderson, 20. In the method used in this chapter's map on increase in ratio (48 states are ranked in three equal-size groups by increase in low-cost work), the six North Atlantic states, by having no decline in low-cost work with federal aid, rank above states that completed many of miles such work by mid-1922 and had smaller mileages of it then under way. The rankings have been changed, moving to last the six states with no low-cost work in either period, leaving in the other ranks only states that had such work.

Several states rank among the top one-third of states in mileage of low-cost projects completed by mid-1922 as well as of those under way then. In federal-aid projects completed by mid-1922, the three low-cost kinds of work in the sixteen leading states totaled these mileages: Minnesota 1,063; Texas 900; Georgia 588; Wisconsin 467; Montana 421; Idaho 368; South Carolina 356; Oregon 355; Iowa 351; North Carolina 325; Wyoming 309; North Dakota 306; Alabama 295; Mississippi 292; Arkansas 279, and Louisiana 274. By comparison, in federal-aid projects under way in mid-1922, those three low-cost kinds of work in the 16 leading states totaled these mileages: Texas and Nebraska, 1,455 each; Iowa 978; Minnesota 907; South Dakota 757; New Mexico 727; North Carolina 432; Wisconsin and South Carolina, 423 each; Georgia 421; Mississippi 399; Louisiana 396; Arkansas 373; Wyoming 339; California 332, and Missouri 329. In contrast, low-cost work totaled less than 100 miles in mid-1922 in 23 states for completed projects, in 21 states for projects under way. For mileage in low-cost kinds of road work for both periods—completed or under way by mid-1922—the median of values for the 48 states was 289.75 miles. Of those below the median, six had no mileage in those kinds of projects.

South Dakota officials chose low-cost kinds of projects for all federal-aid work in 1920-22 except a half mile of bridge construction. Despite the economy’s effect on incomes, roadbuilding using federal aid kept expanding. The program completed 55 miles of grading and draining projects by mid-1922 and 99 miles of graveling. It had under way then projects for 130 miles of grading and draining and 627 miles of graveling. The program attempted no paving in the depression. The Dakotas were similar in having nearly all their work in low-cost kinds of projects, particularly graveling and grading and draining. Both had 99% of federal-aid work in the three low-cost kinds of work in projects completed by mid-1922 and those under way then. South Dakota expanded projects from 155 miles in completed projects to 757 miles in those under way. Mileage was steadier in the program in North Dakota in the two periods, totaling 306 miles in completed programs and 300 miles in those under way. Agriculture Department, Report, 1922. 477-78, 483-84. The 1922 meeting observed the state Farm Bureau Federation’s third year of operation. Farmer (St. Paul, MN), Jan. 21, 1922.

Sioux City (Iowa) Journal, Jan. 20, 1922.

Roseburg (OR) News-Review, March 30, May 16, and May 23, 1921. One bond proponent, speaking at a public meeting in the Looking Glass community said the funds would improve roads and give “better employment for the coming year or two when the county will not be able to take care of its unemployed otherwise.” Ibid., May 30, 1921. Lane County sold $52,000 of its road bonds in 1921 to farmers from Crow, Hadleyville, and Springfield, OR. Morning Oregonian (Portland), April 29, 1921. In Wasco County, opponents to its proposed road bond issues, set for a June vote, organized a “citizens’ welfare league,” which told voters in a letter the “most essential step
toward economic retrenchment is by reduced taxation" to aid the county's farmers and sheep or fruit raisers. Ibid., May 29, 1921. In June elections, voters in six counties voted against higher salaries for local officials. Ibid., June 25, 1921. Work had begun by fall on Roseburg-Reesport highway, "provision having been made in the recent bond issue ordered by the voters to take care of a large part of the cost of this construction. The county funds will not be sufficient to build this road entirely but doubtless it will be possible to secure state and federal aid." Ibid., Sept. 17, 1921. Voters in rural districts of the county favored bonds. Morning Oregonian (Portland), June 25, 1921.

Improvement districts first increased in late-1800s Arkansas to avoid, for levee and drainage projects, the 1874 constitution's prohibition of borrowing by counties or cities for any public improvement. Havens, "History of Financing of Public Highways in Arkansas," 16. The flat rate of road districts' assessment, Havens notes, was mentioned in an April 1921 report of the assistant chief engineer of the Bureau of Public Roads in charge of federal aid in Arkansas, as reprinted in Arkansas Gazette, Sept. 30, 1923. Havens, 57-58. The report said property valuations were usually below market value, and that the district's bonds were adequately secured by property at actual valuation. Yet land's actual valuation dropped in years following early 1921, leaving taxes a burden on the land. The engineer studied Arkansas Louisiana Road Improvement District created in 1917 from parts of five counties in southeast Arkansas. Plans for projects in Johnson and Conway counties were made partly while work on the projects advanced, and "in a number of cases bridges were built that could not be accepted by the engineers in charge of federal aid and these had to be condemned and rebuilt." Havens, 63. "Probably in the majority of cases the accounts and affairs of the road improvement districts were as well handled as could be expected. The majority of the commissioners were simply owners of land in the district, usually farmers, without any special knowledge of the business of road building. Quite frequently, therefore, the records kept by these districts were inadequate to show the actual state of affairs in the district as the work progressed." Havens, 64-65. A 1915 law set standards for the districts, and within a year and a half 57 counties had at least one such district. Havens, 32-33. The districts by 1916 had begun construction estimated to cost $9.3 million and to cover 2,158 miles with surfacing including 110 miles of concrete, 617 of macadam or similar surface, and 1,432 of gravel or graded dirt surface. Havens, 33-34. Havens notes a problem of building large mileages of temporary surfacing financed by bonded debt scheduled to extend for years, likely beyond the improvement. Havens, 34. In 1917, Arkansas complied with the new federal law on highways by designating the commissioner of State Lands, Highways and Improvements to receive federal aid payments and providing for spending of the funds through the road improvement districts. Havens, 43. Soon, districts multiplied, particularly in 1919, when the legislature passed 133 acts creating road districts and 44 acts correcting legal provisions for existing ones; the 1920 session passed 140 acts amending earlier ones and 140 acts creating new districts. Havens, 45-47. The 1920 legislature also raised registration fees for trucks and other vehicles. Havens, 50. "The vast amount of work" by districts in 1919 and 1920 "was initiated during times of extremely high prices." Arkansas Department of State Lands, Highways and Improvements, Fifth Biennial Report, 57. Roadbuilding was by the special, local districts "because the provisions of the state constitution prevent the counties and the state from selling bonds for public improvements." Ibid., 57. Seven counties were listed in mid-1922 as having no districts, one county had 12, another had 11, and most counties have fewer than 5.
Ibid., 66-68. Havens contends that "there was little pretense of creating a general system of roads. Each locality built the road which it believed would benefit it most. There were extreme variations in the width of the roads and in the strength of their construction." Havens, 26. In Arkansas, "the state highway department does not have direct charge of construction, this work being in the hands of local boards." "State Highway Construction in 1920 and 1921," Engineering and Contracting 3 (Feb. 2, 1921): 28. In districts created by landowners' petitions through the state's usual procedures, "under the Alexander Law the right of appeal from the assessments levied is protected." Yet other road districts "are created by acts of the Legislature and not upon the petition of the landowners and opportunity for appeal is usually denied. The time allowed for appeal against the assessments is usually reduced to two or three weeks." Further, "a number of federal aid projects are in such districts." "The Arkansas Road Situation," Good Roads 60 (April 27, 1921): 231. In Arkansas' postwar roadbuilding, in which projects quickly multiplied partly because the effort was so decentralized, decisions by the state were most often made by the legislature instead of being delegated to a highway agency. Determining the status of road work proved difficult for citizens and officials, as the state highway department noted. "Because of the fact that road construction work in Arkansas is done either by road improvement districts or by counties and there is no central source through which all details of construction and expenditures must pass, the true status of the highway program is not well known or appreciated by the general public." The department contacted districts and counties to gain information.

Arkansas Department of State Lands, Highways and Improvements, Fifth Biennial Report, 59.

The resignations of road-district commissioners forced by the group in Lake City's Chancery Court were an attempt to block a road project considered costly in an area of low-value land. The road was "estimated to cost $50,000 a mile through territory where the land is valued at only from $5 to $10 an acre," a newspaper reported. The taxpayers' group's leader was cited for contempt of court, fined $500, and sentenced to six months in jail, though he was not jailed and soon was relieved of fine and sentence by a proclamation of the governor. New York Times, March 28, 1921. Pulaski County Taxpayers' Protective Association formed to investigate roads. Ibid., April 2, 1921. The group later protested a proposed reassessment to finance a $2.5 million bond issue for a road and repeated its position favoring a gravel surface for completing the road. "Taxpayers of Pulaski County, Arkansas Protest Increased Assessments," Good Roads 60 (May 4, 1921): 238. A federal engineer investigated federally aided roadbuilding in the state. New York Times, April 9, 1921. Ibid., May 8, 1921. Taxpayers of Wilmot Road District began a suit over the constitutionality of laws on the district. Ibid., April 24, 1921. In Yell County in western Arkansas, protests of road taxes "were kept in legal bounds through the efforts of prominent citizens not identified with the road movement." And "in no part of Arkansas are the special road tax burdens heavier than in some of the great Mississippi River cotton and timber counties," including Poinsett County, where landowners paid special taxes also for drainage and levees. A Poinsett man said a district's assessments were filed with officials and confirmed by the legislature without notice to taxpayers in newspapers, precluding taxpayer appeals. Seeking tax relief, 90% of the district's taxpayers signed a petition to repeal the district's legislation, and a delegation went to the legislature in support of such a bill, which passed the Senate yet failed in the House, because, according to a Poinsett resident, a member of the legislature who was also an attorney for the district opposed repeal. In Benton County in northwestern Arkansas, about 1,000 members of some 25 taxpayer groups sought a grand jury investigation of local roadbuilding. A Bentonville lawyer said that the district had spent funds without much improvement, that assessments changed often, and that taxpayers had had no opportunity to vote on any of the district's activities. Ibid., March 28, 1921. An editorial noted that a taxpayer might own land in, and be taxed by, several road districts. Ibid. A Pulaski County grand jury recommended removal of a district's commissioners. Ibid., May 27, 1921. On June 6, the U.S. Supreme Court ruled the districts, lacking a standard for determining benefits to lands from the road improvements, did not afford equal protection of the law to all taxpayers. Districts, it said, "divided the farming lands into five zones, determined by distance from the highways and assessed uniform benefits within the same zone without regard to improvements or property value." The court ruled that benefits from the improvements "must be estimated upon contiguous property according to some standard which will probably produce approximately correct general results." The case was brought by Kansas City Southern Railway Co. and the Texarkana & Fort Smith Railway Co. against Road Improvement District No. 6 in Little River County. A report on the ruling noted that "assessments amounting to $67,000, amounting to $7,000 per mile of track for 9.7 miles within the taxable zone, were demanded from the railroads by the road commissioners for the construction of a gravel road 11.2 miles long." "Arkansas Road Law Declared Invalid by Supreme Court," Engineering News-Record 86 (June 16, 1921): 1052. After the ruling, several groups of taxpayers formed to seek relief from road districts' taxes through the courts. New York Times, June 7 and 26, 1921. By mid-1922, about $62 million "in
bonds have already been sold by road improvement districts for the purpose of building about 5,917 miles of improved highway," said state highway officials. "Unfortunately, practically all of this large amount of money has been incurred as a debt on the real property in the road improvement districts, the personal property escaping all taxation and the motor vehicle owner and user of the road paying only a fraction of the cost." Arkansas Department of State Lands, Highways and Improvements, Fifth Biennial Report, 70-71. In 1923, the legislature made no provision for expenses of the highway department, which on July 1 stopped operating; a September special session raised state vehicle fees and taxes on gasoline and motor oil, providing that some of the revenue be used to repay road districts' bonds. Havens, 69.

69 'Blackford County Farmers' Association, meeting Dec. 11, 1920, also asked for abolition of the county road superintendent post and transfer of its duties to the county commissioners. "Indiana Farmers Ask Repeal of Road Law," Good Roads 60 (Jan. 12, 1921): 17. "Changes Recommended for Indiana Highway Commission," Engineering News-Record 86 (March 10, 1921): 443. The board said that the Ohio commission's administrative costs in 1920 were 5.7% construction costs and that they were 32% for Indiana's commission. Ibid. The license fees increased most for heaviest trucks. From $30 for trucks up to 5 tons it rose to $50; from $40 for trucks up to 7.5 it rose to $75. Indianapolis News, April 1, 1921. Elkhart County officials at Goshen, IN, rejected bids for four 1921 road contracts, approving them later for lower amounts despite objections of farmers and others that the work be delayed until "material and labor costs had undergone a general reduction," a newspaper reported. Ibid., April 26, 1921. Ibid., April 27, 1921. The representative of Taxpayers' League of Indianapolis also noted Gov. McRae's announcement that the state would not begin road work until prices declined. Ibid., April 29, 1921.

70 Tax assessments were the subject for officials of Marion County and the state, meeting with "500 farmers and other citizens of Perry township at the township high school building in Southport." One farmer said that he told the assessor his hogs were worth $18 and that assessor set the value at $27, though he could not have sold them for more than $20. Indianapolis News, Feb. 4, 1922. A committee from an unemployment conference of Indianapolis Central Labor Union met with Gov. McRae, who, "in a letter to the highway commission, directed the commission to set in motion at once machinery that would be necessary to start work on various road improvement projects at the earliest possible time," according to a newspaper. Mayor Shank of Indianapolis told the committee he would urge approval of public works by the city. Ibid., Feb. 4, 1922. In Madison County, "remonstrances by taxpayers against bond issues speedily followed" the county's early-1922 award of road contracts, and there was "widespread feeling here against further improvements." Ibid., Feb. 7, 1922. Earlier, Madison County Farmers' Association unanimously adopted a resolution opposing further concrete paving and favoring spending road funds on building and maintaining gravel roads. Ibid., Jan. 20, 1922. Also in early 1922, Indianapolis Real Estate Board opposed further issues of tax-exempt securities, in a telegram to an Illinois member of the House Ways and Means Committee. "The action of the Indianapolis board is in accord with that taken by other real estate boards over the country affiliated with the National Real Estate Association. The securities question was placed before the ways and means committee in the form of a resolution calling for a constitutional amendment that would prevent further issue of the tax free certificates." Ibid. Higher revenues from vehicle-registration fees, said an official in the secretary of state's office, resulted partly from enforcement by the state motor police. Ibid., July 17, 1922. The roadworking demonstrations among farmers were conducted by a highway engineer of Purdue University. One of them began on a dirt road near Willkiffe in Crawford County. "The farmers in the district where the road building is done were well organized and were ready to lend every assistance with tools, labor and teams." Similar demonstrations were planned in Perry, Pike, Dubois, Spencer and Warrick counties. Ibid., July 26, 1922. In July at Terre Haute, Vigo County Farmers Association urged retrenchment. They met at the courthouse and "adopted a resolution asking that no more county roads be built for one year, as the burden of taxation is already too heavy on the farmers and many of them have to borrow money to meet their taxes." Ibid., July 31 1922. Indiana's state law in 1921 provided for "improvement of country roads by direct labor of freeholders, or by township authorities with township funds," according to a newspaper. "Ten or more resident freeholders may petition the county commissioners" to appoint an engineer to study the proposed improvement of grading and draining and, on county approval, survey and make plans. "Then the petitioners at their own expense shall improve the road." If the petition to the county were from a township trustee, "expenses of the improvement would be paid by the township." Ibid., April 1, 1921. Indiana used its federal aid to complete 80 miles of concrete paving and 12 miles of bituminous concrete paving by mid-1922. Federal-aid projects under way then were for 18 miles of grading and draining.
and 172 miles of concrete paving. Nearby states also used much of their federal aid for paving, particularly on east-west transcontinental routes. Agriculture Department, Report 1922, 477-78, 483-84.

71In Texas counties and road districts, voters approved bonds totaling $8.5 million in 1921 and $8.3 million in 1922. Voters defeated bond questions totaling $1.8 million in 1921 and $9.8 million in 1922. Texas State Highway Commission. Third Biennial Report, 94.

72Farmers in the area usually paid laborers $2.50 a day. Also raising farmers’ costs was the boll weevil, driving “tenant farmers off of the farms and forcing the owners to make provisions for labor” paid in wages. Joe Worsham, lawyer and farmer of Dallas, TX, testimony before House Committee on Immigration and Naturalization, 239-253 in House Committee on Immigration and Naturalization. Temporary Admission of Illiterate Mexican Laborers: Hearings before the Committee on Immigration and Naturalization on H.J. Res. 271. Jan. 26, 27, 28, 30, and Feb. 2, 1920. 66th Cong. 2nd sess., (Washington, 1920). 239-40. One county official said that “many unemployed farmers and farmers’ helpers will be given work by the building of roads” planned in his district. Fort Worth Star-Telegram, Dec. 28, 1920. San Marcos Times recommended the county government name such a group and seek its counsel, though it said, “a hundred wise men may sit in with the County Commissioners and still not procure good roads for Hayes County unless good engineering and good materials and good work are had for the job.” San Marcos Times quoted in Dallas Morning News, Jan. 5, 1921. Low-cost kinds of work using federal aid in Texas were 80% of the mileage completed by those projects by mid-1922. They put gravel on 761 miles of roads, added sand-clay surfacing on 28 miles, and graded and drained 112 miles. Then the proportion of low-cost work declined to 74% as the program expanded, so that such work was under way in mid-1922 on 1,455 miles, more than in any state except Nebraska. Agriculture Department, Report 1922, 477-78, 483-84.

73Ohio Farmer (Cleveland), May 7, 1921. By early 1921, Ohio’s agriculture officials were receiving many letters from people “out of employment in industrial towns” asking about jobs on farms. Ibid., Feb. 19, 1921. Letter of W. L. Leffler of Ohio in Indiana Farmer’s Guide, Aug. 13, 1921. Columnist E. A. Reynolds’ objection to hiring city workers for road work omitted mentioning that many factories were not hiring at any scale of wages and that urban incomes maintained a consumers’ market for rural food products. Ohio Farmer (Cleveland). Oct. 15, 1921.

74The request of Ohio’s highway director, L. C. Herrick, for help from the Farm Bureau and Grange in adjusting special assessments was noted by C. A. Dyer, secretary of Ohio Home Protection League. Ohio Farmer (Cleveland). Feb. 4, 1922. Herrick said some county officials were seeking to use special assessments for 35% of road costs, though they should be limited to 10%. “Road building costs haven’t been deflated as far as the prices of farm products and the result is that he is being assessed too heavily,” Herrick said. “The farmer has always been an advocate of good roads, but under the present conditions it is not to be wondered at that he is crying for cheaper types of roads.” Columbus (OH) Dispatch, Jan. 16, 1922. Ohio’s highway department completed work on some 1,022 miles of roads in 1921. Ohio Farmer (Cleveland). Jan. 14, 1922. It planned construction on some 700 miles in 1922, employing an estimated 35,000 to 40,000 men. “Road Work Will Relieve Unemployment,” Good Roads 62 (March 29, 1922): 189. Ohio Farmer (Cleveland). July 1, 1922; Ohio Department of Highways, Report 1917-1928 (Columbus, 1928), 9-10. By late July, Ohio farmers received better prices for hogs, sheep, cattle, and dairy products. Ohio Farmer (Cleveland). July 22, 1922. Instead of attempting much low-cost work with federal aid, Ohio officials chose projects for other kinds of surfacing. Thus, federal aid in Ohio had been part of completed projects by mid-1922 for 161 miles of concrete and, in the most costly kind of surfacing, 129 miles of brick paving; other such projects included 99 miles of bituminous macadam, 53 miles of bituminous concrete, and 40 miles of water-bound macadam. In projects under way by then, federal aid was part of work on 50 miles of concrete, 30 miles of brick, 49 miles of water-bound macadam, and 22 miles of bituminous macadam. Ohio led the nation by mid-1922 in completed brick paving in federal-aid projects. Much of Ohio’s roadbuilding in 1920-22 was to provide for traffic between its urban centers and on trunk roads between Chicago and the East Coast. Fourteen states that completed by mid-1922 the most concrete paving with federal aid, often on sections of transcontinental routes, ranked by these mileages: Illinois 546; Pennsylvania 353; Wisconsin 201; Ohio 161; Washington 121; Iowa 117; Maryland 107; New York 96; Indiana 80; Georgia 75; California 74; Michigan 74; Kansas 69; and Texas 64. Agriculture Department, Report 1922, 477-78, 483-84. In 1914, Ohio had 30,569 miles of surfaced roads, Indiana had 30,962, and New York ranked third with 15,636 miles. Anderson, 20.
immediately instead of waiting until federal aid, stale tax money and other funds are received," a newspaper and are in urgent need of the money that the state is not able to pay." The state's auditor general extended aid to increased the limit on state road bonds from $5 million to $10 million a year and increased interest on the interest tales. Auto fees and some bond sales provided funds for state highway projects, including those using fed-

of the state trunk line system. "Most of the federal funds, however, have been used in extending the improvement on trunk line highways." Michigan, State Highway Commissioner, Ninth Biennial Report, 11-12, 10. The highway department by early 1922 began requiring counties to pay in advance their share of construction costs. "If this money had been paid in advance, as the new rule contemplates, the department would be able to pay all contractors immediately instead of waiting until federal aid, state tax money and other funds are received," a newspaper reported. "Many of the contractors are in the debt of private concerns for materials and to their workers for labor, and are in urgent need of the money that the state is not able to pay." The state's auditor general extended aid to pay some contractors. Detroit Free Press, Jan. 4, 1922. To increase roadbuilding in 1921, Michigan's legislature increased the limit on state road bonds from $5 million to $10 million a year and increased interest it offered on the bonds. Still, many of the bonds could not be sold, and the state had to issue short-term notes in 1921 at even higher interest rates. Auto fees and some bond sales provided funds for state highway projects, including those using fed-

"Tennessee's archaic tax structure was simply inadequate to meet the needs of an industrializing society," according to David D. Lee. Under its reliance on "a general property tax which frequently did not touch personal property," the state "depended for most of its revenue on its farm population, a group that was producing an ever shrinking percentage of the state's wealth." Lee, 7-8. Tax assessment, by local officials, was kept low, an inequity for some counties that the state sought to remedy in an early-1900s measure for reassessment by state revenue agents, a measure that became a political tool of legislators. Ibid, 10-11. Taxation was "emerging as a controversial statewide issue" in 1917, when the governor, contending most of the taxes were paid by those least able to pay, appointed a study commission, which criticized many parts of the tax system and "launched an eight-year reform effort." Ibid., 8. "By 1920, then, taxation was emerging as a major source of discontent across Tennessee," among residents rural and urban. Lee, 9-10. "The agricultural slump that struck most of the nation in 1920 only enhanced this already considerable resentment." Ibid., 8. Efforts to reduce the use of land taxes failed soon after 1920, so that in 1922 landowners "paid the largest land tax ever—$1,700,000 more than in 1919." Ibid., 18. Business groups such as the state Chamber of Commerce and Tennessee Manufacturers Association in 1922 called for good government through economy and efficiency, helping "condition the atmosphere in which the election was conducted." Ibid., 18. The farmers' meetings in Montgomery and Maury counties are noted by Lee from Columbia (TN) Daily Herald, June 23 and July 17, 1922. Lee, 26-27, 30-31. The Montgomery County meeting adopted its resolutions May 6, though a report in another newspaper also appeared in June. Bolivar (TN) Bulletin, June 23, 1922.

The meeting at Bolivar's courthouse was called in a newspaper notice signed by 200 Hardeman County taxpayers. Bolivar (TN) Bulletin, Nov. 11, 1921. Ibid., March 3, 1922. The proposed road, for some 30 miles, was to cost $600,000, one-third of which was to come from local sources, the rest from state and federal funds. The county government, announcing the referendum on $200,000 in road bonds, said that "any citizen of the county, male or female, white or colored, 21 years of age at the time" of the election could vote in it. Ibid., April 25, 1922. Ibid., April 28, 1922. Tennessee projects completed with federal aid by mid-1922 included only 2.9 miles of graveling among the three low-cost kinds of work; less than 30 miles of other kinds of federal-aid work was completed. Yet in projects under way by mid-1922, graveling accounted for 87 miles, among the low-cost kinds; other projects were for 214 miles of bituminous macadam, 123 miles for water-bound macadam, and 30 for concrete paving. Though the ratio of low-cost work was low (7% in projects completed and 19% in projects under way), the total for mileage of federal-aid projects of any kind was low, preventing taxation for much paving. Agriculture Department, Report, 1922, 477-78, 483-84. In 1914, Tennessee had 8,100 miles of surfaced roads. Anderson, 20. In projects completed by mid-1922, federal paid in Tennessee totaled $586,897, ranking 41st among the states. Yet the total increased to $6.1 million for federal aid in projects under way by then, ranking fourth. Ibid., 470. For Tennessee's top two crops in 1919 value, corn and cotton, prices had begun to improve by spring 1922. Census Bureau, Census, 1920, vol. 5, Agriculture, 705-06.
eral aid. "Road Building in Michigan" Good Roads 61 (Dec. 7, 1921): 257. In Michigan's scale of local matching, required in its roadbuilding programs sharing revenue of the state and federal governments, 27 counties paid the highest rate (25% of a road project's cost), two counties paid the lowest rate (5%), and the other counties paid rates between those. Ibid.

