



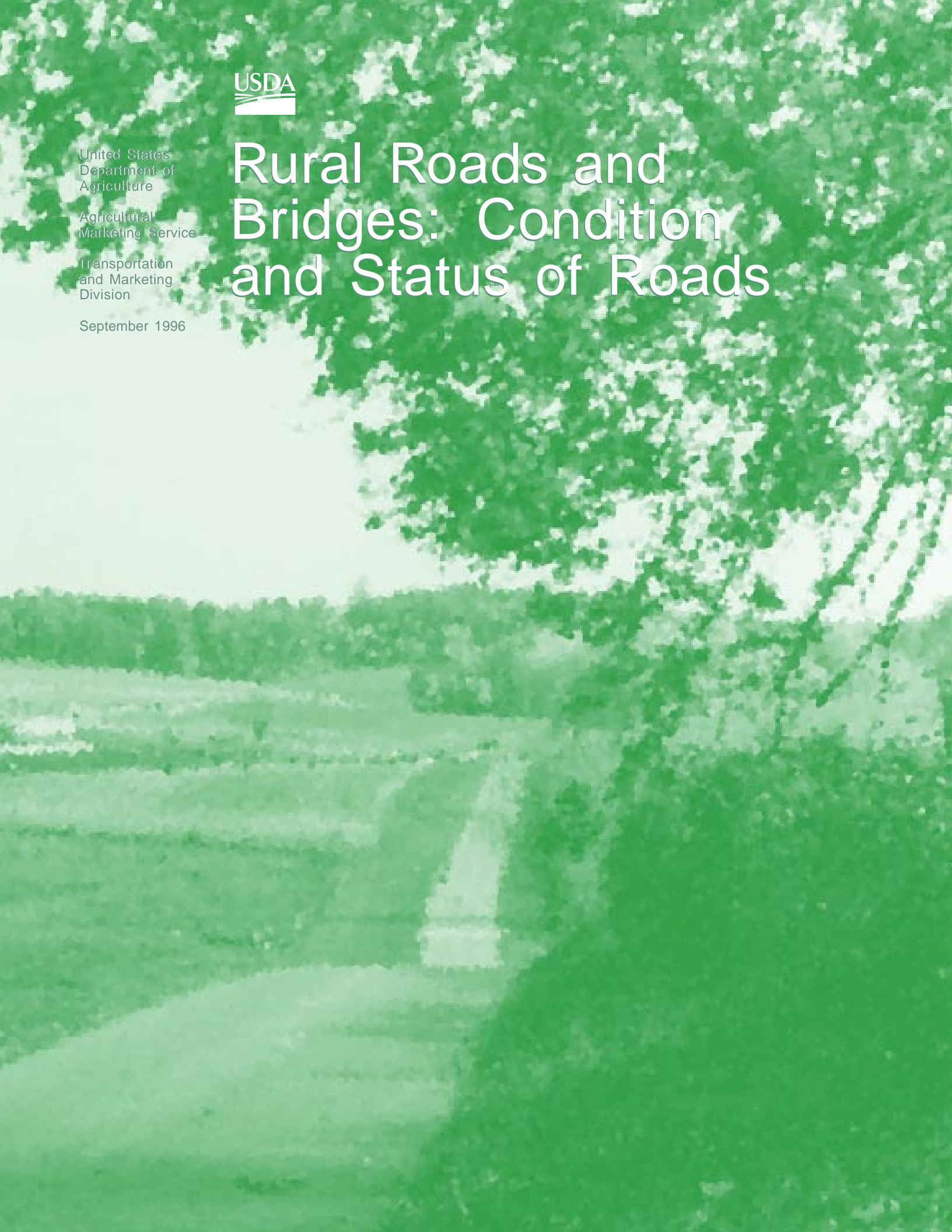
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Rural Roads and Bridges: Condition and Status of Roads



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Rural Roads and Bridges: Condition and Status of Roads

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Introduction

The condition of local (off-system) roads and bridges has been a concern to policy-makers and the agricultural community, especially after the national recession in the early 1980s and the concurrent declines in farmland prices. The changing nature of agriculture—more than half the farm families earn income from off-farm sources, use of large equipment is increasing, and numbers of nonfarm rural residents is growing—raised the importance of rural transportation networks for at least four groups.