78When totals for the 51 counties with federal-aid contracts June 1920-June 1922 are ranked by amount of federal aid in contracts, the 28 counties with largest amounts included 24 counties that paid the highest local share (25%), which Michigan counties paid according to their wealth, measured by assessed valuation. Of the rest, 10 paid the highest share (25%). Michigan, State Highway Commissioner, Ninth Biennial Report, 62-65. Here as elsewhere, rural and urban development provided tax bases from which governments could support programs of roadbuilding. Graveling, said Michigan's highway commissioner, avoided "concentrating all of funds in having a few important routes, although there is no question but what the important cross state routes must be paved just as rapidly as funds are made available." Ibid., 9. Michigan officials divided much of the 1920-22 federal-aid work between graveling and concrete paving. In federal-aid projects completed by mid-1922, graveling totaled 73.4 miles, concrete 73.8 miles, bituminous concrete 6.3 miles, and water-bound macadam 8.5 miles. In federal-aid projects under way then, graveling totaled 135.7 miles, concrete 213 miles, bituminous concrete 44.7 miles and water-bound macadam 8.1 miles. Among three low-cost kinds of projects, graveling accounted for many miles of work, grading-draining and surfacing with sand-clay compound accounted for none. Agriculture Department, Report, 1922, 477-78, 483-84. Settlement continued in the early 1920s in Michigan's newer cutover regions, often by people of little capital. "Some are young men just starting in as farmers but preferring to buy a small farm rather than rent one. Still others are tenants from our great corn belt. A great many are people of foreign birth, and still others are city people with no farm background but who are obeying the back-to-the-land impulse." Also, many men worked on their 40-acre farms in summer months and in nearby mining and lumbering in winter. Such northern counties had shorter growing seasons and different market conditions from those of the corn belt. Michigan Bureau of Agricultural Industry, "Report," 26-27. 24. Most of the state's licensed dairy plants, indicating areas near concentrations of consumers, were in Michigan's southern half. Michigan State Department of Agriculture, First Biennial Report, for the Fiscal Years ending June 30, 1923 and 1924 (Lansing, 1924)). 103. Urban residents in Michigan experienced the depression's effects quickly, and many returned to rural areas. Many people had traveled to jobs in auto factories during and after the war, according to Irving Bernstein. "The one-industry character" of several large cities in Michigan and Ohio "made them particularly vulnerable when the depression struck," affecting the auto industry first from April to July 1920. Unemployment in the auto industry when the depression was worst "was more than twice as heavy as unemployment in industry as a whole and, similarly, recovery came more slowly in automobiles." Thus, "the tide of labor migration moved swiftly out of the automobile cities. Workmen returned to the farms and coal mines of the Midwest. Railways carried a heavy outbound traffic." Bernstein, 52. 55. Many people returned from cities to western-Michigan farms, a movement that began in late 1920 and continued through at least late 1921. "Many settlers left the farms during the periods of high produce prices and returned at a time when farm crops are bringing less in proportion than almost any other commodity." Detroit Free Press, Dec. 28, 1921.

79The policy of allowing auto ownership to qualify a resident as a property holder to vote on road bonds "may need revision as a means of ultimate protection to property of a more fixed, permanent, and stable nature than automobiles." "Who Should Vote At Bond Elections?" Arizona Taxpayers' Magazine 8 (April 1921): 4-5. The journal's issues of 1921 rarely mentioned roadbuilding, often supported retrenchment in government, yet noted no local meetings of taxpayers. Its argument that auto ownership should no longer qualify residents to vote in bond elections neglected practice in many states, if not counties, of repaying road bonds from auto fees. A state bond issue for roads was urged by the state's highway official in late 1922. Arizona State Engineer, Fifth Biennial Report, 13-14. Landowners and tenants had kept other taxpayers from using some county roads, the state engineer said. "Many roads in use in the state for twenty or thirty years have been fenced by property owners or leasers, without any other outlet being provided for the continuance of traffic. Roads long in use, and on which the counties have expended large sums of taxpayers' money, have been fenced by homesteaders." Ibid., 15.

80The ballot proposal for $4.5 million in Maricopa County road bonds carried by early 1921 "by a majority of about 7000, out of a total vote of about 7000." County population was "about 70,000." Los Angeles Daily Times, Jan. 4, 1921. Arizona State Engineer, Fourth Biennial Report, 26-27. Gila County Taxpayers' Association met at
Globe, AZ, on Jan. 4, 1921, and adopted resolutions calling for retrenchment without mentioning road work. A resolution noted lower property valuations and "a heavy increase in municipal, school, county and state tax rates, making it imperative that some relief to the taxpayer be had." *Arizona Republican* (Phoenix), Jan. 13, 1921. County taxes would need to repay a postwar road-bond issue Gila County's voters had approved. In Arizona, low-cost kinds of road work had been 70% of federal-aid projects completed by mid-1922. They increased to 90% in projects under way then. The change largely reflected an increase in graveling from 85 miles completed to 170 miles under way. *Agriculture Department, Report, 1922*, 477-78, 483-84.

At the Idaho meeting, a resolution mentioned effects of high rail rates on growers of potatoes, wheat, and corn. *Idaho Falls Daily Post*, Jan. 7, 1921. Soon before the land-bank announcement concerning the Alabama farmers, when Coffee County's tax assessments were certified and residents were notified of taxes due, "some persons refused to pay, contending that the new records were not the proper tax records" of the county. Some who carried federal land-bank loans on their farms refused to pay until assessments were reduced. The state and county were prepared to ask a court to validate the new records, which replaced county tax records "stolen from the office of the tax collector and assessor during the night of February 18." *Birmingham Age-Herald*, July 5, 1921.

*Good Roads* 64 (Feb. 28, 1923): 77.

"Compared to the previous three years' spending for highways, said the *Engineering News-Record* editors, "no such sums of money were spent by the railways even in the years of their greatest extension. The Panama Canal during the ten years of its construction, cost less than half the amount that has been spent for improved roads each year of the last three years. Every such extreme in public expenditure has been followed by a pause to appraise the situation, and there is no reason why highway expenditures should be an exception."


Chapter 9

The federal tax had made raising state and local revenues more difficult, according to *Iowa Homestead*, Feb. 9, 1922. The effect of the federal tax was discounted in an editorial of *Correctionville* (IA) News, reprinted in *Sioux City* (IA) *Journal*, Feb. 2, 1922. Many Iowans' incomes were not part of the totals, for they were below $1,000 for individuals, the amount that required filing a federal income-tax return. Yet economic trends similar to those indicated by the totals applied to many people whose incomes were lower than those included in the totals. Comparisons are of state totals for individual incomes as reported for federal income taxes. Compared to the 1920 amount, the amount for 1921 for Iowa was down 50%. In the same period, the decline for South Dakota was 55%. In every state, incomes totaled less in 1921 than in 1920, though in two-Missouri and Illinois-the decline was less than 10%. In thirty states, the declines were at least 20%. For 1922, every other state in the nation regained 1920 levels more than South Dakota, still down 52%, and Iowa, down 43%. When the state totals for income are divided by state population, to account partly for people omitted because their incomes were too low to require a federal tax return, Iowa ranked 12 among 48 states for 1920, falling to 30 for 1921, and rising to 24 for 1922. Data is for calendar years. For incomes below $1,000 for single people or below $2,000 for married people, filing income-tax returns was not required. Exemptions and debt deductions allowed people with still higher incomes not to file returns. *Internal Revenue, Statistics of Income, 1920*, 22-23; *Internal Revenue, Statistics of Income, 1921*, 38-39; *Internal Revenue, Statistics of Income, 1922*, 30-31.

Vehicle fees, increased in 1919, quickly produced more funds for primary roads than were being spent. Urban counties, paying large amounts in vehicle fees though receiving revenue from the fees only by county totals for land area, contributed to other counties' road programs. Nearly 100 cities and towns petitioned the legislature in early 1921 for a share of the fee revenues being divided among counties. Cities and towns should levy fees of their own if they wanted revenue from vehicles, the speaker of the Iowa House of Representatives said upon receiving the petitions. *Des Moines Register*, Jan. 18, 1921.

By issuing bonds and concentrating improvements on primary roads, Cerro Gordo County paved more than most counties in 1920, yet the cost to its taxpayers was small, according to Anson Marston, state highway commis-
commission, "as well as paving contractors and cement industries. Ibid., Feb. 1 and Feb. 2, 1921. Other opposition

"disgruntled county boards of supervisors whose road and bridge work is reviewed and often amended by the

"a group of legislators" was "determined to revive the old road issue of past sessions and make a desperate attempt

Spending from bonds by the nine other authorized counties increased, expanding roadbuilding, when the depression was worst. Thus, spending from primary-road bonds by all counties totaled $1.19 million for 1920, $3.14 million for 1921, and $2.6 million for 1922. Ibid. Similar provisions for local petitions and votes before costly transportation improvements were in use in the last half of the 1800s. The legislature in 1866 authorized "local tax levies in aid of railways" upon petition of one-third of the taxpayers and approval by a majority in a referendum. The act was repealed in 1872, though a similar one was approved in 1876, raising requirements to petition of a majority of taxpayers and approval by a two-thirds majority in a referendum. Hobart C. Carr, Early History of Iowa Railroads (New York, Arno, 1981), 73-74. Legislation adopted in 1921 allowed counties to anticipate their future allotments from the Primary Road Fund of federal and state revenues. ISHC, Report, 1922, 15. Thus counties in 1922 could borrow from 1923 allotments amounts up to 99% of their 1921 allotments. Independence (IA) Bulletin-Journal, Sept. 28, 1922.

Totals for autos per capita, 1920, are from Agriculture Department, Yearbook, 1920, 829. In revenues from vehicle registrations, Iowa ranked sixth in 1919 (revenues totaled $3 million), third in 1920 ($7.5 million), third in 1921 ($7.7 million), and fifth in 1922 ($7.9 million). "Motor Vehicle Registration 15,092,179." Public Roads 5 (April 1924) 17. Iowa's revenue from fees was high partly from the large number of vehicles, for in 1923 Iowa's fees, on a per vehicle basis, were $15.46, thirteenth highest. Trumbower, 2. Farmers in 1920 owned 177,588 autos in Iowa, more than in any other state. Illinois was second in autos among farmers, and Ohio third. Service Bulletin 9 (September-October 1921): 14. The autos on Iowa farms in 1920 were enough to extend to 84% of the state's 204,371 farms in 1920 if owned one per farm. Iowa Department of Agriculture, Iowa Year Book of Agriculture, 1920 (Des Moines, 1921). 696. Iowa's totals for autos and trucks registered were: 437,378 in 1920; 461,084 in 1921; 500,158 in 1922; and 571,061 in 1923. "Motor Vehicle Registration 15,092,177." Public Roads 5 (April 1924): 16. Iowa's total for number of registrations of auto and trucks declined as a share of the U.S. total—from 4.7% in 1920 to 4.4% in 1921, 4.1% in 1922, and 3.8% in 1923. Ibid. Iowa's registrations had grown from the 1915 total of 139,125. Service Bulletin 3 (December 1915): 12. Farmers were allowed deductions for depreciation and repair of autos on federal income tax returns, on the theory that for farmers' autos were part of their work. Residents of towns were not allowed such deductions on autos, though they were on trucks. Dubuque Telegraph-Herald, Dec. 16, 1921. In 1920, Iowa farms also had 76,620 mules and 1.2 million horses, some of them being raised for sale and some used for farm work. Iowa Department of Agriculture, Year Book, 1920, 696, 715. During the depression's low prices for produce, farmers had plenty of grain, hay, and straw to use on their farms as feed, increasing the advantage of farming with horses and mules. "The decrease in the price of farm grown feed, such as corn, oats, hay, and straw, has given added emphasis to the economic importance of horses and mules to Iowa farmers," said H. H. Kildee, of Iowa State College's animal husbandry department. Tractors were cheaper in many farming operations than horses in 1920, though not in 1922, according to a USDA survey of corn belt farms, he said. Using grain for feed, he said, also gives a market for it without requiring the expense of hauling it to a shipping point or paying freight rates. Dubuque Telegraph-Herald, Dec. 11, 1921.

In January 1921, there were "persistent rumors" at the State House of efforts to abolish the commission, and "a group of legislators" was "determined to revive the old road issue of past sessions and make a desperate attempt to abolish the commission." The state Senate's 50 members included 21 members regarded as "proven friends of the highway commission and its work," and from the others enough support was considered likely to block repeal. Des Moines Register, Jan. 25, 1921. The legislature at its session during 1920-22, held in early 1921, debated roads, as it had for years, and considered requests for hearings on the commission and a request that it be abolished. Fewer commission opponents than had been expected attended hearings in February. The measure to abolish the commission did not pass during the session. Opponents of the commission were reported to include "disgruntled county boards of supervisors whose road and bridge work is reviewed and often amended by the commission," as well as paving contractors and cement industries. Ibid., Feb. 1 and Feb. 2, 1921. Other opposition
to the commission was attributed by one of its members to local disputes over routing new roads, including decisions on locating curves, adjusting road elevation, and eliminating railroad crossings. "Always these relocation improvements involve bitter fights," said Anson Marston. "They account for much of the animosity against the Iowa State Highway Commission, but we would be recreant to our trust if we did not fight in the interests of the public." Anson Marston, "The Iowa State Highway Commission and Its Work," speech to Iowa League of Municipalities at Sioux City, Aug. 16, 1921, typescript, Special Collections, Parks Library, Iowa State University, Ames.

Among road relocations affecting farmers that summer was one on a section of Daniel Boone Trail north of Madrid, where in July "gangs of men are busily engaged in their tasks of grading and getting a suitable roadway for the gravel." From "Luther north, the highway is being straightened out" as part of a project to make a gravel road from Des Moines to Webster City, newspaper reported. "In the new improvement plan for the road, many fence posts have to be moved, some six inches and some as much as eight feet." For the new road, planned to be about 66 feet wide, "in many places it had been found necessary to put stakes over the fence line in the fields. The posts are thus to be moved back and the new highway fence put up." Boone (IA) News-Republican, July 8, 1921.

Farm groups expressed opinions by adopting resolutions on many subjects. Sometimes resolutions were written by a few and adopted, with little debate being described in reports of the meetings, which might indicate widespread support for the resolutions or limited participation in the decision. Noting resolutions that mention roads omits opinion among farmers supporting roads or considering roads a small problem. Few farm groups were reported as having adopted resolutions during 1921-22 endorsing road work by their local governments or in the federal-state program, though some did endorse graveling. Still, many people in farm and community groups in winter 1921-22 frequently thought roads should be among topics they discussed. The boom market in 1919 raised land prices particularly in northern and western Iowa as well as in other Midwestern states. Wallaces' Farmer, April 1, 1921; Ibid., Jan. 13, 1922. The index of U.S. farm prices, twice pre-war values at 200 in September 1920, fell to 120 in December. A year later, at the end of 1921, it was at 90. Changing prices reduced Iowa incomes from grains, hogs, and cattle. Still, many farmers had payments to make on taxes and mortgages for land bought at boom prices. To pay debts, some Midwestern farmers sold land at low prices. Some tenants who had agreed to cash rents based on the boom's inflated land values, made too little, lost their investment, and became farm laborers. Earle D. Ross, Iowa Agriculture: An Historical Survey (Iowa City: State Historical Society of Iowa, 1951), 148-49, 153-54; Theodore Saloutos and John D. Hicks, Twentieth-Century Populism: Agricultural Discontent in the Middle West, 1900-1939 (Lincoln: University of Nebraska Press, 1964), 104-05. Bankruptcies lag behind economic events, often for several years, according to David L. Wickens. Farmer bankruptcies in Iowa totaled between 60 and 82 yearly for 1912-1918. They dropped to 40 in 1919 and 36 in 1920, then rose to 75 for 1921, 368 for 1922, 489 for 1923, and higher for the rest of the 1920s. David L. Wickens, Farmer Bankruptcies, 1898-1935, USDA Circular no. 414 (Washington: Agriculture Department, September 1936), 5-6. The slowing economy improved conditions for construction, increasing the number of laborers and contractors seeking road work and cutting prices for materials and labor. ISHC, Report, 1920, 5-6. The unemployed in Iowa were estimated in a federal survey to total 54,233 in January 1921. They were among more than 150,000 people unemployed in seven Midwestern states west of the Mississippi River, according the federal estimate. Sioux City (IA) Tribune, Jan. 26, 1921. Plans for new roads offered a new market for rural land. Seeking to reroute the Davenport-Princeton road, Scott County officials offered a landowner $1,000 for 1.21 acres; he then asked $2,000. The county began condemnation proceedings and had the land appraised by a commission, which set its value at $425.60. The owner of the land, part of an orchard, "withdrew his offer of $2,000 and served notice upon the county that he will demand $5,000 damages if the board attempts to convert the strip to road purposes." Davenport (IA) Democrat, Feb. 15, 1922.

Local control of roads, according to Hal S. Barron, was part of home-rule sentiment among many American farmers in the 1880s, and objections to centralized state authority over roads were part of the opposition by some Midwest farmers' groups to early-1920s construction of hard-surfaced roads. Barron, "And the Crooked Shall Be Made Straight," 82, 95. From the 1880s to the 1920s in Iowa, road authority changed from local administration through a multiplicity of districts by as many administrative bodies (at least 4,000 in number) to administration by the 99 county boards of supervisors and the state highway commission. ISHC, Report of the Financial Survey of the Iowa State-Wide Highway Planning Survey (Ames, 1940), 81, 78, 79. Mary C. Ludwig, "Rural Free Delivery in Iowa," Palimpsest 30 (May 1949): 142-68; Samuel C. E. Powers, "The Iowa State Highway Commission," Iowa Journal of History and Politics 29 (January 1931): 42-43. The 1913 legislation had many rural opponents, William H. Thompson argues. "The progressive legislation brought a clash between advocates of a more centralized control and rural elements favoring local domination of road policy, and the elections of 1914 removed
many of the legislators who had voted for the 1913 law. County supervisors and township trustees resented the imposition of county engineers and the commission controls in their domain. Many county supervisors made no effort to hire engineers.” Also, many supervisors “did not appreciate the requirement that standard highway plans be used and bids for construction taken after public hearing.” Thompson, 72. The federal-state road program had spent less than $800,000 in Iowa before 1920, then increased spending to $7.48 million in 1920. From local funds, counties spent $5.76 million on county road work in 1920, and townships spent $4.97 million on other local road work. “Iowa Road and Bridge Expenditures for 1917, 1918, 1920, 1921, 1922.” Service Bulletin 11 (January-February-March 1923): 2. Spending on county roads would decline in 1921 in 47 of Iowa’s 99 counties, in 1922 in 71 counties. In county-by-county totals for their townships, spending on township roads would decline in 27 counties in 1921, in 68 counties in 1922. Still other declines in spending on roads by individual townships would not show in these comparisons if the townships’ total for a county did not decline. The totals for 1922 are incomplete, reflecting only data from townships that made reports. Measured by statewide averages, spending on county roads was $58,220 per county in 1920, $58,247 in 1921, and $42,983 in 1922. Also in statewide averages, spending on township roads was $50,274 per county in 1920, $57,036 in 1921, and $49,996 in 1922. ISHC, Report, 1920, 262-63; ISHC, Report, 1921 (Des Moines, 1921), 302-03; ISHC, Report, 1922, 235-36. Though the 1902 Anderson act abolished township subdistricts for road work in favor of townships and made “the payment of property taxes in cash compulsory,” the “old system was partially restored in 1909 but was abolished for good in 1913. Until 1929, however, it was still possible in some townships for a man to work out his five-dollar poll tax on the roads.” George S. May, “The Good Roads Movement in Iowa,” Palimpsest 36 (January 1955): 21. Before a 1929 centralizing effort, 80 percent of public roads in the state were still under control of 1,640 township boards of trustees, working through township subdistricts. In the 1929 Bergman law that took effect Jan. 1, 1930, Thompson notes, “township trustees were virtually eliminated from responsibilities for road building, reducing the number of secondary road supervisory units from about 5,500 to 400.” Thompson, 75. By affecting secondary roads in the 1929 law, Don S. Kirschner notes, “the struggle between the farmer and city dweller could be fought out on the most immediate level. Administration of the secondary roads had previously rested in the hands of township governments, which is to say that they had been controlled almost completely by farmers.” The new law would transfer “administration of these roads from the townships to the county governments where the weight of the cities could be brought to bear more effectively.” Kirschner, 199-200. Farmers often differed by economic class in their early-1920s opinion on better roads. Kirschner argues. Thus, in Iowa’s 1921 legislative session, “the dirt farmers pressed a demand to abolish the State Highway Commission,” which they believed “catered to the Farm Bureau and the cities by implementing its plans for hard roads and a liberal number of primary highways.” They sought to replace it with a state engineer “and to divert the administration of its funds from the state to the count level.” Their effort, “a bold bid to reverse the trend toward centralization and return control to the grass roots,” failed in the legislature. Kirschner, 187-88. In Iowa after World War I, “opposition to hard roads was centered in the Farmers’ Union and located in the southern parts of the state.” Ibid., 202. In the 1920s, Kirschner notes, “the range of economic differences among farmers in the corn belt was enormous. They ran from the heavily capitalized and mechanized farmers in the fertile cash-grain areas to those, especially in the southern sections” of Iowa and Illinois, “for whom questions of boom and bust in the market economy were almost irrelevant.” Ibid., 9. In 1898, Iowa farmers had been working off road taxes or paying them in cash, indicated in road legislation then. In that, “the demand on the part of the farmers for more time to work roads during the fall season of the year was recognized by amending the code so as to make November rather than September the time when road taxes which remained unpaid should be transferred to the books of the county auditor and made collectible as ordinary taxes.” John E. Brindley, History of Road Legislation in Iowa (Iowa City: State Historical Society of Iowa, 1912), 210. Counties gained authority in 1884 to tax for a county road fund, though by 1886 “the levying of taxes for the support of roads was still primarily a township” function. Brindley, 210. Localism was itself affected by the auto, which let people travel regularly within larger communities, David B. Danbom observes. Danbom, 84, 164. Similarly, railroads “built up a traffic which could never have existed if served by horse-drawn commerce,” according to Frederic L. Paxon. Yet railroads also reduced interest in improving transportation by roads, canals, and rivers, and preserved localism by delaying regional travel over better roads. In shipping produce from the local train station, “the road to town, rather than the road to the next town, became the concern of the farmer.” Frederic L. Paxon, “The Highway Movement, 1916-1935,” American Historical Review 51 (January 1946): 237-38. ISHC, Report, 1920, 6. By 1920, localism had been reduced in Iowa by the development of Rural Free Delivery, according to Roy Alden Atwood. Mail service to rural homes provided information for farmers, reducing their isolation. Yet it also brought the closing in the early 1900s of small post offices in farm villages that had been gathering
places, while bringing city life and issues closer to farms, changes debated in some Iowa newspapers. The changes "epitomized the ambiguity of modern improvements in country life," for "the demise of the fourth-class stations threatened the social and cultural identities of the very communities that had encouraged RFD." Roy Alden Atwood, "Routes of Rural Discontent: Cultural Contradictions of Rural Free Delivery in Southeastern Iowa, 1989-1917," Annals of Iowa 48 (1986): 268-69, 273. A rural-urban division of sentiment on improving roads influenced early-1900s Iowa, according to Rodney O. Davis. In April 1903, Iowa Good Roads Association, meeting in Des Moines, "advocated national aid for the building of permanent highways, with a 'just and reasonable' distribution of the aid money among the states. Local authorities were to select the roads to be improved, however." The editor of Wallace's Farmer "lauded the sincerity of the delegates." He "pointed out, however, that they were mainly from the towns and cities of Iowa, and thus the proceedings of the convention did not closely touch the actual situation." Drainage was needed to improve most Iowa roads, the editor said. Soon, Homestead argued for state aid for roads and professional supervision in laying out and building roads to improve the state's many poorly drained, often steep roads. Federal aid for roads would be no more paternalistic than the Post Office, Homestead's editor contended. Rodney O. Davis, "Iowa Farm Opinion and the Good Roads Movement, 1903-1904," Annals of Iowa 3d ser. 37 (Summer 1964): 327-28. Farmers had built most Iowa roads. In the 1800s, road work in rural areas of Iowa and other midwestern and northern states had been required of the men of the community. Barron, "And the Crooked Shall Be Made Straight," 82-83. With townships divided into many small road districts, men had worked on roads near them, using their own teams and tools. Paying a road tax in work was easier for farmers than paying in cash, and workdays, often during a lull in farming, also were social events. Such road work showed communities' self-reliance and independence and served the needs of early settlements with few resources. Later, Iowa required payment of road taxes in cash, and those public funds paid county or township employees and contractors for road work, which might extend throughout warmer months. Iowa State Planning Board, Transportation Committee, Preliminary Report (Ames: Iowa State Planning Board, 1934), 12.

Iowa Farmers' Union officials reported membership nearly doubling in the postwar boom, growing from 14,000 in fall 1919 to 22,000 in fall 1920. Members' resolutions at the Farmers' Union convention also sought repeal of the Esch-Cummins Transportation Act of 1920, which set new provisions for railroad rates. Iowa Farmers' Union, "Proceedings of the Fourth Annual Convention of the Farmers Educational and Co-Operative Union of America, Iowa Division, Sept 15-17, 1920 at Des Moines" (The Union, n.p.n.d.). 23, 29-31. Milo Reno was among nominees for Iowa Farmers' Union's vice president in fall 1920, yet withdrew before a vote. He led in voting among 17 candidates for delegate to the national convention. On election as the Iowa group's secretary-treasurer, he spoke of his work with farmers' issues since the late 1800s. "I have been in this work when you were in swaddling clothes. I was working in the old Farmers Alliance trying to get you farmers to organize. I was stomping my county before I could vote." He recalled the 1889 Farmers' Alliance convention, at which "it was thirty-five years ago this fall I saw three big Georgians pick up a little fellow and carry him down the hall in St. Louis—Tom Watson of Georgia." Ibid., 51,55, 60. Born in 1866 in Iowa, Reno had been part of several farm groups by the 1920s. Patrick H. Mooney and Théo J. Majka, Farmers' and Farm Workers' Movements; Social Protest in American Agriculture (New York: Twayne Publishers, 1995), 75. Reno was among speakers in 1894 at a Populist rally before fall elections in Jefferson County in southeastern Iowa. Though several celebrated Populists did not attend as scheduled, Reno and "other lesser lights of populism did just as much talking and made just as much noise as the more famous speakers could have done," a newspaper reported. The gathering at the fairgrounds at Batavia "showed a strength and vigor which the local democracy cannot manifest." Fairfield (IA) Ledger, Oct. 31, 1894. As Iowa Farmers' Union's president, Reno was among witnesses before a legislative committee on taxes in January 1922; he suggested "making mortgages uncollectable unless filed for taxation purposes in the county where the land is situated," easing farmers' taxes, a newspaper reported. Sioux City (IA) Journal, Jan. 20, 1922. In early 1922, Reno was a leader of a Des Moines meeting, the Cooperators' Congress, which endorsed government price-fixing and issuing greenbacks. James H. Shideler notes that Reno "had a scheme by which hard-surfaced roads would be built by the unemployed, who would be paid with special currency," which also would help farmers by bringing inflation. Shideler, 177-78. In November 1921, Reno spoke of his opposition to counties having an agricultural agent, "whether he is a nuisance, an extravagant wall flowor, or a babbling demagogue." The solution he suggested was to "let the taxpayers vote for or against the county agent and let those counties that want an agent pay for him." Iowa Union Farmer, Nov. 2, 1921, quoted in Roland A. White, Milo Reno: Farmers Union Pioneer (Iowa City, Iowa: Athens Press, 1941; reprint New York: Arno Press, 1975), 193. In his acceptance speech on becoming president of Iowa Farmers' Union, Reno said he had "donated to put a county agent in before they had a
Farm Bureau in the county." He had been a member of the Farm Bureau, he said, until it "got married to the Commercial Club and betrothed to the Greater Iowa Association." Reno's acceptance speech of Sept. 21, 1921, is quoted in White, 196. Reno objected to road bonds, saying they benefited lenders. "The only thing about the hard roads proposition that is appealing to the big interests is the excuse for more bonds; give them to understand that those roads will be built and paid for with our own money and that they will not be able to exact their pound of flesh and you will no longer have a hard roads question." Iowa Union Farmer, Jan. 25, 1922, quoted in White, 196. Yet Reno was attempting to clarify his position on paving, for earlier, White notes, "in a speech at Glidden, Iowa, in the winter of 1921-22, he made some remarks on paving the public highways that were misconstrued." Thus, Reno qualified his support of paving in an article of Jan. 11, 1922, saying, "I wish everyone would read the entire article and get the reasons why I said to build those roads, giving employment to thousands that are out of employment. Pay them in money issued by the government, thereby making those unemployed thousands producers and consumers. A few million dollars thrown into circulation at this time that is not controlled by the Money Trust would do wonders in restoring prices and production." Iowa Union Farmer, Jan. 11, 1922, quoted in White, 44-45.

Reno described events after World War I in terms often resembling those of Populists. He and his supporters in 1920-22 seem still to have been rural people who, as many who were attracted to Populism in the late 1800s, according to Robert C. McMath Jr., had not been "ensnared by habits of deference" and who "possessed, as part of their birthright, cultures of protest." Robert C. McMath Jr., American Populism: A Social History, 1877-1898 (New York: Hill and Wang, 1993), 50.

8The Scott County farmers objecting to paving said that their taxes already were high that and the road might not be paved beyond the county line, and so their lands might not increase in value enough to justify special paving-tax assessments on them. Action on the request for paving was put off—likely, it was reported, until March, when supervisors usually decided the county's paving program for the year. Davenport (IA) Democrat, Jan. 17 and Jan. 19, 1921. In winter, fewer people were driving on Iowa roads, and so an auto club stopped until spring its weekly reports on road conditions, except for roads near Des Moines. Des Moines Register, Jan. 3, 1921. The state's dirt roads remained regular winter routes, though, for school wagons and buses, transporting 18,887 students to consolidated schools. Davenport (IA) Democrat, Jan. 16, 1921. With autos to take farmers longer distances, the need for towns to improve nearby roads was increasing. According to Successful Farming, whose publisher, E. T. Meredith of Iowa, in early 1921 had about a month left as secretary of agriculture before the administrations in Washington changed, "In order to hold this increasing but vital trade the town must bid in terms of fair bargains and good roads." To ignore the importance of good roads "is to destroy the town." Successful Farming (Des Moines), January 1921. Des Moines Register, Jan. 1, 1921. Speaking of the need for lower rail rates, Howard told a group at Ames that "when it costs more to ship a bushel of corn from the Missouri valley to New York than the corn is worth, it is time that something is being done." Mason City (IA) Globe-Gazette and Times, Feb. 25, 1921. With increasing truck traffic carrying heavy loads of freight, building roads with surfaces strong enough to be used by trucks was a national problem, according to Thomas H. MacDonald of Iowa, director of the federal road program as chief of the Bureau of Public Roads. MacDonald also pointed out that road work provided jobs. "The funds now available for good roads will do much to relieve the present unemployment," he said at a meeting of highway officials and representatives of the auto and roadbuilding industries. Des Moines Register, Feb. 13, 1921. MacDonald directed the road program of the Iowa commission until he became chief of the Bureau of Public Roads in 1919.

9Scott County used local funds from a $2 million bond issue approved by its voters to grade and pave county roads in 1920. Davenport (IA) Democrat, Dec. 31, 1920, and Feb. 16, 1921.

10For many farmers, payments on loans or for rent were scheduled for March 1. Moving time for tenant farmers was in early March in many Iowa communities. Farmers in Chickasaw County, in northeast Iowa, were reported to have made their settlements with few failures, "considered excellent in the face of the general declining price of farm products since the contracts were made." Many farmers were still holding their 1920 crop and borrowing at 8% for their immediate needs. Five-year loans of "eastern insurance money" were available at 7%, up from 5%, which "hits the farmer who has to place loans that are new." There were "not so many changes in farm tenants as usual," and "farmers who had planned to move to town have decided to remain on their farms and give them their closest attention." Mason City (IA) Globe-Gazette and Times, March 7, 1921. Nearby in Cerro Gordo County, bankers were reported optimistic about farmers paying on their loans. "The percentage in the three banks
varies but taken as a whole an unusually large number of local farmers are making their settlements as usual.’” Others were rescheduling payments. Ibid., March 11, 1921. In the Rock Falls area near Mason City, there were “a good many changes of farm tenants,” some for people moving to town, others moving from outside Iowa to the area, or moving among nearby farms. Ibid., March 2, 1921. Ibid., March 3, 1921. Many people in the county were late paying auto taxes. Of 5,000 auto owners in Cerro Gordo County, 1,100 were listed as delinquent, and a fine of $3 had been added to their taxes. Ibid. At the taxpayers’ meeting at Pleasant Township hall near Bladensburg, Charley Morrison was chairman and Madison Warder secretary. The group adopted a resolution, which 75 percent of the township’s taxpayers signed, calling for tax assessments at 1919 levels and stating “we demand that our township board make said reduction.” Ottumwa (IA) Courier, April 7, 1921. The Shelby County farmers petitioning their county to stop a federal-aid project on a primary road “would not interfere with the completion of this project. They would, however, have this end the improvement of the roads until the law is changed.” Ibid., May 10, 1921. About 100 representatives attended the Wapello County meeting at Ottumwa. The Wapello County officials sought to use a new Iowa law allowing bridges to be built from the state’s federal-aid fund. Spending $62,000 for the bridge, said county officials, had depleted county road funds, causing closing of some roads in 1921. Ibid., June 11, 1921.

11Wallees’ Farmer, March 4, 1921.

12ISHC, Report 1921. 5. The 1921 increase occurred partly because earlier problems were absent. Shortages of railroad cars and road materials had ended, and labor was “plentiful, more efficient and cheaper than in 1920.” Ibid., 103. William H. Thompson notes that federal-state highway construction in Iowa during the post-World War I depression helped relieve unemployment in communities near the road work. Thompson, 144.

13Linn County Farm Bureau’s objections to expensive overhead costs and exorbitant prices resemble criticisms of the state highway commission by others during the period. Overhead costs of planning by the commission, though a small part of roadbuilding’s total costs, were higher than they had been for many of the county road programs whose construction often had been for repairs. Prices of some road work did remain high into 1921, then dropped more in 1922. The exorbitant prices likely were those for paving, which had been started in only a few counties. Wallees’ Farmer, Nov. 11, 1921.

14Davenport (IA) Democrat, Nov. 16, 1921; Des Moines Register, Nov. 13, 1921. In the referendum, votes on paving were 7,739 no and 5,904 yes; votes on bonds were 8,338 no and 5,697 yes. In the city, paving and bonds won in 13 of the 14 precincts; outside Dubuque, both questions lost in all 19 precincts. Dubuque Telegraph-Herald, Dec. 20, 1921.

15The Federal Highway Act of 1921, approved Nov. 9, the month’s second Wednesday, is reprinted in U.S., Statutes at Large, vol. 42, part 1, 212-19. Two provisions of the 1921 law gave greater authority in the road program to state agencies, leaving less to counties. The law required spending all federal funds on systems of main roads (7 percent of total mileage in each state) to be designated by state highway officials. And it required that “each state must provide state funds to meet the Federal aid funds, and not be dependent upon the various subdivisions, such as counties, to supply the state’s quota,” noted Thomas H. MacDonald, the federal program’s chief. Yet the act also shifted some costs to states, requiring, he said, that “each state must provide sufficient funds to maintain the roads which are built and lift the responsibility from the shoulders of the local communities.” Thomas H. MacDonald, “Highway Engineering and Highway Transport,” Engineering and Contracting 58 (Dec. 6, 1922): 532-33. The law required the 7-percent system to include primary roads for three-sevenths of its mileage and secondary or intercounty roads for the rest. Federal officials were to give preference to projects on primary roads, yet state and federal approval would be needed for spending more than 60% of federal aid on the primary part of the system. U.S., Statutes at Large, vol. 42, part 1, 213. The Farmers’ Union convention’s resolution committee, a newspaper reported, urged “opposition to any candidate for public office not pledge to restriction of taxes.” The committee also demanded, it said, “absolute separation of the American Farm Bureau Federation from the agricultural colleges, the agricultural extension service and the department of agriculture of the federal government.” Waterloo (IA) Times-Tribune, Nov. 19, 1921. Given their opposition to connections between the Farm Bureau and the other organizations, some Farmers’ Union members’ opposition to federal-state roadbuilding in Iowa likely was not lessened by Iowans’ leadership of the federation, whose president was J. R. Howard, as well as the Agri-
culture Department, whose secretary was Henry C. Wallace, and the federal-state road program, whose Washing­
ton chief was Thomas H. MacDonald, formerly chief engineer of Iowa's highway commission. Yet Farm Bureau
groups in Iowa themselves opposed the roadbuilding frequently in winter 1921-22. Though public works, includ­
ing roadbuilding and projects of local governments, had been urged recently by the President’s Conference on
Unemployment as a way of providing jobs, other concerns were discussed at the Farmers’ Union convention.
Unemployment in the nation was estimated by the U.S. Department of Labor at 5.7 million in August 1921. 67th
Congress, 1st sess. Congressional Record (Feb. 27, 1923), vol. 65, pt. 4, 4247. The resolutions discussed at the
National Farmers’ Union convention were of interest throughout a larger area, yet in Iowa farmers might have felt
that federal-state road programs offered a way for counties to approve paving, which could raise farmers' taxes on
land along paved roads. Similarly, though before the depression and on other topics than just roads, the rural West
during 1918-20 showed “new political expressions of general agrarian restlessness,” according to James H.
Shideler. “The influence of the Nonpartisan League had spread out over this region to vitalize a latent populism.”
Shideler, 32.

16In his letter, Malin said, “There are tendencies in our public politics that must be checked, there is the
crystallization of public opinion and the focusing of public thought upon matters of common interest that needs the
directing hand of some organized force representative of the common people.” He stated that “no organization of
labor is big enough, no organization of capital is broad enough, and no organization of farmers comprehensive
enough in understanding unless they have an intimate and comprehensive” appreciation of the others’ problems.
Dubuque Telegraph-Herald, Dec. 13, 1921. In the letter, published in a Dubuque newspaper, Malin contended that the
referendum’s paving and bond questions had been “defeated by the definite counter proposal to surface with
Dubuque county material” in graveling “a greater mileage of roads than could possibly be paved.” Malin told the
two Dubuque groups that Farm Bureau officials “urge upon you the acknowledgment of our obligation to use
every influence to secure the accomplishment of the people’s will.” Malin noted a petition by “several hundred
citizens” for graveling Dubuque-Cascade road had been presented to county supervisors and the highway com­
mission and then supported in a resolution by the county Farm Bureau. Ibid. The chamber of commerce official
said projects under way on primary roads would take the funds allotted to Dubuque County, so that the Farm
Bureau should find a source of funding for the proposed graveling. Dubuque Telegraph-Herald, Dec. 23 and Dec.
25, 1921. Two months later, Dubuque County Farm Bureau invited representatives of the county supervisors, the
highway commission, and the labor congress to a meeting on graveling the road. The commission kept to its policy
that roads must have grading and drainage work completed before being gravelized, and so the road was not

17Counties represented at the meeting December 14 at Dubuque were Allamakee, Buchanan, Clayton,
Delaware, Fayette, Dubuque, and Jones. Dubuque Telegraph-Herald, Dec. 15, 1921. Similarly, officials of coun­
ties to the west soon attended a meeting at Boone of Central Iowa Supervisors and Engineers Association. A
newspaper reported that “the association proposes to adopt a uniform basis of pay for truck drivers and remu­
neration for road work in the counties in this section of the state.” Boone (IA) News-Republican, Jan. 18, 1922.
Dubuque Telegraph-Herald, Dec. 15, 1921.

18The Nevada resolutions sought to reduce spending for road engineering by 50 percent soon and by 100
percent once projects under way were completed. It wanted 35-percent cuts in all local tax levies and spending. It
would reduce the yearly $3,000 in local funds for Farm Bureau to $1,000 and stop funds for county fairs. Several
speakers at Nevada discussed “the necessity of reduction of expenditures for road improvement and in the conduct
of the schools of the county.” Independence (IA) Bulletin-Journal, Jan. 5, 1922. Commenting on the meeting, the
Dubuque Telegraph-Herald noted that Story and Boone were the first Iowa counties to use federal funds for post
roads, under the pre-war federal post-road program approved in 1912, and it pointed out conditions like those
being discussed in Dubuque. In the early projects, the two counties “constructed cheap roads” instead of paving,
requiring maintenance at “heavy cost,” and “the farmers appear not to be satisfied with the results.” Opinions in
the Story County meeting’s resolutions were similar to those of farmers in other counties, it said. “If the present
state of sentiment among the farmers of the state continues the halls of the state house at the next session of the
legislature will resound with demands for economy in expenditure of public funds.” Dubuque Telegraph-Herald,
Dec. 23, 1921. Webster City (IA) Freeman-Journal endorsed the opposition to bonds at the Story County meeting
at Nevada, “Many boards of supervisors have in recent years bonded their counties for large sums of money. And
we believe the Nevada meeting of taxpayers was right in demanding the repeal of all laws that permit any public board or any public officials to issue bonds for any purpose whatever without a vote of the people.” Editorial of Webster City (IA) Freeman-Journal, reprinted in Sioux City (IA) Journal. Jan. 6, 1922. Wallace’s Farmer, Dec. 16, 1921.

19The description of meetings and their topics by Petersen indicates that local officials themselves were criticized as centralized authority, considered by some men to be overriding the wishes of county residents. The county supervisor for the area, though invited, was absent at the Thornton meeting, leaving the county agent to talk about county spending and taxes. “The way he explained things,” Petersen said, “supervisors have the right to go on. Taxpayers can’t stop them.” It seemed to Petersen, in an account he sent to a newspaper, that “if we listen to our county agent there would be no relief for us in paying taxes, for it is all up to just a few offices. They have all got to dance to their fiddler.” At one point, Petersen said, the county agent “changed his subject and run down editors of newspapers, especially the Homestead for putting items in that interfere with the farmers’ paper, or the Farm Bureau.” Petersen praised Iowa Homestead and its publishers, James and Dante Pierce, and said “there were several farmers there who thought if it hadn’t been for James Pierce and his son they would have suffered a much heavier loss.” Petersen favored gravel roads over paving because of their costs. His own complaint with the county was that it put a tile drainage line across a farm he owned that was “cleared of any encumbrances and was all tiled.” The county’s drainage left him a tax bill of $4,000, though he would be unable to rent the farm for “5 cents an acre more” than without it; if he lived there himself, he would wish the county drainage were not there, he said. Counties’ drainage projects, like federal-state projects for paving, were paid partly from special assessments of taxes on benefited land. Mason City (IA) Globe-Gazette and Times. Dec. 30, 1921.


21In the farmers’ project in Dubuque County, gravel pit owners were donating gravel, and the county was to take over maintenance after the road was graveled. Farmers’ groups at Dyersville and Center Grove each had graveled three miles, and farmers near Center Grove were working on five miles more. “Improvement of secondary roads in Dubuque County has been speeded up since the defeat of the hard roads issue recently,” a newspaper reported. “Many farmers are participating in the road improvement program.” Waterloo (IA) Times-Tribune. Dec. 16, 1921. Buchanan County’s practice of using contributions from landowners to provide funds for roads is described in Dubuque Telegraph-Herald. Dec. 15, 1921. Before the Black Hawk County meeting, farmers were working on roads in two places in the county, in which “between 20 and 40 teams are being employed daily in gravel hauling, the farmers gladly donating their work.” At the meeting, the slogan of Greater Waterloo Association’s representative was “Build Good Roads Now and Build the Kind the Farmer Wants.” Farmers of the county agreed to begin new work on secondary roads at once; weather was mild for winter, and they were not needed in farming. County supervisors would purchase gravel, which farmers’ horses would haul to roads. Waterloo (IA) Times-Tribune. Dec. 16, 1921.

22ISHC, Report. 1921. 14. Independence (IA) Bulletin-Journal. Jan. 26, 1922. Paving had been much less than other kinds of work in mileage of completed projects. The 1921 projects produced 165 miles of paving, nearly four times the amount of a year earlier, and 367 miles of graveling, 1.051 miles of grading, and 5.4 million linear feet of drainage. ISHC. Report. 1921. 6. In August 1921, highway commission member Anson Marston said that “the commission is discouraging extensive paving programs during the present period of severe hard times and has just disapproved contracts in one county for over $700,000 for paved roads at $52,000 to $58,000 per mile.” Anson Marston, “The Iowa State Highway Commission and Its Work,” Speech to Iowa League of Municipalities at Sioux City, Iowa, Aug. 16, 1921, typescript, Marston Papers, Special Collections, Parks Library, Iowa State University, Ames. Besides the difference in cost, much grading and drainage had to precede paving on dirt roads.

23Wallace’s Farmer. Jan. 13, 1922; Dubuque Telegraph-Herald, Dec. 15, 1921. Dubuque County Farm Bureau opposed the special assessment for paving. “Since the primary road system as at present constituted is more a tourist and truck proposition than a local market road,” the group stated, “it is evidently unjust to assess any great part of the cost of construction” against along the road. Also during 1920-22, the taxing of nearby property for costs of improvements was practiced in Iowa for work besides property primary-road paving. Officials in counties decided on assessments on farmland benefited by drainage projects, assessment districts were formed in
some counties to pay for work on secondary roads, and cities levied special assessments on property along streets they paved. Land adjoining a paved road for 1 1/2 miles back from the road was assessed special taxes to pay one-fourth of the cost of paving, on the theory that paving increased value of the land. The Dubuque group's resolution on vehicle fees resembled those of other urban counties that had been noted by the Dubuque Telegraph-Herald. In populous counties, Farm Bureaus wanted the state's primary road fund divided among counties "by population instead of physical area as at present," it said. Farm Bureaus in "counties of large physical area and small population do not favor such change." Dubuque Telegraph-Herald, Dec. 15, 1921. For a drainage project, Hamilton and Story counties named a commission of three men to assess property benefited. Taxes to be levied in the special assessment could be paid in yearly installments at 6% interest. Hearings permitted objections to assessments.

Webster City (IA) Daily Freeman-Journal, Feb. 8, 1922. Reassessment was ordered in Sac County after the board of supervisors rejected the first assessment for a drainage district. Still, "the new assessment," a newspaper reported, "throws some heavy assessments" on some land, including a 40-acre tract assessed at $175 an acre. Sac City (IA) Sun. Feb. 2, 1922.

Woodbury County taxes rose 1.11 mills from 1921 to total 28.61 mills for 1922, according to the supervisors' resolution setting the rates. "City property owners are exempt on 7 mills of this amount, the levy for bridges." Of the total, 4.35 mills was for primary-road bonds; next largest item was 4 mills for county government. Sioux City (IA) Journal, Nov. 2, 1921. Ibid., Dec. 6 and 30, 1921, and Jan. 22, 1922. In December, county officials discussed projects scheduled for graveling and paving primary roads, though landowners obtained two injunctions that blocked some paving until they were dissolved in January 1922. A judge in January dissolved the injunctions against paving on the Denison and King of Trails highways that had been "issued upon petitions of Alvers S. Wendell and L. N. Carter, extensive land owners in the district through which the proposed paving will extend. They declared the paving assessments would be levied at such a high figure that some of the property owners would be forced into bankruptcy. The county's lawyer cited court rulings that forbade courts from interfering in legislative functions of county boards of supervisors and, a newspaper reported, "argued that it was not within the province of the court to investigate the need of establishing or paving roads except under charge of fraud." The paving was estimated to cost $450,000. Ibid., Jan. 7, 1922. At a hearing in Sioux City on the paving project, the state highway commission met with residents including "about 50 property owners" who opposed the proposed paving. Also at the hearing, a former county supervisor said the audience did not represent the route's property owners, of whom just as many favored beginning the paving in 1922. Ibid., Feb. 4, 1922. Even though the county had not yet decided to seek bids on paving a road near Moville, sixty-one property owners there petitioned the county in February to delay such work. Other farmers petitioned the county to form a district in which they would pay special assessments to gravel their secondary roads. Farmers opposing any paving on the road near Moville argued its costs would be too high. Ibid., Feb. 23, 1922. Compensating some for tax increases, assessment rates were cut. Tax-assessment rates were decided at annual meetings in Iowa counties of assessors from each township and incorporated town, held at the courthouse in Sioux City for Woodbury County in January. Assessment rates were cut for 1922 from levels of 1921 for assessment of some personal farm property. "The assessment values were lowered in all but six of the 22 items considered by the assessors, and in those six items the assessment values were unchanged from 1921." Sioux City (IA) Journal, Jan. 11, 1922. In a process similar to that for paving on primary roads, some 35 property owners petitioned the county to form the district for graveling 4.5 miles of secondary road. "Under the law the property owners would pay 25 per cent of the cost of the project, the remaining 75 per cent being paid from the county road cash fund," a newspaper reported. The petition would be considered by county supervisors if recommended by the county engineer. Woodbury County had only one mile of gravel road, near the Climbing Hill community. Ibid., Feb. 2, 1922. In paving city streets, Sioux City in 1921 broke its record with work that cost $1 million in 53 projects. Ibid., Dec. 24, 1921. Some economic conditions had recently improved in Sioux City, according to a report in early February 1922. "The greatly increased price of hogs within the last few weeks, unprecedented activity on the Sioux City grain market, which, during the last month, has handed three times as much grain as in January of last year, and the constant liquidation of farm paper held by the banks here, are all indications that the farmers of northwest Iowa are getting long needed financial relief." Most of the rail cars of grain received were of corn. Local packing houses were buying nearly usual amounts for the season. Corn fed to hogs brought $1 to $1.25, though on the market corn was worth less than one-third that. Prices were higher for sheep, so that "corn fed to sheep nets something more than $3 a bushel." Ibid., Feb. 2, 1922.
Special assessments for paving primary roads could not exceed 4% of land value, or roughly $12 an acre, it noted, though "some people have tried to create the fake impression that certain farmers have paid over $70 an acre for paved roads." Though that might be true if a farmer lives inside city limits and pays the tax to a city, "it is not true of farmers out in the open country." Wallop*, Farmer, Jan. 20, 1922.