First, the farming community, including agribusinesses, must have high-quality roads and bridges to deliver inputs to agriculture and to transport the final products. Second, rural residents not employed in agriculture must be able to commute to work daily without major delays. Third, rural residents need access to essential public services such as fire protection and emergency medical care that travel over the road network. Fourth, the increasing number of rural businesses involved in tourism enterprises requires high-quality rural roads to be successful.

This report examines the condition of roads maintained by local governments based on mail questionnaire responses from county engineers and town/township¹ road administrators in fall 1994 and spring 1995. A total of 609 counties and 1,961 towns provided usable information. The questions are similar to those in a 1987 study, so the status and conditions of roads can be compared.² The discussion begins with changes in road surface type, then examines road conditions, and finally discusses the priorities which local road managers use in managing the local transportation system.

Types of Road Surface

County and town roads have six surface types: (1) earth, (2) gravel (loose aggregate), (3) low bituminous (oil and chip), (4) high bituminous (hot mix), (5) paved, or (6) concrete. The type of surface depends on travel demands, and more frequently traveled roads usually have a surface affording more safety and better year-round accessibility than less frequently traveled roads. The cost of maintaining a viable road network is also determined by surface type. Higher quality roads generally are more expensive to construct, but may cost less to maintain.

Nationwide, 48.1 percent of the road mileage maintained by counties and 34.0 percent of town mileage has either an earth or loose aggregate (gravel) surface, but these lower quality roads are generally found in smaller governmental units (**table 1**). These figures compare with 49.1 percent of county mileage and 57.1 percent of town mileage having these surfaces in 1986-1987 (Walzer and Chicoine, 1989). Thus, during the past decade or so, the road surface types have generally improved.

¹While towns (New England) and townships (Midwest) are distinct, in this report, we use the term “towns” to represent both groups.

²Norman Walzer and David L. Chicoine. *Rural Roads and Bridges: A Dilemma for Local Officials*. U.S. Department of Agriculture, Office of Transportation, Washington, D.C., 1989, Tables 2.2 and 4.3.

Table 1. Distribution of Miles by Surface Type, 1994

<i>Condition Description</i>	<i>Counties</i>			<i>Towns</i>		
	<i>Pct.</i>	<i>Average Miles</i>	<i>(n)*</i>	<i>Pct.</i>	<i>Average Miles</i>	<i>(n)*</i>
Earth	13.2	145	256	8.3	9	390
Gravel or Loose Aggregate	30.3	335	440	25.7	28	1,497
Low Bituminous	15.3	168	405	20.2	22	580
High Bituminous	17.9	197	424	17.4	19	568
Paved	20.8	229	197	18.3	20	299
Concrete	2.5	27	176	10.1	11	46

*number responding

Source: Illinois Institute for Rural Affairs, National Association of Counties/National Association of County Engineers (NACo/NACE) Survey of County Officials and National Association of Towns and Townships (NATAT) Survey of Township Highway Officials, 1994.

Condition of Roads

Differences in surface type, by type location, were found in 1994. Metropolitan (metro) counties, for instance, have a higher proportion of paved and concrete mileage, reflecting expected traffic patterns in both weight and volume. Also likely is that metro counties have more financial resources to support better quality roads.

Surface type, however, is not the only indicator of service. Once the initial investment has been made in an all-weather surface, it then must be maintained in usable condition. During periods of declining tax bases, especially in rural counties relying heavily on agriculture, upgrading or even financing regular maintenance schedules on this mileage can be difficult. Short-term maintenance delays due to financial shortfalls can lead to costly repairs in the future.

The condition in which roads are maintained is usually at the discretion of the county highway engineer or administrator. Through an assessment of expected traffic volume and weight, plus the availability of funds, local administrators allocate resources among the road mileage. While they may be tempted to divert funds from infrequently traveled miles to heavily used roads, legal considerations are important because a public body can be liable for accidents on improperly maintained roads.