The Agricultural Conference in Washington, D.C., which began Jan. 23, 1922, recommended repeal of "the guarantee clause of the Esch-Cummins law, improvement of the farm market roads and development of inland waterways, especially the St. Lawrence deep waterways project." Council Bluffs Nonpareil, Jan. 28, 1922. Charles G. Dawes, met with some 1,000 federal department heads and bureau chiefs in early February. "Waving his arms, stamping the floor and pounding the table, the budget director denounced the bureau chiefs who got in his way of the administration's desire to economize." Dawes at one point showed two brooms the Navy had bought though the Army had them in surplus, available "for nothing." Davenport (IA) Democrat, Feb. 7, 1922. The administration's efforts continued in summer 1922, when the agriculture secretary wrote the Bureau of Public Roads' chief that "it is hardly necessary for me to suggest that in preparing your estimates you keep constantly in mind the necessity for economy in governmental expenditures as emphasized by the President and the Director of the Bureau of the Budget in their addresses at the second annual meeting of the business organization of the Government on July 11. Yet the memo was not about simply cutting spending, for a program with purposes of building roads and hiring the jobless. "Each project should be gone over thoroughly in order to determine whether the funds now devoted to it are bringing adequate returns or might better be employed on work of a more urgent nature, or which might procure results of larger benefit to the nation." Henry C. Wallace, Secretary of Agriculture, to Thomas H. MacDonald, Chief, Bureau of Public Roads, July 26, 1922, included in memorandum C. D. Curtiss, Assistant to the Chief, Bureau of Public Roads, to Henry C. Wallace, July 27, 1922; Box 680. Classified Central File, 1912-50; Records of the Bureau of Public Roads, Record Group 30, National Archives, Washington.

Counties where meetings on taxes and roads were held in early 1922 are shown on a map, Figure 1, Appendix. In the text, grouping meetings in various counties, scattered over some distances, according to their affiliation with statewide farm organizations is a way of organizing a description of numerous incidents. Some of them may have occurred partly because of the effect of some larger group. Many other meetings likely occurred that were similar to these. And because of local causes that were different, many counties held no meetings though the programs and the problems of winter 1921-22 were similar for them. Some meetings are grouped by topic, also for convenience, yet each meeting expressed concerns on several of the topics. The groupings point out, though, that meetings were frequent among chapters of a few statewide farm organizations, at a time when they usually held annual meetings and considered resolutions, and that some of their concerns were similar. In January, counties held annual countywide assessment of property and set assessment rates on property for the year.

Hardin County Farm Bureau also recommended abolishing the office of county engineer and stated that "we are absolutely opposed to paving of roads at this time because of the high cost of the same and the low price of products" of farms. They also condemned Iowa Sen. A. B. Cummins for sponsoring the Transportation Act of 1920, under whose provisions railroad rates had increased. Wallop*, Farmer, Feb. 3, 1922. Mason City (IA) Globe-Gazette and Times, Jan. 12, 1922.

Jefferson County by 1922 had not voted on paving primary roads. ISHC, Report, 1920, 6. At nearly the same time as the county’s Farm Bureau, Jefferson County’s Farmers’ Union held its annual meeting. Resolutions of the Linn County Farm Bureau preceded a Cedar Rapids meeting in February at which urban and rural residents to discuss paving and graveling of primary roads. “Pulling Together for Better Roads,” Iowa Farm Bureau Messenger 3 (April 1922): 2; Des Moines Register, Feb. 25, 1922.

The Cherokee County Farm Bureau also urged “all public officials, endowed with the powers of taxation and the expenditure of public funds, to use all possible economy.” Particularly they wanted them to “confin[e] public improvements, such as road construction and repair to absolute necessity.” Cherokee County, IA, Farm Bureau, Minutes, Jan. 6, 1922, microfilm, Special Collections, Parks Library, Iowa State University, Ames. The wish of many groups to reduce state and increase local authority over roads would have put Iowa more in conflict with new federal requirements. Under federal legislation approved in late 1921 states were to have authority over beginning federal-state projects on primary roads, authority retained by county boards of supervisors in Iowa until the mid-1920s. ISHC, Report, 1922, 15; Iowa State Planning Board, Transportation Committee, Preliminary Report, 14. The Dubuque County referendum mentioned in Cass County had been on issuing not county bonds, which increased county taxes on property for their repayment, but bonds in the primary-road program, which were to be repaid almost completely from federal and state funds, leaving counties to pay only interest. Restricting voting on bonds to property owners as recommended in Cass County was perhaps a reference to paving’s special assessments on land along the road, instead of to bonds, which already were being repaid by general assessments, on all property in a county. Iowa Homestead, Jan. 12, 1922. In Montgomery County, resolutions prepared by a committee of four appointed by Washington Township Farm Bureau for consideration at the full Montgomery County meeting contended that such “extravagance and arbitrary power of the state highway commission and the county engineer” had caused “the bonded indebtedness of our county,” by which several hundred thousand dollars had been “added to the taxpayers’ burdens.” The township’s resolutions arrived “too late for action by the county committee. They were read at the meeting” of the county Farm Bureau, “but a motion to consider them one by one” was defeated. Red Oak (IA) Sun, Jan. 6, 1922.

Iowa Homestead, Jan. 12, 1922.

ibid., Feb. 3, 1922.


Iowa Homestead, Feb. 23, 1922; Wallaces’ Farmer, Feb. 24, 1922.

Des Moines Register, 2-L, Jan. 15, 1922. The Taxpayers’ League on February 4 adopted its resolutions, appointed a committee to plan for a permanent organization, and scheduled a meeting at a hotel for February 11. Iowa Homestead, Feb. 9, 1922.

Iowa Homestead, Jan. 19, 1921.

A resolution adopted by the Washington taxpayers’ meeting opposed any county bond issues without a vote of the people. Iowa Homestead, Jan. 26, 1922. The meeting at Washington, Iowa, was held at the high school “after the court house had too little room for the crowd,” according to a reporter. The county board of supervisors had planned to conduct the meeting, “but the farmers who came to town, decided that they did not need anybody to preside for them, and they insisted on their president, who acted as chairman.” Thus, William Sutherland, county Farmers’ Union president, chaired the meeting. Speakers included state Sen. Jim Brookhart, who discussed local and state road work, and Fred R. White, chief engineer of Iowa State Highway Commission, who was “was not very cordially treated. They started to heckle him, but he told them if they did not wish to hear him, he would not speak, so they quieted down.” At the meeting, “resolutions denouncing and asking the recall of the county nurse.
The crowd greeted the candidate at the meeting with "a rousing ovation" and later resolved that he be "conscripted to stand as a candidate" for the state senate," a newspaper reported. Webster City (IA) Daily Freeman-Journal, Jan. 3, 1922. A resolution of the meeting discussed primary-road work in terms of costs to farmers, without mentioning that funds for that work, other than for paving, did not come from taxes on property. It stated that "we are opposed to the reckless expenditures which have characterized some of the enterprises of the state highway commission in the past, and under existing financial conditions, we demand that they greatly curtail, or entirely abandon, the so-called road improvements coming within their jurisdiction until such time as the products of the factory and farm are on a more equitable basis." Another resolution called for lower railroad freight rates "to conform to the value of farm products." Ibid. Ibid., March 11 and 16, 1922.

Iowa Homestead, Jan. 26, 1922. The Ida Grove-Battle Creek road was to be graded and drained on 13 miles in 1921, yet all bids for the work then were rejected; in 1922 contracts were approved for grading and installing guard rails. ISHC, Report, 1921, 58; Ibid., Report, 1922, 66. Wallaces' Farmer, Jan. 27, 1922. At the Denison meeting, Crawford County's engineer, R. B. Fishel, "explained the method of carrying on the primary road work and stated that the taxpayer was not taxed a nickel for such work only as he paid his auto tax." Little further discussion of primary-road projects was reported in a local newspaper's account of the meeting. "It is a safe estimate to say there were more than 750 taxpayers and interested spectators in the opera house when the meeting was called to order. Every township was represented except Otter Creek, Charter Oak and Iowa. From many of the townships there came large delegations. Even though the delegates did not participate in the discussion of the various questions their presence was evidence of their interest in a more economical government." Denison (IA) Review, Jan. 11, 1922. A chairman elected at the meeting asked for an explanation of its purpose. "Ed Poitevin, of Union township, responded and explained that the meeting was for the purpose of providing or considering ways and means for a more economical government, saying that taxation had become a burden and that some relief must be forthcoming....He favored reducing the membership of the board of supervisors from five members to three, dividing the county into three districts. He also called attention to bond issues, road work, the saddling of higher taxes upon the people," and other issues. A resolutions committee was named, including a delegate from each township. The meeting adopted a statement in terms of economizing and restoring local control. "...And whereas, we view with disapproval and alarm, the steadily mounting volume of indebtedness, and the tendency of recent legislation toward centralization of authority and a curtailment of local self government. Now, therefore, be it resolved: That an administration of rigid economy be inaugurated in all our public affairs, that the taxpayers may be relieved from the almost unbearable burden of taxation now brought against them...; that no road, nor other public improvements, be initiated until better conditions prevail; that we are unalterably opposed to further increase of the public indebtedness, either bonded or otherwise...; that our members of the legislature are most earnestly directed to champion the repeal of the vicious legislation by which it is possible to burden the people with a load of bonded indebtedness without their consent, and by which the people are shorn of the control of their local affairs, and the money derived from excessive taxation consumed by an army of officials, engineers and satellites." Ibid.

A resolution approved at Morning Sun called for providing that valuations of property used by railroads in rate-making should be used also in taxing. Wallaces' Farmer, Jan. 27, 1922. By the time of the meeting at Letts in Louisa County, a newspaper reported, "similar meetings have been held throughout the county." Davenport (IA) Democrat, Jan. 26, 1922.

Iowa Homestead, Feb. 2, 1922.
350

46 *Des Moines Register*, Feb. 25, 1922. Linn County Farm Bureau notified its 1,500 members of the meeting. “Pulling Together for Better Roads,” *Iowa Farm Bureau Messenger* 3 (April 1922): 3. Also, one report noted a public meeting planned Feb. 24 by Jackson County Farm Bureau at Maquoketa to discuss taxes. John E. Brindley, an Iowa State College economics professor, was to lead a discussion on taxes. “Farmers are especially urged to attend the meeting. Each township in the county should send a dozen good citizens who are interested in the tax problem.” *Davenport (IA) Democrat*, Feb. 24, 1922.

47 At $15, memberships in Farmers’ Legislative Council were more expensive than those of Farm Bureau at $5 or Farmers’ Union at $3.50, the journal noted. *Wallaces’ Farmer*, Feb. 17, 1922.

48 *Council Bluffs Nonpareil*, Feb. 3, 1922. Legislative candidates should be ready to cut state spending, though with care, said *Muscatine Journal*. Indeed, “it may be presumed that all who are candidates for public office this year will pledge themselves to an economical administration.” Yet voters needed to choose wisely, the paper warned. “The danger which is presented by the present situation is that the man who talks the most about economy will get into office instead of the man who is best able to put such a policy into practice with the minimum ill effect.” Of the early-1923 session, the Journal said that “when the next legislature meets at Des Moines, it will be possible to initiate fresh economies.” Editorial of *Muscatine (IA) Journal* reprinted in *Des Moines Register*, April 6, 1922.

49 *Iowa Homestead*, Jan. 12, 1922.

50 Yet Pierce interpreted differently the legislative changes that allowed using primary-road funds to build bridges. “This action came almost too late, for a big proportion of the counties of Iowa have robbed their general road systems of bridges for years to come through bonding incurred in order to improve a very limited portion of their highways,” he said. That would have been true if not for the federal-state construction, without which counties could have built new roads and bridges only by their taxes and bonds. Now the new funds from other sources than property taxes paid for construction and repaid most of the cost of issuing bonds for primary roads. Pierce’s 1921 statements are from a Nov., 24, 1921, article, “The Iowa Homestead’s Constructive Road Program,” reprinted in *Iowa Homestead*, Jan. 19, 1922.

51 A highway commission news release cited by Pierce had stated that in road funds for the fiscal year ending July 1, 1920, “for every dollar of Iowa money that went into the federal aid fund, she got back for her own use $3.50.” The release is reprinted in *Iowa Homestead*, Feb. 9, 1922.

52 The federal income tax, Pierce contended, “has made it much more difficult to raise state and local revenues.” Tax cuts could be made only at the community level, said Pierce, suggesting more efficiency and less spending. *Iowa Homestead*, Feb. 9, 1922. From tax values based on earning power, *Wallaces’ Farmer* contended, “Iowa farm land is being assessed at more than its full value,” while railroads were being assessed “at as low as 20 percent of the valuation used for rate making purposes.” State authority to establish tax value of railroad property in Iowa was under consideration in the courts and might be changed by the next legislature, the journal reported. It noted that raising valuations for property other than farmland was being advocated by Iowa Farm Bureau Federation and Illinois Agricultural Association. On increasing government efficiency, the journal argued that “the state of Iowa, as well as the counties, is still doing business in a hit or miss fashion. The budget system,” adopted by businesses and many governments, “has had no place in the administration of public business in this part of the country.” Railroads in Iowa “have been making decided gains in the taxation fight at the expense of the farmer for several years,” so that, for 1915-19, valuation increased for farmland by $390 million and dropped for railroads by $345 million. The journal noted suggestions that eliminating offices could reduce taxes. It recommended that “the most promising movement along this line provides for the elimination of the office of county recorder and the establishment of a state office for the handling of land titles,” as advocated by Iowa Farm Bureau Federation. In part, school taxes were high because many consolidated schools were built while postwar prices were high, the journal contended. It advocated greater efficiency by governments, particularly in budgeting, to reduce expenses. *Wallaces’ Farmer*, Feb. 24, 1922.
Average hog prices on the Chicago market were: $6.63 per hundred pounds Dec. 5, 1921; $8 on Jan. 12, 1922; $10 on Feb. 16, 1922, and the highest in February was $11.04. Waterloo (IA) Times-Tribune, March 16, 1922. Debts of Iowa banks to the Chicago Federal Reserve Bank were $36 million, down from $97 million a year earlier. Des Moines Register, X-8, March 5, 1922. From January to February, Iowa residents made the smallest withdrawal of savings among those of states in the Federal Reserve's Chicago district, which also included Indiana, Illinois, Michigan, and Wisconsin. Ibid.

Taxes in Marion County for 1910-20 included increases of 283% for state taxes, 252% for county taxes, 213% for city taxes, 316% for township road taxes, and 560% for county road taxes. Des Moines Register, March 22, 1922. About the primary road mentioned in the petition, at an earlier meeting, in December, "public sentiment showed itself so against this project" that the supervisors "agreed that no highway work should be done during 1922, with the exception of necessary maintenance and repair work." New supervisors, taking office in January, had approved spending $100,000 from the primary road fund for the project, prompting the petition, Des Moines Register, Jan. 28, 1922.

Members of the Humboldt County Farm Bureau's legislative committee resolved that they "entirely oppose the present system of the highway commission." They also demanded that all county officers work 48 hours a week, hire no extra help, and reduce taxes. Candidates supporting those and other resolutions, they said, "we would favor, regardless of political belief." Ibid., March 11, 1922. After Humboldt County farmers said they would support candidates regardless of political beliefs if the candidates supported the group's resolutions, in nearby Sac County farmers were considering cooperative efforts by farm groups. At a meeting of the county's Farmers' Union, representatives of the county's Farm Bureau had been invited to discuss cooperation by the two groups. "There were present a number of men who were members of both organizations." Among those at the meeting were some "who insinuated the idea that the Farm Bureau leaders have not been wholly true to the interest of farmers and those who regard the methods of the Farmers Union not always wise." Committees from the two groups were to continue the discussion after the meeting. Sac City (IA) Sun., April 4, 1922. Both groups had held public meetings in Sac County in early 1922. Sac County's supervisors authorized graveling projects for primary roads in 1922, and roads were not an important issue in the Farm Bureau's description of its year's work. Ibid., Feb. 23, 1922. Cutting taxes was an issue for meetings of the Farmers' Union, whose scheduled speakers included its state president, Milo Reno. Ibid., Feb. 2 and 9, 1922.

Des Moines Register, March 14, 1922. Later in the spring petitions were being signed in Cedar Rapids to put on the June 5 primary ballot questions on paving and issuing $1 million in bonds to pay for it. Ibid., April 24, 1922. Yet in much of Iowa, though federal aid and state funds from vehicle fees were available for road work, a newspaper reported, "business and agriculture are depressed, and the cry for economy in public expenditure is vociferous." Opponents of paving had said it would raise farmers' taxes by special assessments more than it would raise their lands' value. Some had said paving assessments would total $40 to $50 an acre, an estimate that supporters of goods roads called excessive, it reported. Supporters also claimed that primary roads serve farm-to-market traffic often and that opposition to roadbuilding would decline "as its importance and relatively low cost are more widely realized." Ibid., April 29, 1922.

Iowa Homestead, March 16, 1922.

Ibid.

Besides adopting resolutions on marketing livestock, the Equity members recommended "strict enforcement of the traffic and other regulations" for public safety. They stated that two-thirds of Equity members in the three eastern-Iowa counties were members of Farm Bureau. Ibid.

Iowa Homestead, March 23, 1922; Des Moines Register, April 7, 1922.

Many accounts of the meetings in the map are from the farm journals Iowa Homestead and Wallaces' Farmer. Editors of Iowa Homestead were frequent critics of the state highway commission. In contrast, Wallaces' Farmer was edited by Henry C. Wallace until spring 1921, when he became agriculture secretary, administering
the federal-aid road program in Washington, where the program's chief was Thomas H. MacDonald, who until 1919 was chief engineer of Iowa's highway commission. Iowa newspapers took varied positions on roads and taxes. A different sentiment from that at many of the meetings was expressed in an editorial at Primghar. "What the whole country wants is less hot air and more constructive work done—less pawing the air over trifles and more things of real moment started, less swivel chair patriotism and more statesmen, less graft and dishonor and more American manhood, less societies passing the hat for contributions and more work on the roads and farms, more irrigating projects, public highways, public streets and all that sort of thing—something that creates work and pay—and an oceanful less of gab." Editorial of Primghar Bell, reprinted in Davenport (IA) Democrat, Feb. 6, 1922. Also in the year's early months, tax-assessment rates were decided at annual meetings in Iowa counties of assessors from each township and incorporated town. In Woodbury County, which includes Sioux City, the rates were cut for 1922 from levels of 1921 for assessment of some personal farm property. The cuts were made in January "at the annual meeting of the assessors of the county at the courthouse. The assessment values were lowered in all but six of the 22 items considered by the assessors, and in those six items the assessment values were unchanged from 1921. Thirty-five out of the 36 assessors representing the various townships and incorporated towns of Woodbury county were present at the meeting." Sioux City (IA) Journal, Jan. 11, 1922. In the 1890s depression, taxpayers had formed groups, sometimes dividing by extent of property. In winter 1895, a newspaper noted that "small taxpayers of Des Moines are organizing a league. Its aim and object is to be to compel large property owners to pay their proportion of the levies, and to see that they do not dodge. The new movement is likely to have a lively history." Davenport (IA) Democrat, Jan. 30, 1895.

62 At the meeting the day property owners had signed a petition opposing the paving project, F. R. White, the state highway commission's chief engineer, spoke about the federal-state work on primary roads. White "was asked many questions, some of them wise, some otherwise," which he answered though "some would-be hecklers who had no voting or financial interest in the proposed paving district tried to confuse him." White mentioned the petition and said that "you fellows have got to fight it out and settle it locally." That would determine whether the work would begin. "If a substantial majority of the property owners in the district to be paved are opposed, so far as the highway commission is concerned, the paving project will not go ahead." The highway commission's chairman, William Collinson, also said starting the project would be decided locally. About half the people attending stood when asked who lived in the special-assessment district (within 1 1/2 miles of the road to be paved), and most of those stood when asked who opposed paving. Independence (IA) Bulletin-Journal, Feb. 23, 1922. To Bulletin-Journal editors, the meeting "proved an almost unanimous sentiment on the part of the farmers' most affected by the paving in opposition to the project. The farmers might be scared, "but it must be admitted even if that is the case they have passed through an experience during the past year" that could "make any set of men flighty." Conditions had improved for them some. The county's farmers "are just beginning to see daylight, and it is our opinion that they are the best judges as to the merits of the problem." The gathering to discuss roads attracted some people who asked questions because they wanted to make speeches, it said, but "in the main that great assemblage was made up of taxpayers who wanted to do the best thing they could for themselves and their community, and to deny them that right is also to deny the people the right to govern themselves." Ibid.

63 The paving contract was awarded to a Sioux City contractor, lowest of eight bidders. One-fourth the cost would be paid by property owners on the road, of whom some 150 met with officials of the state highway commission, which still had to approve the contract before work could begin. When owners in the special-assessment district were asked their opinion at the meeting, some 30 said they approved, 12 to 15 preferred waiting, more than 50 were absent, and more than 100 said they opposed. Independence (IA) Bulletin-Journal, March 16, 1922. In early April, the highway commission approved the paving contract. The commission said county supervisors had stated that there was not a substantial majority of property owners along the road who were opposed to the paving. The commission said that some objections by property owners during its March meeting with them were from opposition to relocating the road to avoid railroad crossings east of Independence, and that since railroad tracks now appeared likely to be relocated and straightened, the highway need not be rerouted. Ibid., April 6, 1922. Work on the project began in May, using many trucks and machinery that often drew spectators. At the cement mixer in the Independence railyards "they had a little strike" over whether wages would be 25 cents or 30 cents an hour, yet "the work has gone on even if they were a bit short handed." Ibid., May 11, 1922. Buchanan County's paving project was completed by November, when the two incumbent supervisors who remained as candidates were reelected, one of them without opposition. Ibid., Nov. 9, Feb. 9 and 23, March 9, June 8 and 15, 1922. In late 1922,
the state highway commission recommended that the legislature repeal the requirement of assessments on nearby land for paving "and that no special assessments be levied for paving primary roads." ISHC, Report, 1922, 12.

64ISHC, Report, 1921, 56-61; Ibid., Report, 1922, 45-51. The number of lettings for projects on primary roads are compared by month for 1921 and 1922 in Table 1, Appendix. Figures in the table exclude smaller contracts (mostly for guardrails) that were part of other, larger construction projects.

65ISHC, Report, 1922, 45-51. In 1921, the largest monthly total for lettings for federal-state road projects had been for March, when counties let 25, compared to 7 that month in 1922. Ibid. The federal-state projects let in 1922 most frequently included work in grading and draining for roads. Some projects included several kinds of work. Grading was planned in 110 contracts let, grading in 62, graveling in 66, and paving in 29. Ibid. Federal-aid work completed or under contract on Iowa's primary roads by December 1922 is shown in a map published by Iowa's State Highway Commission in Service Bulletin 10 (October-November-December 1922): 8. The map shows paving had been completed or contracted for on two east-west routes—North Iowa Pike (from Sioux City to east of Mason City) and the Grant highway (through Waterloo)—and near urban areas. Graveling was generally a project on roads of central and northern Iowa. In the map, for 33 counties south of a line from Sioux City to Des Moines to Keokuk, nearly all primary roads lacked paving or graveling, though some of those dirt roads had been built to permanent shape in projects of grading and draining. Low-cost kinds of work accounted for most of the federal-aid mileage completed in Iowa by mid-1922, and they increased in the mileage of such projects under way then. Projects to grade and drain roadways (a first-stage improvement, preparing for graveling or paving later if traffic were to require them) had the largest mileage in either time period. The first of the periods included projects completed by mid-1922 since the program began in 1916, though little work was begun in the program nationally until 1920, after the war and the postwar boom. In completed federal-aid projects by mid-1922, those to grade and drain roads totaled 240 miles, nearly exceeding the combined total of graveling (111 miles), concrete paving (116 miles), and brick paving (21 miles). In projects under way with federal aid at mid-1922, the increase in construction was largely in projects for grading and draining roads. They were for a total of 789 miles, more than twice the combined total for graveling (189 miles) and concrete paving (150 miles). The low-cost kinds of work—grading, draining, and graveling roads—could spread improvements to more miles of road (to more communities) and frequently used skills and horses of farmers and other men for hauling and for spreading materials on the roadway. They often were more labor-intensive projects than paving with concrete, which also had large costs for materials. The mileage of low-cost work was attained while spending of federal aid was largely for paving. For projects completed by mid-1922, federal aid totaling $527,111 had been paid to the state, together with $339,733 for graveling; the amount paid for paving was $2.26 million. Federal aid paid up to half the cost of projects in which it was used. Totals for mileage and funds paid for federal-aid projects are from Agriculture Department, Report, 1922, 477-78, 483-84.

66ISHC, Report, 1922, 3; "Iowa Road Builders in 1922 Built 1,069 Miles of Grading, 432 Miles of Graveling and 101 Miles of Paving," Service Bulletin 10 (October-November-December 1922): 7. Despite the year's problems, work in the federal-state program exceeded the highway commission's plans for paving and graveling. Prices in most contracts were below those for 1921, and in many were below pre-war prices, it reported. Men seeking work on federal-state road projects throughout Iowa were "plentiful at all seasons, except during the few harvest weeks" of 1922. "Contractors experienced some difficulty during this period to get enough men" for the road work. Ibid. The distances for paving and drainage completed for primary roads decreased in 1922 from their levels of 1921, and graveling increased. Amounts for 1921 and 1922 were: paving, 165 miles and 101 miles; drainage, 5.4 million linear feet and 3.1 million linear feet; graveling, 368 miles and 432 miles; grading, 1,051 miles and 1,070 miles. ISHC, Report, 1922, 4.

67Des Moines Register, X-8, July 2, 1922. Many farmers had become motorists, a change noted by a Successful Farming editorial in August 1922. "Only 15 years back the farmers cursed every auto that traveled the roads and streets for it frightened the horses," though soon farmers were in the autos themselves. With that change, it said, "go where you will in the summer months and you will see farm families travelling by auto far from home." Now that "distance is no longer reckoned in miles but in minutes and hours," picnics of farm families are larger. One in Marshall, MN, recently had "over 2,700 farm autos on the ground." Autos had improved education,
recreation, and social life for farmers, it said. And in buying autos farmers had supported an industry “that in turn consumes great quantities of farm products.” *Successful Farming* (Des Moines), Aug. 22, 1922.

The ad by Cedar Heights noted that waivers of the full amount of assessments had to be signed by Dec. 29, 1921, and that “by signing a waiver the assessment may be paid in ten equal installments—one-tenth now, one-tenth in March, 1922, and one-tenth annually thereafter for eight years.” Interest on deferred payments was 6%. According to the town council’s ad, “this notice is not required by law, but is given that there may be no possible chance of misunderstanding, and that all property owners may have full opportunity to take advantage of the ten-payment plan.” *Waterloo (IA) Times-Tribune*, Dec. 12, 1921. The paving assessment system concentrated taxes for paving on land along the road, not on land throughout a county. Still, it was “quite common to hear the charge that made that the paved roads built in a county are in a great measure responsible for the high rate of taxation,” according to the newspaper report in early 1922. Paving could raise general taxes, it said, only where bonds were issued for funds beyond those available to a county in the state’s primary road fund; that had increased taxes in no more than six of the state’s 99 counties, it said. For paving costing $28,000 a mile, the report noted, one-fourth of the cost would be assessed on land on both sides of the road for 1.5 miles back from the road, or on 1,920 acres. The highest assessment would be $6.25 per acre, the lowest $1.05 per acre; if paid over 10 years they would range between 62 1/2 cents and 10 1/2 cents per acre annually. *Des Moines Register*, April 29, 1922. Yet with sufficient funds available from state and federal governments, some farmers opposed paying any of the cost of paving from property taxes, and in late 1922 the highway commission agreed, recommending legislation to stop special assessment for paving. ISHC, *Report*, 1922.

Judson also described a study by the National Grange showing that farmers’ taxes had increased while farm produce prices had declined, when compared to pre-war levels. And he suggested that taxes for the nation’s farmers in 1922 would exceed the total of all farms’ profits above cost of production. A. B. Judson, speech to State Grange of Iowa, Dec. 12, 1922, in *Journal of Proceedings of the Annual Session of the State Grange of Iowa, Patrons of Husbandry*, vol. 53, 1922 (State Grange of Iowa, 1923), 9, 10. Comparisons with conditions before the war continued in the 1920s and 1930s, James H. Shideler observes. If there were a time when “agriculture enjoyed a wholesome relationship with commerce and manufacturing, it was the time before World War I when the advantages derived from ascending prices were comparable to the advantages industry gained from protective tariffs.” Shideler, 5. By late 1922, the market for farm produce improved. Prices for corn averaged 50 cents a bushel for 1922, up from 30 cents for the year before, and the 1922 corn crop was larger. The Iowa corn crop’s value, $133 million in 1921, increased to $246 million in 1922. The total value of Iowa crops and livestock, $847 million for 1921, was $1.1 billion for 1922. Iowa Department of Agriculture, *Iowa Year Book of Agriculture*, 1921 (Des Moines, 1922); *Iowa Year Book of Agriculture*, 1922 (Des Moines, 1923), 1. Likely some Grange members could have considered no stronger argument against road work than that it might raise rail rates. Spending for roads at the recent rate would soon be enough to rebuild all the railroads, the meeting’s transportation committee reported. Reducing railroad rates is “the great problem,” and “if one-half of the freight and passengers that are now hauled by the railroads were handled by common carriers over the public roads built at public expense, would railroad rates be raised or lowered?" They would be raised by courts, which have held that corporations are entitled to fair return on investment, it said. People urging road building with federal funds, the Grange committee said, were “good road promoters, government officials, and the manufacturers of automobiles and road machinery.” *Report of the Transportation Committee*, in *Proceedings*, 35. Thinking of transportation as mostly by railroad was supported by the region’s conditions so far. Most farm-produce shipment in the Midwest was still by train, though in parts of the region trucks were being used more on farms. Farms used trucks more if they were some distance from the market, according to a 1922 survey of 555 Midwest farmers, most of them truck owners. Yet half of those responding still used horses for hauling on the road, mostly in bad weather. H. R. Tolley, *The Motor Truck on Corn-Belt Farms*, Farmers’ Bulletin no. 1314 (Washington: Agriculture Department, March 1923), 2-3, 8-9. In the survey, Iowa had 142 farmers responding, the most of any state. The survey was based on responses of 555 farmers in 1922 to a request for information issued to more than 1,000 Midwest farmers who had been truck users in 1920. Ibid., 2. For the 555 farmers, “on the average there were 8.4 weeks during the year when the trucks could not be used, and only about 6 per cent of the men reported that they were able to use their trucks every week.” Ibid., 9. In the early 1920s, most farmers were shipping not only by trains but also locally by horses, which they already owned and needed for field work. For farms distant from markets, trucks might reduce uses for horses in hauling. “On most Corn Belt farms, however, the work stock
which it is necessary to keep in order to carry on the field work can also do all of the hauling on the road.” Ibid., 17. For many Iowa farmers, better transportation was less important for hauling on the road than for work on the farm. In 1920, Iowa’s 204,371 farms were using 10,788 trucks, compared to 22,319 tractors. Iowa Department of Agriculture, Year Book, 1920, 696, 715.

*The legislature also cut in half the total allowable for each special assessment, reducing the limit from 4% to 2% of the land’s fair market value. “Paving Assessments on Abutting Property on Primary Road System Reduced One-Half by Fortieth General Assembly—Other Road Law Changes.” Service Bulletin 11 (April-May-June 1923) 5-7; ISHC, Report, 1923 (Des Moines, 1923), 10. The bill to cut the special assessment from 25% to 12.5% of paving costs, introduced by Rep. A. O. Hauge, R-Polk, a Des Moines banker, was passed in the House by an 85-15 vote on March 21, 1923. Of the 15 opponents to the cut, 12 were farmers, 12 were Republicans, two were Democrats, and one was an Independent. The House included 91 Republicans, 16 Democrats, and one Independent. Provisions to refund half of amounts paid earlier under the special assessments were added in the Senate. The bill to create a gasoline tax of 2 cents a gallon was approved by the legislature and vetoed by Gov. N. E. Kendall. Iowa House of Representatives, Journal, 40th General Assembly (Des Moines, 1923), iv-vi, 259, 1064-65, 1914, 1914, 1930. One-third of the gas-tax revenue was to go to the primary road fund, and two-thirds to a secondary road fund. The legislature also made it optional for county boards of supervisors to employ county engineers. Ibid. Spending for work on secondary roads from the state’s primary-road fund began in 1923, though the amount that year totaled only $1,055. It increased to $247,618 in 1924 and $722,203 in 1927, the highest level of the 1920s. ISHC, Report, 1929 (Des Moines, 1929), 5. Some of Iowa’s events of 1920-22 (local protests over road costs, leading to changes to rely more on state and federal funds) resemble those in Hal S. Barron’s interpretation of early-1900s changes in which rural resistance to road reforms tended to increase activities of governments beyond the community level. Rural “attachment to local control” and concern for costs, he argues, “forced compromises that limited the government’s powers and created the need for still further state involvement in order to overcome those limitations, propelling the issue of road administration to progressively higher levels.” Thus, as planning for highway systems and funding for macadam roads exceeded capacities of townships and counties in the early 1900s, “state aid emerged as a solution; but the states were often unable to ignore their rural constituents, prompting increased pressures for a greater federal role. In this sense, then, the battle between rural localism and cosmopolitan priorities helped to create the modern state.” Barron, Mixed Harvest 41-42. By 1923, Iowans and residents of many other states had become increasingly aware that rural land was a tax base that could not support the costs of paving if roadbuilding were to proceed when the economy was slow. In many states, funds to match federal aid for roads was increasingly coming from taxes on vehicles and gasoline. Road improvement, considered a benefit to farmland even into the early 20s, was increasingly recognized as a benefit also to motorists and those using highway shipping—manufacturers, merchants, consumers, and farmers. And partly from a familiarity with road issues that residents of many rural areas had developed, a nationwide program of federal aid for better roads was influenced in its early expansion, during the 1920-22 depression, by comment and criticism from farmers and other taxpayers in communities of many states. In 1927, Carl Henry Jens notes, Iowa repealed its law allowing special assessment of land for costs of paving nearby roads. Carl Henry Jens, “A Study to Determine the Motives and Results of the ‘Good Roads Movement’ in Southwestern Iowa, 1922-1926” (M.A. thesis, Drake University, Des Moines, August 1961), 33.

**Chapter 10**

*Besides Mexican nationals who were immigrants to the United States, Hispanic residents also sought work in the Southwest in 1920-22. Many people of Spanish heritage who were U.S. residents by 1900 entered the economy in the depression seeking incomes, according to Sarah Deutsch. Many of them had been migrating seasonally, others permanently, from villages in remote areas of New Mexico and Colorado. “Economic forces initiated in the nineteenth century and intensified by the drought from 1916 to 1918,” together with “the postwar depression in agricultural prices, pushed still more villagers into the Anglo economy to earn the cash necessary to survive.” Sarah Deutsch, No Separate Refuge: Culture, Class and Gender on an Anglo-Hispanic Frontier in the American Southwest, 1880-1940 (New York: Oxford University Press, 1987), 119-20. Hispanic men in the early 1900s, Joan Jensen notes, regularly left small farms in New Mexico to the care of women of their family, “who irrigated the holdings and cared for livestock while men sought day labor.” The combined income from farm and day labor “allowed many Hispanics to retain their lands. During the agricultural depression of the 1920s and 1930s, however, as farmers began to mechanize and unemployed Anglos increasingly competed for the remaining jobs, most
Hispanic men found little wage labor. They returned to subsistence farms only to find that without a way to make their farms more productive they could not survive the loss of their cash income." Many sold their lands to ranchers. Jensen, "New Mexico Farm Women, 1900-1940," 65-66. On farms and in many communities and smaller cities, the arrival of road contractors' machinery and their preparation of camps nearby to house construction crews for federal-aid projects were events that stirred residents' curiosity.

2The 1919 congressional provision to give veterans a preference in hiring for federal-aid road work had been criticized when proposed in the Senate. The preference was legislation favoring a particular group, said Sen. Charles Thomas, D-Colorado. The legislation appropriated $200 million for federal aid for roads and required that in spending the funds "for labor preference shall be given, other conditions being equal, to honorably discharged soldiers, sailors, and marines." Congress, Senate, Senator Charles Thomas of Colorado speaking to Senate on public works appropriations, 65th Congress, 3d sess., Congressional Record (Feb. 1, 1919), vol. 57, pt. 3, 2498-99. Using the funds for hiring more generally was the concern of Sen. Wesley Jones, R-Washington. He proposed using more of the funds for roadbuilding immediately, in 1919, because of the "conditions of the country and the conditions likely to confront us." Those expected conditions of increased unemployment, he argued, justified appropriating money "not only for the building of good roads, but largely to furnish a sort of reservoir for the employment of idle labor that we will very likely have in this country in the very near future." Congress, Senate, Senator Jones of Washington speaking to Senate on public works employment, 65th Congress, 3d sess., Congressional Record (Feb. 8, 1919), vol. 57, pt. 3, 2951. Even so soon after the war's end, many servicemen already had been demobilized, and a large proportion of contracts for war production had been canceled. George Soule, Prosperity Decade: From War to Depression, 1917-1929, vol. 8, The Economic History of the United States (New York: Rinehart, 1947), 31-33, and 83. Earlier support for road appropriations for employment also had described their need for jobless men including ex-service men and other people. In December 1918, Agriculture Secretary David F. Houston said roads would be among the most-needed postwar public works to provide work for "many unemployed men." In the transition from war production, Houston said, "there doubtless will be a period in which some laborers engaged in war industries and men released from the Army will be seeking new tasks." "President Favors Pushing Construction of Highways," USDA Weekly News Letter 6 (Dec. 18, 1918): 1. Chicano residents of the U.S. and Mexican nationals often were given the status of laborers in the West. Mario Barrera argues Anglos in the Southwest made them part of a "colonial labor force" through treating racial or ethnic minorities as unequal to Anglos and using methods of inequality including labor repression, a dual-wage system, and occupational stratification. Mario Barrera, Race and Class in Southwest: A Theory of Racial Inequality (Notre Dame, IN: University of Notre Dame Press, 1979), 40. Protests in 1920-22 in the southern Plains demanding preference in construction jobs for white men seem consistent with interests of farmers who relied on wage labor. Using white laborers for road work would help preserve for agriculture the lower-wage workforce of Mexican nationals, letting farming compete less with roadbuilding for wage laborers. In early 1920, at least one farmer, Joe Worsham of Dallas, favored increased immigration of Mexican nationals to supply farm laborers, citing higher wages being offered in road work and in the oil fields, as noted in this chapter on page 193.

3In California, Chinese workers were needed for economic growth yet were opposed as unfair competition in the depression. California farmers "hired Chinese workers in groups to harvest wheat and to work in the developing fruit and vegetable industry," according to Camille Guerin-Gonzales. "By the 1870s, growers depended primarily on Chinese workers to harvest their crops. Chinese farmers and farm workers made possible the shift from wheat to fruit and vegetable production in California by sharing their knowledge of planting, cultivating, and harvesting these crops and by providing invaluable labor and skill in harvesting and packing produce." Chinese workers also cleared and drained land and built levees. In the 1870s depression, in California "native-born white workers complained that the Chinese were competing unfairly by accepting low wages." Sentiment against Chinese "resulted in mass demonstrations throughout the state in the 1870s demanding an end to Chinese immigration. Agitation centered in San Francisco, where workers and other opponents of Chinese immigration organized public demonstration." Camille Guerin-Gonzales, Mexican Workers and American Dreams: Immigration, Repatriation, and California Farm Labor, 1900-1939 (New Brunswick: Rutgers University Press, 1994), 15-16. Congressional hearings on the 1870s depression are reported in U.S. House of Representatives, Select Committee on Causes of the General Depression, Hearings on Causes of the General Depression in Labor and Business, Etc, House Misc. Doc. 29, 45th Cong., 3d sess. (Washington, 1879) and U.S. House of Representatives, Select Committee on Causes of the General Depression, Hearings on Causes of the General Depression in Labor and Business: and as to
Chinese Immigration. House Misc. Doc. 5, 46th Cong., 2d sess. (Washington, 1879). Advice on avoiding drawing transients to a city by offering relief in the depression of the 1890s was part of a letter to the mayor of Buffalo, NY, from the city's Charity Organization, notes Hannah Leibowitz. The letter "expressed its strong opinion that the only proper way to assist able-bodied workingmen was 'by furnishing them with work at a rate of compensation which will save them and their families from actual suffering, and will also save them from begging and other humiliation, and yet so low that it will furnish no inducement for persons to come here from other places in order to get work, or to leave other employment for it.'" Hannah Leibowitz, "Unemployment Relief During the Depression of 1893-1894" (M.A. thesis, Columbia University, 1936), 3-4. Hiring of the 125 Chinese laborers to dismantle buildings left at Camp Upton brought opposition from veterans who objected that unemployed ex-service men should have gotten the work. The contractor said that he offered former soldiers first chance at the work but that they were not interested at the wage he offered. New York Times, March 11, 1922. Opposing a depression's increased competition for work, members of a Richmond, VA, bricklayers union discussed recent construction of public buildings which one unionist said were built "in part by bricklayers and other laborers from other states" while many local men were looking for jobs. Richmond (VA) Labor Journal, Jan. 20, 1922. In the 1914-15 depression, groups of men demanded food at restaurants and clubs in cities including Des Moines, a problem that might be relieved by putting them to work on roads in counties, a newspaper said, noting a bill by an Iowa legislator. Under the bill by Rep. Coakley of Union County, it said, counties would be obligated to provide work so that "any able-bodied person who can satisfy the board of supervisors or the overseer of the poor, or the superintendent of the county farm, that he is without means of support, shall be employed upon the roads and highways of the county, upon the county farm, or upon any other county works and receive food and lodging and a wage of not to exceed 35 cents a day for ten hours' work." Coakley said the measure sought to "deal with the problem of handling the unemployed in something approaching a scientific and economical manner." Register and Leader (Des Moines), Jan. 26, 1915. By the late 1800s, Mexicans traveled to the United States to work in large numbers, according to Lawrence A. Cardoso. The developing Southwest region of the United States offered work in its agriculture, mining, and transportation industries. And northern Mexico added connections by railroad to increasingly populous areas to the south, where "hundreds of thousands of people" sought to leave hacienda conditions or had lost communal lands. Cardoso, 17.

Cardoso, 51-52.

"It Doesn't Take an Army of Men to Build Concrete Roads with Up-to-Date Methods," Service Bulletin 8 (December 1920): 1. Mexicans worked in the Midwest since the 1880s in railroad construction and track maintenance and later worked also in mining, meatpacking, and harvesting cotton, sugar beets, and grains. Many signed contracts with labor recruiters, who transported them from border areas. Midwestern farmers sometimes sent foremen to recruit laborers at the border, though often they succeeded in hiring Mexican men away from nearby railroad crews by offering higher wages. Michael M. Smith, "Beyond the Borderlands: Mexican Labor in the Central Plains, 1900-1930," Great Plains Quarterly 1 (Fall 1981): 243, 245-48.

The wartime waivers' extension resulted from political influence by organized growers, according to Mark Reisler. Those who benefited most included "Arizona cotton growers and Colorado and California sugar beet companies. Both beet companies and cotton growers established labor associations to facilitate the recruitment of Mexican workers." Mark Reisler, By the Sweat of Their Brow: Mexican Immigrant Labor in the United States, 1900-1940 (Westport, CT: Greenwood Press, 1976), 36. Organized labor's objection that Mexican nationals left farm work and competed with Americans by accepting low wages was voiced in 1920 in "numerous letters from Texas and Oklahoma local unions," according to Reisler. Samuel Gompers, president of American Federation of Labor, accepted reluctantly the federal waiver for Mexican immigration in 1917 and 1918 and, soon after the Armistice, opposed continuing it. In 1919, the AF of L opposed continuing Mexican immigration. Ibid., 17. Mexicans crossed into the United States in large numbers, Cardoso contends, "beginning around the turn of the century because of strong economic inducements in the southwestern United States." Agriculture and mining developed there, requiring a larger workforce in a sparsely settled area. Federal officials acceded to requests from the area, allowing Mexicans to immigrate easily. Cardoso, 18, 34. Cardoso argues that by 1900 Mexicans "comprised from 70 to 90 percent of the track crews on all the principal southwestern lines." Ibid., 29. In 1906, some Mexican politicians advocated repatriating Mexican workers from the United States. In the U.S. recession of
1907, when "several thousand railroad track laborers in California and Arizona lost their jobs," Mexican consuls persuaded Southern Pacific officials to provide Mexican workers transportation to the border. Ibid., 32.

Joe Worsham, statement, 239-253 in House Committee on Immigration and Naturalization, Temporary Admission of Illiterate Mexican Laborers: Hearings before the Committee on Immigration and Naturalization on H.J. Resolution 271, Jan. 26, 27, 28, and 30, and Feb. 2, 1920, 66th Cong, 2nd sess. (Washington, 1920), 239-240. Migration northward to southwestern parts of the United States continued after the 1907 recession. Many Mexican nationals worked in coal mines in southern Colorado; others mined coal for railroads at locations including Gallup, New Mexico, and in southern Texas. California farmers had begun importing many Mexican workers by 1907; earlier, Texas landowners started hiring them to clear land and plant crops. Owners of sugar-beet fields imported Mexican laborers by 1903 in Colorado's South Platte Valley. Refrigerated railcars shipped to the rest of the nation increasing amounts of fruits and vegetables grown or harvested in the Southwest by Mexican workers. Cardoso, 29, 26, 24-25. Railroads carried Mexicans across the border and took them to points throughout the United States, where they worked, frequently for lower wages than other laborers, in a variety of jobs. Many worked first at laying tracks, and often they decided to stay in the United States. Large populations of Mexicans developed in such rail centers as El Paso and San Antonio in Texas, Kansas City, Kansas, and Los Angeles. Railroad labor camps, which often had more men than needed, were frequent hiring points for other employers. Ibid., 25-27. Mexican-born people and their children were numerous north of the border by 1910, totaling 382,002 in the U.S. census then. Most were in Texas, where they totaled 232,920 people. About half that many lived in other states on the border. Census Bureau, Census, 1920, vol. 2, Population, 904-05, 932. At El Paso, Mexican nationals constituted a large source of labor; many had worked for construction companies since at least the 1890s, building stores, houses, and the streetcar system, and paving streets. Mario Trinidad García, "Obreros: The Mexican Workers Of El Paso, 1900-1920" (Ph.D. dissertation, University of California, San Diego, 1975), 113.

Immigration to the U.S. greatly increased during a decade of revolution in Mexico that began in 1910; recruitment increased as the U.S. mobilized for World War I and experienced labor shortages. The 1917 Immigration Act cut the number of immigrants from Europe. In May 1917, the labor secretary exempted Mexicans from the act's literacy tests, a status maintained until March 2, 1921, at employers' request. The secretary extended that exemption for farming in July 1918 to allow Mexican immigration for work for mines, railroads, and construction companies. Cardoso, 46, 48. "By late 1917 there were thousands of braceros who worked in factories as far from the border as New England and New York. Others worked in packing houses, hotels, and restaurants in cities such as Chicago, New York, and Omaha, Nebraska." Ibid., 48. In summer 1918, many immigrants were arriving at El Paso, where recruiters included those from the Pennsylvania Railroad, seeking several thousand laborers. Garcia, 85-86. Many Mexicans settled or stopped over temporarily at Omaha. Some had worked on the Union Pacific railroad in the area as early as the 1860s, and others had worked for railroads in the Midwest and West in the late 1800s and early 1900s, according to Nina L. Nixon. "A 'Mexican town,' an aggregate of housing facilities provided by the railroads, was established along the tracks in Omaha in 1910. These living quarters consisted of tents and small boxcars." Nina L. Nixon, "Mexican-American Voluntary Associations in Omaha, Nebraska," Journal of the West 28 (July 1989): 73-76. Most Mexicans in the United States in winter 1920 lived in the Southwest. Mexicans in Texas numbered 398,174, more than half the U.S. total. California reported 126,086 Mexicans. Arizona 91,514, and New Mexico 34,083. Census Bureau, Census, 1920, 904-05.

J. C. Minus of San Antonio, Texas, statement, 117-133 in House Committee on Immigration and Naturalization, Temporary Admission of Illiterate Mexican Laborers, 122-23.