Complete and accurate information on road quality is difficult to find, except in areas that maintain a management system at the local level. This information is not usually collected statewide. Conditions of road mileage change continually when improvements are made, causing centrally collected data to be, at best, only a snapshot of a specific time and place. Nevertheless, it is important to compare road conditions through time to gain at least broad insight into how road quality has changed.

In the mail survey, county engineers and town road administrators classified road mileage into 10 categories, ranging from 0 when a road is closed and awaiting repairs to 9 when in new or perfect condition (**table 2**), based on a brief description of road conditions needed to qualify for a specific category.

Nationwide, 7.3 percent of the county road mileage and 8.5 percent of the town mileage was rated 9 (new or perfect condition). At the other extreme, 1.4 percent of the county mileage and 2.2 percent of the town mileage was listed as closed and awaiting repairs. There is not much difference by type of government—that is, counties or towns. In these comparisons, however, respondents evaluated the roads based on expected traffic demands, so a mile in the same physical condition might be rated as less adequate by county engineers than by town officials, given expected traffic demands.

Two condition levels are especially important in comparing mileage. First, a classification of 6 or below means that the mileage is perceived as having less than an adequate surface with normal maintenance. In 1987, 54.8 percent of the county mileage was rated as a 6 or below, and in 1994 the comparable percentage was 47.8 percent, with relatively little variation across counties by population size. These figures show that approximately one-half of the mileage in responding counties is considered less than adequate with normal maintenance. Towns are in slightly better

Table 2. Condition of Roads, 1987-1994

Condition Description*	Ranking	Counties [†]				Towns [‡]			
		1987		1994		1987		1994	
		Pct./ Cum. Pct.	Pct./ Cum. Pct.	Pct./ Cum. Pct.	Pct. Chg. 1987-1994	Pct./ Cum. Pct.	Pct. Chg. 1987-1994	Pct./ Cum. Pct.	Pct. Chg. 1987-1994
New or Perfect Condition	9	5.3/100.0	7.3/100.0	7.3/100.0	37.7	7.4/100.0	8.5/100.0	14.9	
Better Than Adequate With Normal Maintenance	8	11.4/94.7	17.1/92.7	17.1/92.7	50.0	17.3/92.6	22.1/91.5	27.7	
Surface Adequate With Normal Maintenance	7	28.5/83.3	27.8/75.6	27.8/75.6	-2.5	27.7/75.3	26.9/69.4	-2.9	
Less Than Adequate With Normal Maintenance	6	15.1/54.8	13.7/47.8	13.7/47.8	-9.3	13.4/47.6	9.5/42.5	-29.1	
Limited Failures and Barely Adequate	5	10.7/39.7	7.2/34.1	7.2/34.1	-32.7	6.2/34.2	4.7/33.0	-24.2	
Maintenance Will Be Considerably Higher To Prevent Continued Deterioration	4	12.3/29.0	8.4/26.9	8.4/26.9	-31.7	10.3/28.0	10.2/28.3	-1.0	
Considerable Failures and Disintegration Beyond Practical Limits of Normal Maintenance	3	5.5/16.7	5.8/18.5	5.8/18.5	5.5	4.7/17.7	5.5/18.1	17.0	
Substantially Higher Than Normal Maintenance Required	2	6.1/11.2	6.7/12.7	6.7/12.7	9.8	5.7/13.0	6.8/12.6	19.3	
Failures to the Extent That Operation of Traffic Is Severely Affected	1	3.0/5.1	4.6/6.0	4.6/6.0	53.3	5.1/7.3	3.6/5.8	-29.4	
Closed, Awaiting Repairs	0	2.1/2.1	1.4/1.4	1.4/1.4	-33.3	2.2/2.2	2.2/2.2	0.0	

*Source: *Illinois Hiway Inventory—Data Collection and Coding Manual*. October 1971. Springfield: State of Illinois, Department of Transportation, Bureau of Systems and Services.
Source: IIRA, NACo/NACE Survey of County Officials and NATAT Survey of Township Highway Officials, 1994.