James H. Patten, representing Patriotic Order Sons of America, statement, 320-343 in House Committee on Immigration and Naturalization, Temporary Admission of Illiterate Mexican Laborers, 330-331.

Dallas Morning News, Jan. 8, 1921; Reisler, 50-52; Fort Worth Record, Jan. 11, 20, 22, 1921; Dallas Morning News, Jan. 11, 1921, cited in Reisler, 72 n15. After the group of jobless men marched to city hall to protest employment of Mexicans in construction, Reisler notes, "the commissioner of streets of Fort Worth
suggested that Mexican workers be replaced by Americans. Local paving companies complied with this suggestion. Reisler, 51-52.

12 *Dallas Morning News*, Jan. 11, 1921.

13 Ibid., Jan. 11, 1921.

14 Ibid., Jan. 21, 1921.

15 Reisler, 52; *Fort Worth Record*, Jan. 21, 1921, cited in Reisler, 72 n17; *Dallas Morning News*, Jan. 8, 1921. A Denver newspaper reported that 3,500 Mexicans were unemployed in Denver in January 1922. Reisler, 53-54. In Wichita Falls, TX, 100 white men and several black men began a strike at a downtown construction site in January 1921 because their employer hired Mexicans at 40 cents an hour, which they said would depress the scale of wages. At about the same time, a group of white men there reportedly chased Mexicans from their jobs at that wage and beat them; some Mexicans asked the sheriff for protection after reports of mass meetings making plans to “run Mexico out of Wichita Falls.” *Dallas Morning News*, Jan. 5 and 7, 1921. At Ranger, TX, masked night riders in February 1921 dragged Mexican families from tents and houses at a labor camp, beat them, and told them to be out of town in a day. Some of the 100 people fled to Fort Worth. In parts of the Southwest, posters warned Mexicans against competing with Americans for work in oil fields. Reisler, 53. Charity groups in Tulsa, OK, warned unemployed men generally in other parts of the nation against coming there, though building and other local efforts were expected to provide work for most of its people. A newspaper account from there said that “little suffering in surrounding towns in the oil belt has been reported this winter.” *Dallas Morning News*, Jan. 22, 1921. Interest in employing local men was widespread in 1921 as it had often been in earlier depressions. Usually local governments had been the only ones providing public works in earlier depressions; in the 1800s and early 1900s cities often gave preference in the jobs they created during depressions to local men with families. In areas including parts of the Southwest, local residence sometimes was presumed indicated by appearance, language, or membership in an ethnic group. Though some Mexicans were residents of the counties where whites advocated hiring of local men, some of those statements opposed Mexicans, not non-resident Mexicans. Still, Fort Worth officials noted their exclusion was intended for non-residents, not for members of ethnic groups. Ethnic tension turned into a riot in summer 1921 in Tulsa that produced deaths among whites and blacks. Much of the black housing district was burned, many blacks fled the city, and some 5,000 blacks were put under protection of national guardsmen at the fairgrounds. *Arizona Republican* (Phoenix), June 2, 1921.


17 Ibid.

18 Ibid., Jan. 10, 1921.

19 Ibid., Jan. 13, 1921.

20 Ibid., Jan. 9, 1921, p. 9 (III).

21 *Boise, Idaho Statesman*, Dec. 14, 1920. Martinez, 90-91. John Ramon Martinez contends that in 1920-22 “the plight of the Mexicans was most acute in areas outside the border states. During and after the war many thousands had been taken to the Northwest, the Middle West, and the East. Since the recession was basically an industrial one, the braceros in the urban-industrial centers around Chicago, Detroit, Pittsburgh, and New York were the most severely pressed.” Ibid., 89-90. Many Mexicans were jobless in several large U.S. cities. “In April 1921 welfare officials estimated that 90 percent of Fort Worth’s 12,000 Mexicans were unemployed and living in deplorable conditions.” Reisler, 50-52. In Arizona’s Salt River Valley at Phoenix, a cotton boom slowed in the recession, idling some 10,000 Mexican nationals, some of whom repatriated while “hundreds of others” found work in cotton fields of New Mexico’s Mesilla Valley. Ibid., 92. By early summer, mines had closed in Arizona and many of the recent workers had returned to Mexico. By June, a newspaper reported, “Mexicans in large numbers already have come to Phoenix and Tempe since the closing of the mines in the Ray-Superior district so that
there remain only 19 adults and 20 children," who needed help to return to Mexico. Arizona Republican (Phoenix), June 1, 1921. At Jerome, north of Phoenix, 150-200 Mexican miners had been laid off, and the remaining ones were working part time. Mines there agreed to pay miners' fares to Phoenix, and the Mexican government would pay it from there to their point of entry to Mexico. Ibid.

22Idaho Falls (ID) Daily Post. April 30, 1921. In Twin Falls, ID, two weeks earlier, a mob of about 250 had formed at the courthouse and demanded custody of a Mexican man charged with murder in the stabbing death of a white traveling salesman. When authorities refused to give them the man, "the mob turned attention to rounding up all Mexicans," who were "ordered to leave Twin Falls by night." Ibid., March 16, 1921.

23Ibid., Feb. 24, 1921; Seward (NE) Journal, April 1, 1921; New York Times, Aug. 18, 1921. Among organized activities by white men opposing other social groups in the postwar period were those in Sacramento, CA, during preparation for 1921 celebrations of the Fourth of July. Members of the local unit of the Native Sons of the Golden West named a committee to meet with a city commissioner "and inform him that members would not march in the Fourth of July parade if Orientals are permitted to participate in it." The lodge's action, said a newspaper, followed the commission's "announcement that he would resign from the celebration committee and withdraw his endorsement of the City Commission for an appropriation if Japanese were excluded." The commissioner "took the stand that everybody allowed in the United States should be allowed to march behind the flag at a patriotic celebration. He declared many who were not citizens were taxpayers and therefore defrayed a portion of the expense connected with such affairs." Sacramento (CA) Union, June 7, 1921. The status in labor unions of women and blacks was debated in summer 1921 at American Federation of Labor's convention in Denver. Compromise measures won approval, though in debate "discrimination by certain unions against the negro and woman wage earners was bitterly denounced." Delegates "voted down a constitutional amendment designed of the give women 'equal rights and privileges of membership of their trade or industry,'" a newspaper reported. "All affiliated unions, however, were urged not to discriminate against the woman wage earner and admit her to membership." The defeated amendment "would have provided for the issuance of a separate charter by the federation to a woman's local without the consent of the union having jurisdiction over the particular trade." Also, "the convention took the stand that national and international unions could not be compelled to recognize negro workers, and that this was a matter to be adjusted by conference between negro wage earners and the various organizations." A black delegate of the railway coach cleaners said such conferences, ordered at earlier conventions, had not been held, so that other measures were needed. Sacramento (CA) Union, June 25, 1921.

24Subscribers to a black newspaper in Houston in fall 1922 were urged to vote against issuing county road bonds. A front-page article was designated "Political Advertisement" yet ran under the banner headline "$6,000,000 Bond Issue Opposed." Houston (TX) Informer, Nov. 6, 1922. Port bonds of $4 million were endorsed by Houston (TX) Informer in its issue of Dec. 30, 1922. Norfolk (VA) Journal and Guide, Feb. 4 and 18, 1922. An exception to a general absence of news on road construction in several black newspapers of the South or Plains in 1920-22 was an article describing 1922 plans for roadbuilding near Ponca City, OK, using revenues from taxing oil production. Oklahoma City Black Dispatch, Feb. 9, 1922. In California, beginning before the war, black population increased, and the new residents often found jobs at Pacific ports. By early 1920, for example, "more than a thousand" blacks were stevedores near San Francisco, according to a black political leader in Los Angeles. California Eagle (Los Angeles), Feb. 21, 1920.

25Some Mexican and U.S. nationals may have worked in postwar street and road projects planned in Mexico's northern cities. Officials of Mexico's federal government visited El Paso, TX, in November 1920 to meet with contractors about paving streets in Juarez. Tentative bids were secured from contractors, though the start of the work was not set. A newspaper reported that "the government at Mexico City has decided that the streets of all the Mexican border cities will be paved in the near future," under federal supervision and partly with federal-loan funds. In Saltillo, capital of Coahuila, financing was ready for laying 100,000 meters of paving, on which American contractors had been invited to bid. Some of work may have proceeded during the depression. El Paso (TX) Morning Times, Nov. 5, 1920. A month later, plans for the Mexican federal government's paving of "the entire downtown section of Juarez" scheduled work to "start shortly after the first of the year." Ibid., Dec. 10, 1920.
Chapter 11

Roads later called narrow were in the 1920-22 depression considered achievements. Returning from Washington by car in mid-1922, two Minnesota officials, Charles M. Babcock, state highway commissioner, and J. H. Mullen, assistant commissioner, noted new pavements. According to a newspaper, "Illinois paving is standing up well, they reported, but is mainly 16 feet wide, against the 18-foot Minnesota standard." Bagiev (MN) Farmers' Independent, June 8, 1922. Congress expanded the purposes of the federal road program in 1944. Charles L. Dearing and Wilfred Owen argued by 1949. "The Federal-Aid Highway Act of 1944 introduced the principal change of emphasis in the federal highway program. In addition to making available the unusually large sum of 1.5 billion dollars over a three-year period, the 1944 act supplemented the basic 1921 act by providing funds for exclusive use of the federal-aid system within municipalities and urban places of over 5,000 population. This provision was made in recognition of the acute problems of providing adequate facilities in congested urban areas. The 1944 act also permits the expenditure of federal funds for right of way and property damage costs, and provides for the co-operation of local road officials in the selection of roads to be included in the rural secondary and feeder road systems. It also provides for designating an interstate system of the most important routes." Charles L. Dearing and Wilfred Owen, National Transportation Policy (Washington, Brookings Institution, 1949). 110. Though Congress approved the interstate system in 1944, "it took some twelve years after 1944 to resolve a conflict on how to fund a nationwide Interstate system building program. Legislation to authorize the Interstate system was passed in 1956, together with the creation of the Highway Trust Fund, and imposition of a 3 cents per gallon motor fuel tax to fund its construction, with the proceeds of this user tax and any interest earned on balances" in the trust fund to be used for roadbuilding. The federal fuel tax was raised to 4 cents a gallon in 1959. With such a "guaranteed fiscal mechanism," some 21,000 miles of the interstate system's highways were built by 1965. In 1982, the gasoline tax grew to 9 cents a gallon, including 1 cent for revenue for mass transit systems. In 1989, the tax per gallon was 9 cents for gasoline. 15 cents for diesel. By late 1989, much of the interstate system, "basically laid out in the 1940s," was completed, totaling some 43,000 miles. American Association of State Highway and Transportation Officials. Moving America into the Future, 29, 33, 36.


2In World War I, military trucks made in the Midwest were loaded there with supplies and driven to Atlantic ports, avoiding rail congestion. The Army began driving trucks to the East Coast in December 1917. Paxon, 243-44. Congress in spring 1915 received a report of the Joint Committee on Federal Aid for roads. In the committee report, a newspaper said, "federal aid is held to be justified, not only because past methods, including state participation in road building, have proved inadequate, but because the activity of the government would emphasize the importance of better roads, establish higher standards, and to some extent shift the burden of expense from the rural resident to the city dweller." New York Times, March 21, 1915, p. 3 (VIII). Meanwhile, motor vehicles were growing in use by the British Army to increase efficiency, according to an account reprinted from a London newspaper: the struggle in France might "be called a petrol war" because internal-combustion engines had permitted aviation and "immensely simplified the work necessary for the supply of the army." The correspondent said that "within the field of operations practically the whole of the conveyance of food, material, and munitions beyond the railheads, or points to which they are taken by the railway, up to the refilling points, or points beyond which it is neither safe nor convenient to take motor lorries, depends on motor traction." Nearer the front, transport still depended on horses or mules. Yet "mechanical propulsion has practically replaced horse traction on the roads." Also, the British were using steam-powered tractors to haul artillery and work at bases. The account, from "one of the London papers," quoted in New York Times, March 21, 1915, p. 1 (VIII). Military preparedness helped win passage of the 1916 act for a federal-aid road program, according to John Hammond Moore. Some twenty bills for federal highway funds had been introduced in the previous session. In 1916, the "House and Senate approved 'good roads' legislation, with most of the opposition coming from Republicans, especially men from the Northeast, a region that had developed a fine highway system. Despite delaying tactics, events on the eve of World War I—especially friction along the Mexican border—gradually transformed the highway question into a preparedness-national defense issue, thus assuring passage. Soon minor House differences were resolved," and President Wilson


7An interregional system had been recommended in 1939 in a report on toll roads and free roads by the Public Roads Administration. Ibid., 252-53. Maps of interregional routes suggested in the 1939 report, a system of 26,700 miles, are in National Interregional Highway Committee, Interregional Highways. A Report of the National Interregional Highway Committee. Outlining and Recommending a National System of Interregional Highways. House doc. 379, 78th Congress, 2d sess. (Washington, 1944), 138. Ibid., 36. Roosevelt said in early 1944 he named the committee in April 1941 to study interregional transportation needs and the possibility of using its construction for postwar employment and economic stimulation during demobilization. Franklin D. Roosevelt, “Message of the President, Jan. 12, 1944, Transmitting Report to Congress,” iii-v in Ibid., iii; Letter of Maj. Gen. Philip B. Fleming, Administrator, Federal Works Agency, to Franklin D. Roosevelt, Jan. 5, 1944, quoted vii-viii in Ibid., vii. Postwar employment through roadbuilding was an early interest of federal officials as the war widened, according to Mark H. Rose. “Between September, 1939, when the war opened in Europe, and late 1941, those planning for postwar road building thought mainly in terms of employment. Highway building, both in the minds of public and private leaders, would create needed jobs. In November, 1939, for instance, President Roosevelt ordered members of his planning group to get ready programs to bolster the postwar economy. In February, 1941, he wanted sketches for roads ‘put on the shelf, ready to take out’” for postwar use. Roosevelt on April 14, 1941, wrote an advisory committee on roadbuilding to prepare plans that would use “man power and industrial capacity” at the “completion of our defense program.” Mark H. Rose, Interstate: Express Highway Politics, 1939-1989 (Knoxville: University of Tennessee Press, 1990), 16-17. In the 1920s, Roosevelt, as head of a trade association, the American Construction Council, sought to regularize activity in the construction industry to counter the economy’s changes. “Through the six years he headed the council, Roosevelt tried to promote long-range planning to postpone construction at peak periods and stimulate it in slack times,” Frank Freidel argues. Lacking enforcement authority, “the council failed to bring order, indeed functioned little at all.” Frank Freidel, Franklin D. Roosevelt: Launching the New Deal (Boston: Little, Brown, 1973), 417-18. Herbert Hoover had favored such a council, Ellis W. Hawley notes, as a way to “end the ‘antagonism’ between manufacturers, builders, and workers, unite them in an effort to ‘lower the cost of homes,’ and thus create more business and more employment. The eventual result, in June 1922, would be the formation of the American Construction Council under the direction of Franklin D. Roosevelt.” Ellis W. Hawley, “Herbert Hoover and Economic Stabilization, 1921-22,” pp. 43-79 in Ellis W. Hawley, ed., Herbert Hoover as Secretary of Commerce: Studies in New Era Thought and Practice (Iowa City: University of Iowa Press, 1981), 59.

On a map, MacDonald pointed out for the committee “the German and Austrian network, connecting into the Italian and the Yugoslavian highways.” Statement of Thomas H. MacDonald, commissioner, Public Roads Administration, to House Committee on Roads, Washington, D.C., June 10, 1941, 111-12 in House Committee on Roads, Hearings: Defense Highway Act of 1941, 111-12.

9Ibid.

10Brandt said Hitler had coordinated expansion of the military and construction of the autobahns. “After spending months or perhaps more than a year on investigations and plans, he started on his program, and up to date, unfortunately, that program has been most successful. He didn’t let construction of these military highways go until he had planes and tanks built; he started the whole program at the same time, with the result that five years later he had a fine system of superhighways over which to transport the men, equipment and materials.” The U.S.
road system was not prepared for wartime traffic. Brandt told the committee. He urged that “specific amounts be placed in this bill, amounts which mean that we can make a substantial start in relieving the congestion that will inevitably result if this nation is drawn into the war.” Statement of A. W. Brandt, superintendent, Department of Public Works, State of New York. 215-16 in House Committee on Roads, Hearings: Defense Highway Act of 1941, 215-16.


13 About the scattered, large benefits for landowners from purchase of land for roads, Roosevelt mentioned a landowner who had sold a narrow right-of-way through his farm. Later, though, in funds from a jury ruling and land sales on the two new road frontages, the man received three times the farm’s former value while retaining his house, barn, and 90% of his land. Franklin D. Roosevelt, “Message of the President, Jan. 12, 1944, Transmitting Report to Congress,” iii-v in National Interregional Highway Committee, iv-v. Data from tables in the committee’s report, which describe construction in the 1920s and 1930s and its economic effect, are discussed further on page 209.

14 National Interregional Highway Committee, 120-21. The committee considered 1930s federal spending on roads to have had little effect in raising employment. The committee’s chairman was Thomas H. MacDonald, chief of the federal-aid roadbuilding program since 1919. In the 1930s, the committee said, problems such as growing traffic, higher speeds than roads were designed for, and needs for road maintenance and for improved main routes in cities offered possibilities for projects “of great potential benefit, on which thousands of workers and a large industrial production could have been usefully employed. In spite of these recognized needs for highway improvement and notwithstanding the widespread need for employment, local expenditures for highways, both for construction and maintenance, were reduced during the depression by amounts at least equal to the increases in federal expenditure, so that the employment purposes of the federal Government were largely or completely nullified.” Ibid., 124. In contrast, the 1920-22 depression was brief and occurred after a wartime period of restrictions on road construction through priority systems (for materials, credit, and shipping) and from labor scarcity in a booming economy. Thus, roadbuilding by federal and other governments expanded as restrictions ended, once the economy slowed from the 1920 boom. Many state, county, and township programs continued to spend in 1920-22 to build and maintain roads, adding to the effect from federal road spending in increasing employment and in stimulating economic activity. Also, federal spending for roads rose in 1920-22 from near zero in many states before 1920, and that increasing spending required matching by equal amounts from state and local governments. Thus, an increase in spending was easier in 1920-22 than in the 1930s because the depression was briefer and because spending was lower or non-existent at the start of the period.

15 Dwight D. Eisenhower, Special Message to the Congress Regarding a National Highway Program, Feb. 22, 1955, 275-80 in General Services Administration, National Archives and Records Administration, Office of the Federal Register, Public Papers of the Presidents of the United States: Dwight D. Eisenhower, 1955 (Washington, 1959), 277; Rose, 26. “For the next decade or so, arrangements made in 1944 determined the politics of express highway building, shaping both the problems and direction of over-the-road transportation.” Ibid., 28. President Truman limited road construction 1946-50 because of material shortages and price inflation in the economy, often permitting road work only in areas of unemployment and serious repair needs. By 1948, civil and traffic engineers were using new ideas, equipment, and formulas to study the design and construction of high-speed roads. In 1952, Congress voted funds for the interstate system apart from other road programs. In 1954, it voted $175 million for building interstates (and $700 million for other road programs) and increased to 60% the share of interstate construction costs payable in federal funds. Ibid., 35, 40, 63, 52-53.

16 Eisenhower’s statements are from his notes, delivered by Vice President Nixon at a Governors’ Conference on July 12, 1954, and reprinted in President's Advisory Committee on a National Highway Program, A Ten-Year
National Highway Program: A Report to the President (Washington, January 1955), 1. Bureau of Public Roads, A Preliminary Report on Highway Needs for Civil Defense (Washington, October 1956), 1-2. Cities containing more than half the population of all those studied were within 150 miles of the nation's coasts, "where warning times would be a minimum and attack by guided missiles launched from submarines or surface craft is an added threat." Ibid., 39-40.

17Ibid., 30-31, 37, 39-40.

18Ibid.; Ibid., 41-43.

19Few factions in 1956 made large concessions. Agreement resulted instead on "legislation which incorporated long-sought goals, asked few significant sacrifices, and managed to sidestep difficult questions," according to Rose. "Basically, the key to success was providing something for everyone without imposing high taxes on truckers." Rose, 89. Ibid., 85-93. By 1952, at least 600 miles of toll road were open, and some 1,100 miles were under construction. Ibid., 41-42.

20Rose, 44-45. Though in 1946-50 the $8.4 billion spent by local, state, and federal road programs was "more than any previous five-year period in American history," inflation "consumed a good part" of the increase. Rose, 31. Truman lifted wartime controls on road construction by Sept. 6, 1945, yet federal officials froze road aid for some 50 days beginning Aug. 6, 1946. Rose, 11-12, 35. Rose, 48; Arthur F. Burns to the President, Aug. 11, 1953. Papers of Arthur F. Burns, Dwight D. Eisenhower Library, Abilene, KS, quoted in Rose, 48.


24President's Advisory Committee on a National Highway Program. A Ten-Year National Highway Program. 4, 9, 8. Also in 1955, Eisenhower and his advisers continued to consider the interstate system partly as a way to manage the U.S. economy, as Rose notes. On Jan. 26, Eisenhower wrote to Gen. Lucius Clay, head of a committee he had appointed to study a 10-year interstate plan, that "our whole industrial activity" should be "geared to a purpose of steady and stable expansion." Dwight D. Eisenhower to Lucius D. Clay, Jan. 26, 1955, Administrative File. Eisenhower Library. Abilene, KS, quoted in Rose, 76. Members of the Council of Economic Advisers wanted to link road spending "with economic fluctuations." Rose, 87. Gabriel Hauge, one of Eisenhower's other economic advisers, said that using construction of the interstate system to direct the economy "was the fundamental purpose of the plan in the initial instance." Gabriel Hauge to the Secretary of Commerce, Nov. 1, 1955, OF 141-B, Eisenhower Library, quoted in Ibid. A committee led by the president of the U.S. Chamber of Commerce was one of several studying highways in 1955. Its report to a federal interagency group urged planning projects for use as needed to stabilize the economy—projects not only on the proposed interstate system but also on all highway systems. Study Committee on Federal Aid to Highways. Report on Federal Aid to Highways. Submitted to the Commission on Intergovernmental Relations. June 1955 (Washington, 1955), 29. In this interest, Eisenhower's advisers resembled those of Roosevelt who recommended in 1944 an interregional system of superhighways partly as an element in a "public works plan which looks toward the stabilization of the national income and the preservation of prosperity in the post-war period." National Interregional Highway Committee, 133.
Truckers’ groups often complained of traffic in the early 1950s; they also disliked the growing mileage of toll roads. Rose, 41-42. National Interregional Highway Committee, 124. Examples of superhighway sections in use during World War II were noted in the study on interregional highways, which included photos of interchanges on Henry Hudson Parkway and East River Drive, both in New York City. Ibid., 68, 116. Congress, Senate, Senator Lyndon Johnson of Texas speaking to Senate, 84th Congress, 2d sess., Congressional Record (July 13, 1956), vol. 102, pt. 9, p. 12644.

The 1956 act appropriated $25 billion over 13 years for work on the National System of Interstate and Defense Highways and $2.55 billion over three years for other roads. It expanded the interstate system from 40,000 to 41,000 miles. Ibid. After the 1956 bill passed the 84th Congress, Rep. Cramer said that “the 83d Congress was road conscious too, because it voted the largest program for 1956 and 1957 known to that date, $175 million for interstate and $700 million for other systems per year. Thus on the average, the new program means a thousand percent increase in Interstate System funds and a 30 percent increase in other systems.” Congressional Record, 84th Congress, 2d sess. (July 7, 1956) vol. 102, pt. 9, p. 12048. By 1965, about 21,000 miles of interstate construction had been completed. By late 1989, most of the Interstate and Defense Highway System had been built. Sections were open to traffic for 42,436 miles; construction, engineering, or land acquisition were under way for some 360 other miles. American Association of State Highway and Transportation Officials, Moving America into the Future, 29, 35.