[†]Sample contains responses of Illinois Institute for Rural Affairs, National Association of Counties/National Association of County Engineers (NACo/NACE) Survey of County 2 Officials and National Association of Towns and Townships (NATAT) Survey of Township Highway Officials, 1987 and 1994. County, n=210; towns, n=518.

condition with 42.5 percent in this category. While the comparison shows improvement since 1987, the conditions are potentially troublesome.

A second level of quality is a rating of 5—with limited failures and a barely adequate surface or worse. These roads clearly are seen as in relatively poor condition. The average county mileage in this category in 1994 was 34.1 percent, compared with 39.7 percent in 1987. Among town-maintained roads, one-third were in this category in 1994, compared with 34.2 percent in 1987. One explanation of why town mileage has not improved as much as county could be that towns do not have access to as broad a range of revenues as counties. General Revenue Sharing (GRS) was a major source of support for infrastructure, and its loss in 1987 affected the funds available.

Additional insight into changing road conditions was obtained by asking county engineers whether the *overall* condition of the mileage since 1989 improved, remained the same, or declined. Overall, 22.6 percent of the county officials reported improvements, 55.7 percent reported that general conditions remained the same, and 21.7 percent reported overall conditions had declined (**table 3**).

From the town perspective, 30.4 percent of the mileage on average was reported as improved; 47.0 percent remained the same; and 22.6 percent declined. These comparisons, again, suggest that nearly 70 percent of the town mileage had not improved and more than 1 mile in 5 had declined.

Changes in road conditions are not consistent across the United States, with some States faring much better than others. Since some States had small numbers of counties responding, it is difficult to make comparisons, but several observations are worth noting. Among States with meaningful numbers of survey respondents, Kentucky reported that 43.5 percent of the mileage had been improved. On the other hand, Michigan reported that 47.0 percent of the mileage had declined, and 27.4 percent had declined in Wisconsin. While these numbers are estimates, they depict a situation in which many local governments in certain States have had difficulties financing major improvements of local roads.

While finances will be the subject of a future report, we should mention here that financing is often a limiting factor in the amount and types of infrastructure improvements. As noted previously, changing population compositions and traffic patterns can increase the demand for services, placing fiscal strain on shrinking county budgets. Fortunately, in many States, taxes on motor fuels are shared with local governments, relieving some pressure on property taxes which are unpopular in many States.

Needed Improvements

During periods of tight resources, effective planning for infrastructure improvements is important. Without planning, crisis management techniques can take over until short-term emergency projects consume most of the budget. Respondents were asked whether the county had a capital improvements plan in place and the length of time it covered. Nationwide, 67.7 percent of responding counties reported that such a plan

Table 3. Road Conditions*, by State (1989-1994)

State	Remained the Same (percent)			(n)**	State	Remained the Same (percent)			(n)**
	Improved	Declined	Declined			Improved	Declined	Declined	
Counties:									
Arizona	48.8	45.0	6.3	4	New Jersey	17.0	62.3	20.7	6
Arkansas	40.0	46.3	13.8	4	New Mexico	65.0	27.7	7.3	3
California	20.4	48.3	31.3	26	New York	21.5	55.9	22.6	30
Colorado	15.5	51.2	33.3	10	North Dakota	40.6	37.7	21.7	10
Florida	21.9	43.0	35.1	15	Ohio	33.8	49.6	16.6	33
Georgia	42.7	45.0	12.3	12	Oklahoma	25.0	54.2	20.8	6
Idaho	15.0	77.7	7.3	3	Oregon	22.9	53.9	23.2	15
Illinois	19.0	61.9	19.0	62	Pennsylvania	47.5	41.3	11.3	4
Indiana	23.4	52.7	23.9	14	South Carolina	11.9	63.1	25.0	4
Iowa	9.3	70.3	20.4	47	South Dakota	28.3	49.3	22.3	15
Kansas	29.8	60.1	10.1	29	Tennessee	33.6	47.8	18.7	9
Kentucky	43.5	51.3	5.3	16	Texas	25.2	60.2	14.5	21
Louisiana	30.0	66.0	4.0	5	Utah	21.3	63.3	15.3	6
Maryland	12.9	68.9	18.3	7	Washington	16.2	66.5	17.2	21
Michigan	8.7	44.4	47.0	24	Wisconsin	22.9	49.7	27.4	27
Minnesota	16.8	52.4	30.8	29	Wyoming	14.0	68.3	17.8	8
Mississippi	2.0	58.0	40.0	1					
Missouri	50.0	49.3	0.7	3					
Montana	14.9	39.4	45.7	7	County Mean	22.6	55.7	21.7	552
Nebraska	13.4	78.6	8.0	9	County Metro Mean	21.5	58.8	19.7	373
Nevada	13.8	61.3	25.0	4	County Nonmetro Mean	25.2	49.2	25.6	174
Towns:									
Illinois	39.2	51.7	9.0	140	South Dakota	16.4	56.9	26.7	96
Minnesota	32.4	60.2	7.4	618	Wisconsin	35.4	47.8	16.8	264
New York	37.9	43.0	19.2	61					
North Dakota	21.0	64.1	14.9	151					
Ohio	43.6	46.9	9.5	367	Town Mean	30.4	47.0	22.6	1,717