The routes recommended in 1944 for the interregional highway system are shown in maps indicating locations also of “concentrations of primary war industry” and of “principal military and naval establishments.” National Interregional Highway Committee, 37-37, vii-viii. The proposed interregional system’s routes also were near where employment was expected to be needed most during postwar demobilization, the committee said. “There are more or less extensive sections of the recommended interregional highway system in every state and in 1,056 of the 3,076 counties of the country. It has been shown also that the system reaches directly 587 of the 1,077 cities of 10,000 population or more, and that the cities directly touched are those in which a large volume of unemployment is likely to occur in the process of changing from the activities of war to those of peace. For purposes of direct employment, therefore, the system is well located, and a prompt beginning of its construction can be the means of employing directly substantial numbers of workers in every state and at the points in each state where there will be the greatest employment needs.” Also, indirect employment, in support and supply industries for the construction, would be increased away from the construction site. Ibid., 131. President Wilson in November 1918 told Agriculture Secretary David F. Houston he favored increased roadbuilding to employ men while the economy converted to peacetime production. Wilson supported increased appropriations for the Agriculture Department’s road program, and he emphasized his belief it could start projects quickly, removing the need for creating another agency. Because the program’s staffs, in federal and state highway agencies, had developed plans and specifications for roads, Wilson noted, “I have no doubt that all activities in this field can be vigorously conducted through these two sets of existing agencies.” Woodrow Wilson to David F. Houston, Nov. 22, 1918, Woodrow Wilson Papers, series 3, vol. 56, letter 31, Library of Congress, reprinted in “President Favors Pushing Construction of Highways,” Agriculture Department, Weekly News Letter 6 (Dec. 18, 1918), 1. In his State of the Union address of Dec. 2, 1918, Wilson said that though the economy was quickly returning to peacetime operations, it could not provide enough jobs for returning soldiers. He proposed “development of public works of every sort,” including land-reclamation projects and development of the nation’s “railroads, its waterways, its highways, and its countryside roads.” “President Wilson Urges Highway Construction,” Municipal Journal 45 (Dec. 14, 1918): 470. Using public works, including street repair and construction, to hire the jobless in depressions had been practiced in many U.S. cities in the late 1800s and early 1900s. Providing work where needed through road construction had been practiced in some states, particularly as early-1900s auto use and roadbuilding increased. In a 1914 depression, before the federal-aid highway program, Arizona changed from building roads with convicts’ labor to hiring jobless miners as unemployment increased (discussed further on page 300). F. G. Twitchell, “Prison Labor,” paper read at meeting of Association of Arizona Highway Engineers, July 27-29, 1915, 586-91 in Arizona State Engineer, Second Report, July 1, 1914 to June 30, 1915 and July 1, 1915 to June 30, 1916 (Phoenix, 1916), 587-88. In 1918, Montana’s state highway commission selected road projects to serve traffic needs and to hire farmers in north-central counties where weather had caused crop failures (discussed further on page 292). “Roads Give Work to Farmers,” Public Roads 1 (January 1919): 26.
The committee said the total of private and public construction and maintenance was 17.5% of national income for 1927-30, then fell to 7% for 1931-34, rising again to 13.1% for 1935-38. National Interregional Highway Committee, 120-21. For years during and after World War I, according to tables in the committee’s report, the ratio was 12.96% for 1915, 12.27% for 1916, 12.03% for 1917, 11.47% for 1918, 12.35% for 1919, 12.15% for 1920, 13.77% for 1921, 16.06% for 1922, 16.51% for 1923, and 17.87% for 1924. Percentages are low for prosperous years such as 1917-20 because higher national income affected the ratio. In those years, much of income was from activity in other sectors of the economy than construction. National income in years between 1915 (when it was $32.3 billion) and 1924 (when it was $67 billion) peaked in 1920 at $68.5 billion. It was $56.7 billion for 1921, $57.2 billion for 1922, and $65.7 billion for 1923. In a period of preparation before World War II, the ratio was 12.89% for 1939, 12.91% for 1940, 15.28% for 1941, 14.15% for 1941, according to tables in the committee’s report. Indeed, the percentage for 1942 is high despite the much higher national income that year. National income had increased quickly, for the 1939 level was 57% of that for 1942. National income was $68.5 billion for 1939, $77.3 billion for 1940, $94.7 for 1941, and $119.8 for 1942. Ibid., 179-80. The committee’s 1944 theory of an economic balance resembled early-1900s plans that emphasized federal public works. In 1913, economist Wesley C. Mitchell, from study of business cycles in the United States and part of Europe, proposed scheduling government and railroad purchasing and building as a possible “balance wheel to steady the business mechanism,” a proposal he traced to the French and British. Wesley C. Mitchell, Business Cycles, 586-88. By mid-1917, a plan by Otto T. Mallery, of saving some public projects in good times to help provide jobs and stimulate spending in depressions, won approval in Pennsylvania of a state agency to administer such an economic balance. Sautter, “Government and Unemployment,” 71. In December 1921, Mallery and Mitchell supported a bill to create a federal agency for initiating public works to buffer economic changes. Mallery, a wartime federal labor official, told a congressional committee that public works of federal, state, and local government were enough to “have an enormous influence in stabilizing industry and employment.” Mitchell told the committee he favored forming a federal agency to monitor business forecasts and intervene to counter depressions by beginning reserved public works. U.S. Senate, Committee on Education and Labor, 67th Congress, 2d sess., Relieving Periods of Unemployment by a System of Public Works, 11-12, 14, 4, 6. In early 1922, the bill produced brief debate before defeat in the Senate. Mallery’s notion of a balance was limited, though, by a belief that public borrowing might use funds the private economy needed, according to Joseph Dorfman. “Thinking closely in terms of the gold standard and a scarcity of capital, he argued that direct expenditures of public works must not exceed the surplus of capital funds beyond the requirements of private enterprise.” Dorfman, 8.

The report’s tables include totals for 1915-42 for federal and non-federal governments’ spending on highways. Federal spending on highways, they show, began in 1918 and totaled only $12 million before 1920. The table lists totals for spending for construction, maintenance, and work relief. The table’s construction figures are under headings for private construction (including that of public utilities) and public construction (including highway and other). Further, it specifies public construction in terms of federal public (under headings highway and other) and non-federal public (again under headings highway and other). Also, it combines figures from all those headings for a figure under a heading of total construction. Ibid., 179-80. Employment totals from federal highway spending are given for 1931-42 in the tables. Those tables also list employment from states’ highway spending independent of federal programs. Ibid., 181-83. Employment from spending on federal and federal-aid road construction increased to higher levels, particularly in 1934 and 1936, then decreased in 1937-42. That employment, in man-months of direct work, totaled: 1.1 million in 1931; 902,075 in 1932; 1.53 million in 1933; 2.69 million in 1934; 1.62 million in 1935; 2 million in 1936; 1.39 million in 1937; 1.14 million in 1938; 1 million in 1939; 854,957 in 1940; 719,655 in 1941, and 400,932 in 1942. Ibid. Direct work was at the construction site; indirect work created by construction was in industries supplying equipment, materials, or shipping.

In programs of state and local governments, highway spending of the 1920s peaked at $1.19 billion in 1928. It rose in 1930 to $1.38 billion before declining in 1931 to $1.08 billion and in 1932 to $810 million, remaining below $590 million yearly for 1933-37. Their spending often was lower than in the early 1920s. From $298 million in 1915, their spending rose to $405 million in 1919, $604 million in 1920, $753 million in 1921, $776 million in 1922, $708 million in 1923, and $855 million in 1924. Ibid., 179. States cut their independent roadbuilding projects quickly from levels of 1931 and began to raise them again in 1940. In states’ highway projects, independent of federal aid, employment (measured in man-months of direct work) declined steadily from
1.06 million in 1931 to 883,317 in 1932, 609,696 in 1933, 493,870 in 1934, and 359,118 in 1935. The total remained below 300,000 until 1940, when it rose to 535,602. Ibid., 181-83.

Federal spending for highway work relief was only 31% of the size of that for federal-aid highway construction in 1933, rising to 94% in 1934. Yet federal spending for highway work relief surpassed that for federal-aid highway construction in 1935-41, and it grew to be four times as large in 1938. The ratio of highway work relief to highway construction in federal spending for those years was: 1.02 in 1935, 1.98 in 1936, 1.71 in 1937, 4.14 in 1938, 3.89 in 1939, 3.16 in 1940, 3.36 in 1941, and .93 in 1942. Ibid. Besides spending for highway construction and highway work relief, federal funds provided for highway maintenance, as before and after the 1930s. Ibid. As use of the auto rose by the mid-1900s, road spending by many governments grew. And relying on roadbuilding as a form of employment greatly increased federal funds for work relief on roads, as Charles L. Dearing and Wilfred Owen note. In the federal-aid program, "some 4.5 billion dollars was authorized from the beginning of the program in 1917 through fiscal 1948. Other special appropriations made available during the depression of the 1930's have also been spent under the general supervision of the Public Roads Administration [the Bureau of Public Roads as renamed in the 1930s], bringing the total of the Public Roads program to nearly 6 billions." Other funds were spent by other agencies for work relief. "Nearly 4 billion dollars have been spent for highways in connection with work relief programs, most of it under the jurisdiction of the Works Progress Administration. Thus, over a period of 30 years, the federal government has contributed 10 billion dollars for roads and streets, or approximately 20 per cent of the total spent by all levels of government for this purpose." Dearing and Owen, 107. In spending outside the federal-aid program, they note, "beginning in 1935 and continuing for several years, the Works Projects Administration spent 3.7 billion dollars on highway projects to furnish employment. The work involved some 600,000 miles of road, largely under county control." Ibid., n. 6. Bruce E. Seely argues that the federal-aid program had maintained support for building a system of primary roads, or state highways, until the mid-1930s. The consensus failed then as federal aid was extended to secondary roads and proponents of larger roads began advocating superhighways. Through 1932, federal highway officials told congressional committees "that existing funds could produce no real improvement in rural [secondary, or farm-market] roads for there were simply too many miles of them. The Depression, however, upset this position because providing jobs became the key reason for highway spending. Significant amounts of federal relief funds reached even the most insignificant roads." Once such programs "established a precedent for federal involvement," supporters of better rural roads "were soon pressing for secondary highways to be included in the regular federal-aid program." Seely, Building the American Highway System, 146-47. The mid-1930s extension of federal aid to secondary roads was influenced also by states' and localities' lack of revenues. "Because local and state funds declined so precipitously, local officials quickly grew dependent on the federal assistance," provided as grants. In the late 1930s, Congress made eligible for regular federal aid the nation's secondary roads and, where they connected to primary roads, municipal roads. "These additions brought under the federal umbrella road builders whose concerns were often different from those of the state highway engineers" the Bureau of Public Roads had worked with since 1916. "Rather quickly, the new groups were engaged in a divisive competition for funds with supporters of the original federal-aid system." Ibid., 142.

Paul Samuelson and Everett E. Hagen note that the highest yearly federal spending before the war, the $750 million reached in 1915, was exceeded each month in the first three quarters of 1919. Delivery of ships peaked in May 1919, not during the war, and Shipping Board spending declined "very gradually throughout 1919." As the stimulus of federal spending continued, "economically the first World War lasted until 1920." Samuelson and Hagen, 22, 6-7, 21. Federal construction spending for highways accounted for 45% of total federal construction spending for 1921 and 42% for 1922. Those were higher percentages than those in the 1930s except for 1931 (when it was 57%) and 1934 (48%). Other kinds of federal counter-depression spending developed in the New Deal that reduced the highway share of the total even during increases in federal spending for highway construction. Thus, after 1934 the share for highway construction remained below 27% of total federal construction spending. That reversed the 1920s trend, in which spending for new highways was the main stimulus for prosperity in federal construction. Large shares of federal construction in the 1920s were in highway construction. The share was 42% or more in the 1920s except for 1929, when it fell to 34% as other kinds of federal construction spending increased. National Interregional Highway Committee, 179-83.
Federal spending for highway construction totaled: $2 million in 1918; $10 million in 1919; $36 million in 1920; $87 million in 1921; $75 million in 1922; $75 million in 1923; $96 million in 1924; $90 million in 1925; $78 million in 1926; $80 million in 1927; $81 million in 1928; $77 million in 1929; $96 million in 1930; $242 million in 1931; $106 million in 1932; $183 million in 1933; and $317 million in 1934. Ibid., 179.

Total construction spending in the U.S. (for public and private construction and for highways and other projects) increased steadily during and after the war, rising in 1916 ($3.4 billion), 1917 ($4.2 billion), 1918 ($4.8 billion), 1919 ($5.9 billion), and 1920 ($6 billion). Though it decreased in 1921 ($5.6 billion), it increased in 1922 ($6.97 billion), exceeding any yearly total 1916-21. Compared to the 1920-22 depression, that of the 1930s steadily affected the economy over more years and in a period farther from prior stimulus of wartime economic activity. Total construction spending in every year of 1932-38 failed to reach even the level of 1921, much less the high levels of the last half of the 1920s. Despite increased federal construction spending in 1929-38, total construction spending remained below pre-depression levels. Prosperity of the 1920s occurred amid large amounts of total construction, which exceeded the 1921 level every succeeding year and exceeded $10.3 billion, or nearly twice the 1921 level, for five years (1925-29). Ibid. Total construction spending yearly in the 1920s and 1930s was: 1920 $6.02 billion; 1921 $5.62 billion; 1922 $6.97 billion; 1923 $8.48 billion; 1924 $9.44 billion; 1925 $10.35 billion; 1926 $10.92 billion; 1927 $10.94 billion; 1928 $10.64 billion; 1929 $10.33 billion; 1930 $8.20 billion; 1931 $6.22 billion; 1932 $3.52 billion; 1933 $2.41 billion; 1934 $2.96 billion; 1935 $3.31 billion; 1936 $4.60 billion; 1937 $5.36 billion; 1938 $5.2 billion; 1939-5.83 billion. Ibid., 179-83. In the report's tables, spending figures for private construction, and those for private maintenance, include activities by public utilities.

The nation's non-federal governments increased their spending for roads from $308 million in 1916, $313 million in 1917, $286 million in 1918, $405 million in 1919, and $604 million in 1920 to $753 million in 1921. In 1922, their spending increased slightly, to $776 million. And in 1923, when the depression had eased in much of the economy, they reduced road spending to $708 million, the lowest level until 1933, when it was $492 million. Highest spending by those governments in 1915-42 occurred in 1927-30, when yearly levels exceeded $1 billion. In the post-World War I period, those governments quickly raised road spending and maintained it at steadily increasing levels in the 1920s and in 1930. In percentage, the greatest increases were immediately after the war, which had limited spending for many kinds of construction, leaving the base for comparison at a low level. Their road spending declined 8.6% in 1918, then rose by 41.6% in 1919, 49% in 1920, 24.7% in 1921, and 3% in 1922. Its decline of 8.8% in 1923 was the only one between 1918 and 1930. Farmers and others in 1920-22 often noted higher taxes on rural land than in years past. Road spending then by non-federal governments had risen to more than twice the 1915 level of $298 million. Ibid.

For the World War I era, 1917-19, total federal construction spending was 1.8 times that of the 1920s combined. In 1941 alone, total federal construction spending was half that of the 1930s combined. Yet it more than doubled the next year, so that in 1942 total federal construction spending was 1.23 times that of the 1930s combined or 99% of the combined totals for the 1920s and 1930s. Ibid.

Chapter 12

From the early 1920s, spending for roads, mostly in rural areas, grew large by the mid-1900s. And rural areas had steadily supplied less of the required funds through their property taxes, particularly as states developed their own revenue systems for roadbuilding. Once the federal-aid program was implemented, building was continuous, as auto traffic kept increasing and employment grew as a role of highway construction. In the programs of all governments in the nation since 1921, Charles L. Dearing and Wilfred Owen argued by 1949, "during the past quarter of a century close to $50 billion dollars has been spent for highways. The bill has been paid in part through state levies on highway users—including motor vehicle registration fees and gasoline taxes—and partly through local property taxes and general tax funds made available by federal, state, and local governments. Over a period of years the contribution of user charges to the total funds available for highways has increased steadily, and the $1.8 billion dollars raised from these special taxes in 1947 was approximately 60 per cent of all highway revenues."

Other trends had included "a sharp decline in property tax and state and local general fund support for highways. At the same time the participation of the federal government has expanded, both as regards the scope of federal activity and the percentage of the bill accounted for by federal money." Dearing and Owen, 108-09. Federal aid
was spent in the 1920s in rural areas on primary systems of 7 percent of each state’s mileage, as required by Congress in November 1921. “Federal activity was confined to improvements on this primary system of rural federal-aid roads until 1933 when, as part of the emergency program to provide employment, federal participation was broadened to include grants for extensions of the federal-aid system through cities, and for secondary roads.” Ibid., 110. A larger shift resulted, they argue, from the Federal Aid Highway Act of 1944, making “the principal change of emphasis in the federal highway program.” It provided “the unusually large sum of 1.5 billion dollars over a three-year period” and “supplemented the basic 1921 act by providing funds for exclusive use of the federal-aid system within municipalities and urban places of over 5,000 population.” The act of 1944 permitted spending federal funds for right of way and property-damage costs and provided “for the co-operation of local road officials in the selection of roads to be included in the rural secondary and feeder road systems.” Also, it provided “for designating an interstate system of the most important routes.” Ibid. The special taxes on road users that Deering and Owen mention gradually replaced the special taxes on land near improved roads, which were frequent in 1920-22; the road replaced roadside land as a special-purpose tax district. With approval of building the interstate program in 1956, larger funds supported construction in rural areas, Bruce E. Seely notes. The Bureau of Public Roads “annually authorized more than $2.5 billion in highway funds by 1958,” contrasting its “distribution of $6.6 billion in federal-aid highway funds from 1919 to 1953.” Seely, Building the American Highway System, 235. Seely attributes much of the federal-aid system’s capacity to grow in that period to its having three characteristics—a cooperative structure of federal and state governments, technical solutions that were valued in solving road problems, and a funding system (the formula using area, population, and road mileage to allocate funds to states) that could settle political divisions. Ibid., 228-30. Seely cites problems in federal highway efforts by the late 1960s amid criticism that interstate construction in urban areas displaced residents and split neighborhoods, problems for which technical solutions were not politically satisfying. Ibid., 231-32. In 1990, state highway officials said highway construction had become “much more complex” by “about 1965.” In rural areas, many sections of the interstate system had been completed “with little opposition” Yet, they said, “when attention turned to constructing connecting sections through urban areas, often in built-up sections of cities, the climate changed” as opponents organized and acted through city and state governments. At the peak of construction then, some 70,000 housing units a year were demolished to clear for Interstates. American Association of State Highway and Transportation Officials, Moving America into the Future, 29-30. Though roadbuilding in rural areas, particularly in 1920-22, would displace fewer people than the 1960s expressway projects in cities, residents of the countryside noticed changes proposed for their roads in the 1920s and often felt they could discuss them. Seely argues that “the case of highways clearly shows how political activity impinges on technology” and on “the best plans of road builders.” Seely, Building The American Highway System, 230. Ending a scarcity of labor, the post-World War I economic decline aided plans of many road builders. In 1920-22 and later, federal roadbuilding gained political support from its capacity both to improve travel and to increase employment and spending. By 1920, political activity concerning roads still seemed a customary part of citizenship in many rural areas. Even where farmers were keeping up local roads more by cash taxes than by their work, building highways was an issue many of them felt they could comment on publicly. Rural opponents of road projects in 1920-22 often described them as products of decisions from outside the community, not subject to local political influence. Seely notes that “the Depression turned road construction into the country’s largest public works project” and that “both urban and secondary highways were included in the New Deal’s unemployment programs, a decision that legitimized demands to add these highways to the federal-aid system.” Ibid., 225-26. Seely notes the continuous work on roads by the federal program, for which the 1921 Federal Highway Act “launched a basically unending engineering project.” Ibid., 71.

2Wiebe, The Search for Order, 1877-1920, 12.

3Wiebe identifies a class-based difference between rural areas of the South and West during late-1800s protests, one that seems to endure through 1922. Thus, the late-1800s South had “a sharper line between town and countryside,” a division that held because “tenantry, poverty, and ignorance more often turned the farmer’s bitterness within his own community.” Yet though Western “farmers and townsman had sometimes clashed over details” of such matters as railroad building projects, both joined against the outsider over rail regulation. Wiebe, 78, 85. Contrasts with conditions of much of the rural North’s included those of the Middle South as described by Gilbert C. Fite. The area, from western Virginia and North Carolina west to the Mississippi River, by 1930 was “one of the poorest farming regions” in the nation, with nearly one-sixth of U.S. farms, most of them “small and
unproductive.” Its “hilly farms simply did not lend themselves to modernized farming,” most farmers lacked capital for improved methods, and such land in the early 1900s supported a large rural population. Gilbert C. Fite, American Farmers: The New Minority, 22-23. For Wiebe, the autonomy of people in localities, which across 1870s America made up a “distended society,” eroded amid growth of large organizations, centrally directed. In large cities, new values of regularity and system “clashed increasingly with the old,” particularly the individualism and spontaneous cooperation associated with the frontier. By 1900, “a successful elite” among American companies had incorporated, aiding their financing, interstate operations, interrelations, and vertical integration. Wiebe, 18, 19, 23, 14. Efforts for better southern roads were slowed by “antiquated laws and a rural population which in theory approved of road reform measures but in practice was unwilling to underwrite” them, Howard Lawrence Preston argues. “While a part of a larger and more widespread effort to improve farm life, good roads progressivism in the South during the first decade of the twentieth century evidenced strong ties to late nineteenth-century American Populism.” Yet “no strong organization emerged to lead the good roads movement or hold southerners’ interest long enough to realize any significant gain.” Because “farmers adamantly refused to pay additional taxes to have better roads,” Farmers’ Union and Farmers’ Alliance groups in the South worked at other issues. Preston, Dirt Roads To Dixie, 36-37.

Cities were gaining more influence in the late 1800s over regional finance, rural marketing and buying, and news and opinion. That such urban influence itself rested with only a few there failed to mollify farmers, Wiebe observes. “Although few city dwellers held any of that power, still fewer recognized that they had it, and fewer yet knew what to do with it, country people cared only that someone in a distant center was pulling the strings that moved their affairs.” Rural people, accustomed to dealing from a hinterland with established trade centers, he argues, experienced by the 1880s new cities growing and relations with cities changing. Wiebe, 14-15.

Barron, Mixed Harvest, 14-16. Steven Hahn traces upcountry yeomen’s pursuit of their interests in opposition to planters in post-Civil War Georgia and in a more-organized opposition to merchant credit and marketing control in the era of Farmers’ Alliances. Opposition in the upcountry to stock-fencing laws was a concern that, with division in rural economies over attempts of the start cooperatives and other local issues, “played key roles in splitting Alliances along class lines and pointing the way to the People’s party.” Steven Hahn, The Roots of Southern Populism: Yeoman Farmers and the Transformation of the Georgia Upcountry, 1850-90 (New York: Oxford University Press, 1983), 277. Despite segregation, southern blacks organized in large numbers in the Colored Alliance. Traveling on railroads, many southerners, particularly blacks and women, Edward L. Ayers argues, moved from rural areas to cities in the late 1800s, seeking jobs, schooling, property ownership, and opportunities for interaction in social organizations. As the New South’s towns and cities developed, the countryside’s “power and attractiveness declined with every passing year.” Edward L. Ayers, Southern Crossing: A History of the American South, 1877-1906 (New York: Oxford University Press, 1995), 41-45. An aspect of modernization in the South was a trend of planters to provide sharecroppers the “furnish” in cash after World War I because of increased mobility. Jack Temple Kirby notes. Planters’ economic influence through sharecropping probably increased in the 1900s. Yet using autos and better roads, tenants found wider variety and lower prices at new chain stores than at planters’ stores. “Largely in order to hold their laborers,” planters increasingly paid cash and in at least a few counties nearly abandoned “their traditional credit system and the controls (not to mention profits) which went with them.” Jack Temple Kirby, “The Transformation of Southern Plantations, c. 1920-1960,” Agricultural History 57 (July 1983): 258, 260. Populist leaders maintained a critical regard for late-1800s modernization, Norman Pollack contends. Instead of being opposed to development they perceived, Populists “accepted both capitalism and modernity” yet “could envision circumstances in which these distinct social configurations worked at cross-purposes.” Capitalism might be monopolistic or not, Populists held, and modernity “became a broadly construed democratic standard that they applied to economic operations.” Their support of public ownership and enlargement of state power in the economy “meant that their allegiance to capitalism would be subject to constant pressure.” And “in the name of property, they would be scrutinizing its uses, its relationship to the community, and its potential limitations on human freedom and economic activity.” Norman Pollack, The Humane Economy: Populism, Capitalism, and Democracy (New Brunswick, N.J.: Rutgers University Press, 1990), 60. Hahn describes Alliancemen and Populists as often upholding a “nineteenth-century producer ideology.” Their goal was not political pluralism, though “they lent wider expression to republican sensibilities founded on social relations quite at odds with the dominant trends of industrializing America.” Populists “spoke for men and women of ‘small means’ who faced and sought to resist the specter of proletarianization.” Elements of Southern yeomen’s
experience limited Populism, Hahn argues. They had a legacy of being excluded from political decision-making and "a highly personalized view of economic relations," and they often interpreted politics in terms of morality, all of which made dealing with an increasingly centralized and bureaucratized society difficult. By contrast, the Alliance earlier had succeeded in its advocacy of co-ops because it "tapped the 'habits of mutuality' deeply imbedded in rural social life and sought to broaden them." Hahn, 282-83, 286, 277, 274. Road proposals of several Populists, to hire the unemployed by using federal funds from issuing new currency, might have produced spending in the 1890s by counties, for few states had highway agencies. Such hiring would have removed that road work from farmers' customary statute labor, called by some symbolic of yeoman participation in society and administered from a bureaucracy that was community-based and intermittent. By 1900, six states created highway agencies, Charles L. Dearing notes. All were in the Northeast, where Farmers' Alliances and Populism had less success than elsewhere. Many of the last to form such agencies were states of the South, Plains, and West, which account for 26 of the 29 agencies formed after 1908. Dearing, 54-55.