*Unweighted average

**Number of respondents

Source: IIRA, NACo/NACE Survey of County Officials and NATAT Survey of Township Highway Officials, 1994.

existed, covering an average of 6 years. The likelihood of having a plan was less in nonmetro counties. Only 36.9 percent of the nonmetro town administrators reported such a plan covering 5 years, with the likely explanation being that many units have a part-time highway administrator with a very small staff. The limited size of the operation may prevent extensive planning efforts; however, it makes sense to carefully evaluate the work priorities.

The capital improvements plan in counties ranked road-related projects highest (55.6 percent), followed by bridge-related projects (28.1 percent). Towns had the same priorities, but the relative importance of these projects was much higher, with roads rating highest with 77.1 percent of the towns and bridges with 9.3 percent (**table 4**). Differences in responsibilities for services probably account for some of these variations.

One measure of resource adequacy for providing local transportation services is the length of time it takes governmental units to meet their objectives for roads and bridges. Among counties, the largest number (44.1 percent) reported that the objectives can never be met. Another 34.9 percent said that it will take more than 10 years to accomplish their objectives for roads. Town respondents were more optimistic. Only 19.1 percent reported that the objectives could not be reached in the foreseeable future; however, an additional 23.2 percent said that reaching the objectives would take more than 10 years. A relatively large number (26.1 percent) of town officials said that the objectives could be met in fewer than 4 years but only 5.2 percent of county officials had such optimism.

The reported expectations for bridges were relatively similar, except that county administrators were more optimistic with only 33.3 percent reporting that the objectives would not be reached in the foreseeable future. Likewise, town administrators were slightly more optimistic about reaching the objectives for bridge projects within 4 years.

Survey respondents ranked the work priorities for specific projects in their capital improvements plan for the next 5 years and were given a set of responses including pothole patching, resurfacing, new road/bridge construction, sign maintenance, and similar activities. Respondents ranked the activities on a 4-point scale (where 1 is lowest and 4 is highest in priority).

Patching potholes on existing roads, resurfacing (not widening) of roads, replacing culverts and bridges, and signage maintenance were of “high or very high” importance based on the national sample (**table 5**). Differences exist, however, in work priorities between metro and nonmetro counties. Widening and resurfacing existing road mileage ranked higher in metro counties than in nonmetro counties. One likely explanation is the fact that metro counties experienced higher population growth requiring mileage upgrades and, in fact, metro counties ranked new road construction to meet population growth higher than nonmetro counties. Even so, new road construction to meet population growth received the lowest ranking of any work priority.