6Alan Brinkley, "Prosperity, Depression, and War," 119-41 in Eric Foner, ed., The New American History (Philadelphia: Temple University Press, 1990), 121. Louis Galambos states as a basic assumption of the organizational synthesis that "some of the most (if not the single most) important changes which have taken place in modern America have centered about a shift from small-scale, informal, locally or regionally oriented groups to large-scale, national, formal organizations" with bureaucratic structures. "Businesses, reform groups, professional and labor organizations—all developed along somewhat similar lines. These organizations could and did conflict, but they nevertheless shared certain modes of orientation, certain values, and certain institutionally defined roles." Louis Galambos, "The Emerging Organizational Synthesis in Modern American History," Business History Review XLIV (Autumn 1970): 280. Ellis W. Hawley, The Great War and the Search for a Modern Order: A History of the American People and their Institutions, 1917-1933 (New York: St. Martin's Press, 1979). Samuel P. Hay's argues that to operate in a national market, groups formed rapidly after 1895 among American producers, distributors, workers, and farmers. Samuel P. Hay's, The Response to Industrialism: 1885-1914 (Chicago: University of Chicago Press, 1957), 48-70. Danbom describes a belief, widespread by the early 1900s and shared by Country Life Movement members, that increased efficiency in the economy and in society "would present Americans with a technocratic utopia," though a few "doubted whether change in the countryside could be completely free of dislocation and pain." Danbom, 49. Barron, Mixed Harvest, 12.

7In the late 1800s, an "era of evanescent organization," Wiebe argues, the Farmers' Alliances like the Knights of Labor, each an old-style group in being a "collection of local associations" lacking much central direction, "rapidly melted away." Alliancemen and Populists never expected "to realize their program by way of its anti-thesis; that is, by constructing a huge apparatus for centralized direction." Wiebe, 66-69, 72-73, 74. In the Progressive era in cities, on issues affecting children, "the new reformers thought in terms of fluid progress, a process of growth that demanded constant vigilance. Whatever the reformer's specialty, his program relied ultimately upon administration." Wiebe, 169. A federal role in improving roads was suggested in the Good Roads movement by 1889 by Col. Albert Pope. Speaking to the Carriage Builders' National Association, "he recommended a commissioner of highways in the Department of Agriculture, and state highway commissioners." Dearing, 241 note 66. By 1892, national aid for roads won support of Rhode Island Republican Convention and Missouri Good Roads Convention. Ibid., 241. In early 1892, a Grange lecturer proposed federal funds for roads, partly to improve the economy. His plan also would have paid for the construction in other ways than taxes on farmers' land. "Why can't we have a system of National inter-state roads, under the inter-state commerce clause of the constitution? National road bonds at 2 per cent. interest would 'go,' and the money could be used to build roads that would benefit city and country alike. There are many good citizens of our country that would even advocate the issue of a few hundred million more 'greenbacks' that cost the people not even 2 per cent. (and the Supreme Court says they are constitutional), to be used in building these inter-state roads, and at the same time increase our per capita of circulation, and so make times better for every one." Mortimer Whitehead, lecturer, National Grange of the Patrons of Husbandry, "A Word from the National Grange," Good Roads 1 (Feb 1892): 86. By summer 1893, farmers of the Midwest were being urged to petition their counties and towns for better roads to aid in rural free delivery of mails. Iowa Homestead, July 28, 1893.

8The new organizations affected methods of reform efforts, Wiebe argues. "In order to compete effectively, members of the new middle class organized to ensure a continuity of influence. Where respectable citizens in the
eighties typically had called a conference and passed resolutions, the new breed around 1900 formed associations with long-range policies and delegated one or two officers to act for the entire body.” Wiebe, 173. City councils increasingly designated experts to settle details of government activity by the early 1900s. “Now laws established an outline for management, a flexible authority to meet and follow the major issues of urban living. In fact, the fewer the laws the better if those few properly empowered the experts, for administration was expected to replace the tedious, haphazard process of legislative compromise.” Ibid., 169. When the 1921 act for the federal-aid program required its funds be spent on a system of seven percent of a state’s highway mileage, it stirred in South Carolina “a controversy between the rural and urban areas with the farmers claiming their interest had been sacrificed for that of the cities.” And it gave the state agency some control over spending funds for highways. Thus, South Carolina’s custom of legislators setting policy and varying from it, in special legislation on details of individual provisions or projects, was extended to the highway agency. “County legislative delegations began to appear before the highway commission seeking to have roads in their counties included in the state system in order to obtain federal aid. By the end of 1922 this process became so time consuming that the commission required all persons appearing before it to submit concise written statements in advance.” Suttles, 25-26.

9Baron, Mixed Harvest, 41-42. The American Association of State Highway Officials had endorsed key elements of legislation creating the 1916 federal-state program, said Thomas H. MacDonald, the program’s chief during 1920-22. Thomas H. MacDonald, “The Federal Aid Road Law and Changes Suggested by its Practical Operation,” Public Roads 1: (January 1919): 3-6. Even in 1925, the states remained most important in road authority. MacDonald said, perhaps understating the federal agency’s influence since 1920 through funds and supervision. “The bulwarks of the system of road administration in the United States are the state highway departments. The Federal Bureau of Public Roads is the national coordinating agency, and the leader in experimentation and research.” County practices in roads generally were old-fashioned, though they seemed adequate to rural residents, he said. In road work, counties were “in form and efficiency but little improved since the days of the horse and wagon; and unrefived only because the needs of transportation have not yet urgently demanded a more effective control for the local roads of light traffic which they have in their charge.” Thomas H. MacDonald, “Highway Administration in the United States,” Good Roads 68 (November 1925): 277. Roads were an issue also in ante-bellum debates over the state, influenced by regional differences in agricultural systems that precluded agreement on a federal role. Of 1830s arguments over federal appropriations for the National Road, Bruce E. Seely contends that the “lofty constitutional scruples often seemed little more than a veneer over deep regional jealousies.” Though such regionalism prevented pre-Civil War construction of a transcontinental railroad, states often supported ante-bellum road and canal projects, and many opponents of a federal role in internal improvements “had no objection to state involvement.” Bruce E. Seely, “A Republic Bound Together,” Wilson Quarterly 17 (Winter 1993): 21-23. In the 1900s, Barry D. Karl contends, industrialization and the nation’s development as an international power increased reliance on the national government, often reducing Americans’ older relationships to state and local governments, which had provided participatory democracy for many. Yet also, he argues that by 1900 “the words ‘local autonomy’ had become a code signal, not of democracy for all, but of democracy for some. Local majorities exercised their power to limit democracy on grounds of race, national origin, and sex. The call for federal action to extend democracy could be viewed as an attack on local culture and the traditional bases of local democracy. The Progressive movement seemed to threaten local traditions of selective democracy in the interests of a national promise of greater democracy.” Barry D. Karl, The Uneasy State: The United States from 1915 to 1945 (Chicago: University of Chicago Press, 1983), 238-39, 233-34. Organizational changes affected the development of 1900s nationalism, according to Karl, particularly the “movement toward bureaucratic and economic centralization that is associated with what some mean by the term ‘modernization.’ The growth of national political parties and nation-wide industries laid the groundwork for defining the economic and political outlines of a national state that transcends state lines and regional commitments.” Ibid., 3.

10Many states granted aid for roads by the early 1900s, though the federal example of aid to roadbuilding preceded that of states in some instances. Still, the voluntary participation by counties in programs of state or federal aid often was possible only for counties of some wealth. By 1920-22, state aid, often requiring county matching, had been of most use to wealthier counties, which frequently were those with rural or urban development. State funds in many instances were insufficient in 1920-22 to match federal allotments, leaving that task to counties and so precluding poorer counties’ participation in federal aid. The matching requirements, however, did concentrate spending for roads in areas of rural and urban development. In 1905, Ohio’s highway commissioner
suggested that "the much discussed proposition" of federal aid to states in roadbuilding could reduce counties' matching share in the state road program. Ohio highway commissioner Sam Houston, statement of 1905, quoted in Ohio Department of Highways, Report, 1917-1928, 36-37. In 1915, a federal official noted that "only the states of Florida, Indiana, Mississippi, South Carolina, Tennessee, and Texas have no provision for any sort of participation in road work" by the state. J. E. Pennybacker, "State Management of Public Roads: Its Development and Trend," 211-226 in Agriculture Department, Yearbook, 1914 (Washington, 1915), 215. Virginia, for example, granted aid to counties beginning in 1908, to be matched equally by the county, "and the joint fund was to be expended under the supervision of the state highway commissioner. Within two years all but ten counties had secured some of this money," according to Allen W. Moger. Virginia's state aid was an incentive to construction; by the end of World War I "about 4,500 miles had been built with state aid, and the counties had issued $8,641,700 in road bonds." Moger, 261, 263. In Georgia as in some other states, though, by 1923 state funds had been insufficient to aid counties in matching federal funds. Large amounts in federal aid had been matched and spent by Georgia's wealthier counties in 1920-22. Yet, state highway officials said, "What is needed to help the counties that have not the financial strength to build roads is a state aid fund for construction. If state funds in sufficient amount are raised to match federal funds then roads can be built in these weak counties." Georgia State Highway Board to Gov. Thomas W. Hardwick, May 1, 1923, 2-3 in Georgia State Highway Department, Fifth Annual Report, January 1, 1923 (Atlanta, 1923), 2-3.

11 MacDonald cited as "the five acts which have carried federal grants to the states" the Smith-Lever Act (1914) for agricultural extension, Post Road acts (1916 and 1919), the Smith-Hughes Act (1917) for vocational education, and the Chamberlain-Kahn Act (1918) for prevention of venereal disease. Thomas H. MacDonald, "In Re Federal Highway Legislation." Typewritten manuscript, U.S. Congress, Federal Aid in the Construction of Roads, Data presented at hearings before House and Senate committees in connection with the Federal Highway Act and the Post Office Appropriation Bill, 1923, Progress Report on the Federal Highway Program, Office Files and Correspondence Concerning Particular Bureau Activities, Records of the Bureau of Public Roads, Record Group 30, National Archives, Washington, 6, 3, 8. MacDonald stressed a validity of local interests in the community matters that federal programs might "assist" in changing. "The efforts of the federal government to assist in developing matters primarily of local interest, but which in the aggregate have a tremendous influence upon the national life and the advancement of the national standards have taken the form of federal grants or federal aid. It is not a new principle, but the principle of the formation of a partnership between the state and the federal government distinguishes the legislation and administration. The form of the legislation has recognized the necessity of reconciling the conflicting claims of the advocates of state rights and of those in favor of centralization in matters which affect, first of all, the locality or the community." Ibid., 5. In the sentence above, MacDonald indicates the alternative to states' rights is community rights that are subsumed in federal citizenship, to be served by "centralization," apparently using an accepted definition of federal authority. The notion is a basis for forming programs of the central government to deal with citizens separately from programs of states. Yet interpreted as meaning a centralized form for an agency, the term is consistent with some federal efforts of wartime more than with those in the countryside in peacetime. For MacDonald, having the federal office not deal directly with localities permitted a "lack of centralized bureaucracy," enforced economy in spending, and encouraged states to form policy to account for localities' differences. "The state or locality that is required to match every federal dollar with one of its own will not waste federal money," MacDonald said. And "the fact that the national government does not deal directly with local units tends to prevent undue variation." Ibid., 9. Testimony at the Senate hearings is published in Senate, Subcommittee of the Committee on Post Offices and Post Roads, 67th Cong., 2nd sess., Feb. 23, March 2, 1922, Hearings on H.R. 9859, Post Office Appropriation Bill for Fiscal Year Ending June 30, 1923, Part 2. A proposed centralized agency (a national highway commission) was debated after the war. In 1919, Congress rejected it, retaining the federal-state form, whose supporters included the American Association of State Highway Officials (AASHO) and MacDonald, a member of its executive committee. Changes proposed in the 1916 law to broaden definitions of eligible roads, appropriate more funds, and increase the federal share to half of projects' costs "should eliminate every criticism" from a survey of 35 states' highway officials by MacDonald, he told a December 1918 meeting of the association. Thomas H. MacDonald, "The Federal Aid Road Law and Changes Suggested by its Practical Operation," Public Roads, 1 (January 1919): 5-6. Bruce E. Seely notes that the federal-aid method, in proposals that Logan Page, director of the federal Office of Public Roads, was forming for road-building before 1916, "drew on precedents in several other Agriculture Department programs. Agricultural experiment stations, created in 1887 and expanded in 1906, relied on a similar sharing of funding and responsibility with
the states, as would the Agricultural Extension Service and the Forest Fire Protection Service, both created in the 1910s." Seely, Building the American Highway System, 39. A more-centralized, national plan for building roads had been favored in a bill proposed by the newly formed AASHO, Seely argues, until midwestern highway engineers opposed it at the group's meeting in September 1915. "A group led by Thomas MacDonald of Iowa used this occasion to transform the bill into a federal-aid plan congruent with Page's ideas." Page's Progressive notions of a cooperative federal effort with states and of improving rural roads for farmers and for mail delivery, "rather than a highway system to serve the automobile," became in 1916 "the first federal highway policy," Seely notes. "But like most people in 1916, Page failed to anticipate a transportation system based on cars and roads" and planned as if railroads would continue to handle all long-haul shipping and travel. Ibid., 42, 37, 39, 43. By 1921, the federal program of agricultural extension had spread to most eligible counties. Working in the program were 2,425 people "in county agent work in approximately 2,000 of the 2,650 counties having enough agriculture to employ an agent. The total number of the counties in the United States is about 3,000." In other extension efforts, 950 people were working in home demonstration programs in 725 counties, and 305 people were working with boys' and girls' clubs. Wallace, Report of the Secretary of Agriculture, 1921, 34. Postwar advocates of continuing the state-federal form for the roadbuilding program also stated the likelihood that the existing form could expand road work more quickly than some other form to be established. With proposals for a national highway commission being discussed in late 1918, MacDonald told the state officials association that that "there seems to be a disposition in some quarters to overlook existing agencies and to pass the responsibility for undertaking the super-program of road improvement demanded along to the Federal government," unaided by states. MacDonald, The Federal Aid Road Law, 3-6. Earlier, weeks after the 1918 general election, President Woodrow Wilson had endorsed an increase in funds for the program, and said that because federal and state agencies had developed plans for roads in the program, "I have no doubt that all activities in this field can be vigorously conducted through these two sets of existing agencies." Wilson also supported then using roadbuilding to provide jobs as the economy adjusted to peacetime. Besides the need to "develop good highways throughout the country as quickly as possible," Wilson told Agriculture Secretary David F. Houston, "it is also at this time especially advisable to resume and extend all essential public works, with a view to furnishing employment for laborers who may be seeking new tasks during the period of readjustment." Woodrow Wilson to David F. Houston, Nov. 22, 1918, Woodrow Wilson Papers, series 3, vol. 56, letter 31, Library of Congress, reprinted in "President Favors Pushing Construction of Highways," Agriculture Department, Weekly News Letter 6 (Dec. 18, 1918), 1.

12The 1920-22 road program showed how various agencies and communities could deal with a problem basic to federal activity in depressions—how to work with local authorities. The problem was still important in the mid-1930s, when middle class leaders at national and local levels dealt often with each other, Wiebe argues. Such community elites wanted national economic aid yet also "they insisted on maintaining control over local life." Thus, "in a simple yet fundamental arrangement" among themselves, "the compromise of the 1930s," national and local leaders "traded support and reaffirmed realms of authority. National government would increase its economic assistance for local America; local politicians would remain loyal to the existing national parties. Members of the national class would set broad economic policy; members of the local middle class would set the rules in their own localities, including many of the decisions about how federal monies would be allocated." The agreement that communities would receive national aid under local control, affecting such programs as Works Progress Administration and Tennessee Valley Authority, was one "of the major political compromises in American history." In the 1930s, it affected urban political machines as well as agricultural programs. Robert H. Wiebe, Self-Rule: A Cultural History of American Democracy (Chicago: University of Chicago Press, 1995), 211. Popular participation in government was not aided in the 1920s as "in very broad terms, the national bureaucracy acquired its modern form," Wiebe argues. Agencies negotiated with private interests by economic area, leaving to higher administrative levels the settlement of policy. "Ordinary citizens, one by one, had no access to these offices, no legitimate business with their government." Already, though, in the Progressive era, organizations had influenced government increasingly in national and local politics, so that "the unorganized fell to the bottom of these hierarchies: no group, no voice." Ibid., 206, 204.

13Public works were related not only to depressions but also to electoral support, according to Gerald Friedman. In the late 1800s, residents of many big American cities supported political-machine government as a compromise: property owners and laborers preferred the machine as a way to keep control of the city from each other, and public works by such governments offered benefits to both groups. "Public works spending can be the
ideal cement for a cross-class political coalition. Such spending provides working-class jobs, which in turn enhances property values and rents of landowners, and it creates educational, recreational, transportation and health facilities for middle-class use.” Friedman, “Dividing Labor: Urban Politics and Big-City Construction in Late-Nineteenth-Century America,” 447-64 in Claudia Goldin and Hugh Rockoff, eds., Strategic Factors in Nineteenth Century American Economic History (Chicago: University of Chicago Press, 1992), 460. In the South, sentiment for improving roads increased with spreading use of the auto, the “irrepressible machine,” Cecil Kenneth Brown argues in describing pre-1930 events in North Carolina. Cecil Kenneth Brown, 53-54. Vehicle users paid more of road revenues in 1920-22. Revenues from vehicle users—motor-vehicle registration and license fees and gasoline taxes—were 5.1% of total revenue for roads in 1914, 10.6% in 1921, and 19.5% in 1923. Gasoline taxes, first adopted in 1919, were used in 35 states in 1924. T. Warren Allen and others, “Highways and Highway Transportation,” 155. In late 1921, construction was expected to continue for years in the federal-aid road program. Thomas H. MacDonald, the federal program’s chief, told a meeting of highway officials of the 48 states that the $350 million already appropriated for the program “is not all you are going to get for this kind of work.” Speaking soon after discussions of public works at the fall 1921 President’s Conference on Unemployment, MacDonald told the state highway officials that “I want you members to go back to your states and tell the people that this is a permanent scheme of construction. There may be times when only the minimum amount of work will be done, but there will always be road improvement.” MacDonald said it was the Agriculture Department’s intention “to use this scheme of work to furnish employment during financial depressions.” besides building roads when the economy was functioning as usual. MacDonald spoke at Omaha to the American Association of State Highway Officials’ seventh annual meeting. Omaha World-Herald, Dec. 8, 1921.

14Barron, Mixed Harvest, 41-42. “The automobile both symbolized and contributed to the disintegration of rural society,” according to David B. Danbom. By 1920, “30.7 percent of farmers owned automobiles, and despite economic depression the number of cars on farms nearly doubled between 1920 and 1930. More than any other material convenience of the industrial age, the automobile caught the countryman’s imagination. In 1930, the farmer was nearly twice as likely to own a car as a phone, four times as likely to have one as to have water in his house, and five times as likely to have a car as to have electric light.” Danbom, 126. Autos were easier to adopt in rural areas. Farm residents could use an auto without needing to obtain connection to any new community system, unlike adopting the telephone, electricity, or water in the house (if pumped by electricity service). Rural people could benefit from autos over wagons even using the community’s old system of roads, at least in many places, if weather was dry, and if few outsiders’ autos increased road wear.

15Seely, Building the American Highway System, 88-89. The 1919 support of roadbuilding for employment included that in a statement of Otto T. Mallery, executive director of the War Labor Policies Board. “Highway construction is particularly useful in providing employment for unskilled labor, upon whom the greatest burden of suffering falls in hard times,” according to Mallery. “The geographical distribution of highway work is another element of advantage for our purpose, because it will diminish unemployment in many districts at the same time.” Mallery’s statement was quoted by Maine’s highway engineer at American Road Builders’ Association’s convention February 1919, after new funds for the federal road program had been appropriated. Paul Sargent, chief engineer of Maine Highway Commission, address Feb. 26, 1919, in Proceedings of the 16th Annual Convention of the American Road Builders’ Association, Feb. 25-28, 1919, at New York, N.Y. (New York: The Association, 1919), 98. Warken contends the Public Works Administration in 1933 was able to speed the start of road projects using plans the Bureau of Public Roads had ready. Philip W. Warken, A History of the National Resources Planning Board, 1932-1943 (New York: Garland, 1979), 43-44. The roads bureau, said PWA administrator Harold L. Ickes, “had already developed a long-range program for roads, and so was able to apportion and start the expenditure of the $400 million dollars with a minimum of delay.” Harold L. Ickes, Back to Work: The Story of the PWA (New York: Macmillan, 1935), 82-83. Construction had continued throughout the 1920s in the federal-aid program, based on administrative processes in which states’ highway agencies identified and planned projects for approval by federal officials. By 1930, the program had built many miles of roads, which had improved travel and raised the value of many holdings of rural land. Theda Skocpol and Kenneth Finegold argue that experience, procedures, and planning had developed particularly in the Agriculture Department by 1933, making the department “an island of state strength in an ocean of weakness” in the federal government generally in capacity to form policies for government activities amid the 1930s Depression. Theda Skocpol and Kenneth Finegold, “State Capacity and Economic Intervention in the Early New Deal,” Political Science Quarterly 97 (1982): 271.
The experience of wartime mobilization changed notions about federal activity in the economy, according to William E. Leuchtenburg. World War I "occasioned the abandonment of laissez faire precepts and raised the federal government to director, even dictator, of the economy." The mobilization provided a basis for responses by the Hoover administration and the New Deal to the depression of the 1930s, for "very little in the Populist and Progressive periods offered a precedent for massive federal intervention in the economy." Before World War I, "reformers thought the state and the city were more important arenas than the national capital." William E. Leuchtenburg, "The New Deal and the Analogue of War," 82-143 in John Braeman, Robert H. Bremner, and Everett Walters, eds.. Change and Continuity in Twentieth-Century America (Columbus: Ohio State University Press, 1964), 82-85. Many routes for the interstate system approved in 1956 resembled those discussed as an interregional system in the 1940s. The interregional highway system as recommended in 1944 was for construction of roads "in every State and in 1,056 of the 3,076 counties of the country." The recommended system also was to reach "directly 587 of the 1,077 cities of 10,000 population or more." Other counties and cities would be served indirectly by being near the recommended system. National Interregional Highway Committee, 131. The 1944 act changed the federal highway program's emphasis, according to Charles L. Dearing and Wilfred Owen. "In addition to making available the unusually large sum of 1.5 billion dollars over a three-year period, the 1944 act supplemented the basic 1921 act by providing funds for exclusive use of the federal-aid system within municipalities and urban places of over 5,000 population." The 1944 act provided for using federal funds for right-of-way costs and "provides for designating an interstate system of the most important routes." Dearing and Owen, 110.

The quick expansion of public works in the federal-aid program was greatest in a few states (discussed further on page 121). Many such states were in the Midwest, which provided 32 percent of the nation's total estimated jobs in the program. The four other regions each provided between 15 and 20 percent of the national total. Even in the West, where road work was reduced in many areas by aridity and low population, projects employed 15 percent of the program's estimated 262,085 jobs in the nation. Ranking after the Midwest in creating jobs in the federal-aid program were the South (20 percent of the national total), the North Atlantic (18 percent), the Plains (15 percent), and the West. Apart from comparison of regions, the top third of the forty-eight states in spending provided 67 percent of the estimated national total. The five states with largest spending provided 34 percent of the jobs estimated in the national total. The top five are Illinois, Pennsylvania, Ohio, Georgia, and Texas. Others in the top one-third of states are Minnesota, Oregon, Wisconsin, Washington, Iowa, Idaho, North Carolina, Montana, Maryland, Kansas, and South Carolina. Jobs are estimated from federal funds to states for projects completed by mid-1922. Agriculture Department, Report 1922, 473-83.

Federal spending for construction of highways was 6% of that of non-federal governments in 1920, 11.6% in 1921, 9.7% in 1922, and 10.6% in 1923. For 1920-22, federal spending for roadbuilding totaled $198 million, and that of non-federal governments totaled $2.13 billion. National Interregional Highway Committee, 179-80. State and local governments generally increased their road spending throughout the 1920s, continuing methods similar to those that expanded in use in 1920-22. The decade's only declines in the road spending total for those governments were small ones for 1923 and 1929. Even at the depressed prices of 1921, their spending for roads totaled more than twice the level of 1915; for 1928 it was four times that of 1915. The growing total for most of the 1920s likely represents rising prices, increasing roadbuilding using cash, and further declining use of statute labor. Ibid.
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