Table 4. Capital Improvements Plan, 1994

<i>Item</i>	<i>Counties</i>		<i>Towns</i>	
	<i>Avg. Pct.</i>	<i>(n)*</i>	<i>Avg. Pct.</i>	<i>(n)*</i>
Top three program priorities in capital improvements plan:				
Bridge Related	28.1	286	9.3	161
Road Related	55.6	566	77.1	1,330
Equipment & Facilities	7.4	75	10.9	188
Safety	4.6	47	1.3	23
Other	4.3	44	1.4	24
Under anticipated budget conditions, how long will it take the county to meet its objectives for the road and bridge quality?				
Roads:				
Fewer than 4 years	5.2	29	26.1	382
4 to 10 years	15.7	87	31.7	464
More than 10 years	34.9	193	23.2	339
Never	44.1	244	19.1	279
Bridges:				
Fewer than 4 years	9.0	49	29.3	223
4 to 10 years	20.1	110	26.3	200
More than 10 years	37.5	205	25.8	196
Never	33.3	182	18.6	141

*number responding

Source: IIRA, NACo/NACE Survey of County Officials and NATAT Survey of Township Highway Officials, 1994.

Table 5. Preference for Work Priorities, 1994

<i>Priorities</i>	<i>Counties</i>		<i>Towns</i>	
	<i>Average</i>	<i>(n)*</i>	<i>Average</i>	<i>(n)*</i>
Rank as follows: 1 = lowest; 4 = highest				
Pothole Patching on Existing Roads	3.2	559	3.0	1,369
Resurfacing of Roads (not widening)	3.2	560	2.8	1,335
Widening and Resurfacing Existing Roads	2.6	531	2.1	1,192
New Road Construction to Meet Population Growth	1.9	504	1.5	1,081
Rehabilitating Existing Bridges	2.7	533	1.9	821
Replacing Existing Bridges/Culverts	3.1	546	2.6	1,027
Building New Bridges	2.1	484	1.6	767
Signs, Traffic Control Devices, and Guardrails	3.1	544	2.7	1,254

*number responding

Source: IIRA, NACo/NACE Survey of County Officials and NATAT Survey of Township Highway Officials, 1994.

New road construction to meet population expansion ranked lowest in nonmetro counties and next to lowest in metro counties. This is likely to be true for two reasons. First, much of the growth in metro areas was within municipal boundaries, and counties may have limited responsibility for roads in these areas. Second, when a subdivision, even in a rural area, is formed, the developer may have responsibility for constructing the roads as a condition for obtaining hookups to city sewers or other public services. Thus, counties may not have to construct the roads initially, even though they may have responsibility for them later on. Alternatively, when the subdivision is annexed to a city, the city assumes responsibility.

Building new bridges ranked relatively low in priority, but these projects ranked higher in rural areas than in metro areas. Most likely, this reflects the relatively poorer condition of bridges in rural counties. Bridge conditions are covered in another report.³ One might expect that the new construction needed to accommodate growing traffic demands is more important in metro areas where housing expansion is underway.

Respondents also reported the mileage that needs *resurfacing, widening and resurfacing*, and *new construction* to accommodate growth (**table 6**). Nationwide, counties responded that 86 miles, on average, need resurfacing; 28 miles need widening and resurfacing; and 16 miles of new construction is required to accommodate population growth. These figures are based on 739 miles in the average county. Metro counties reported larger mileage needing resurfacing (101 compared with 80) and slightly more widening and resurfacing (30 compared with 27) than nonmetro counties. Nonmetro counties reported a greater need for new construction (18 compared with 12 in metro counties).

Management Practices

During times of tight resources, counties and towns must pay greater attention to budgeting and allocating relatively scarce resources to their most efficient use in maintaining road systems. Information on the cost to maintain a mile of road is compared through time.

County and town officials were asked about the cost of *maintaining* an average mile of road by surface type (**table 7**). These figures vary with traffic volume and weight, so they are difficult to compare between metro and nonmetro counties; however, several differences are clear.

Nationwide, 301 county respondents estimated an average cost of \$7,986 per mile to maintain loose aggregate surface with a substantial difference between metro and nonmetro counties (\$11,366 compared with \$7,103). Major differences exist with towns that reported an average estimated cost of \$1,995 per mile for loose aggregate surfaces. Certainly, differences exist because of the travel demands on these roads, their width, and the quality of the condition in which they are maintained.

³Norman Walzer and Steven C. Deller. *Condition and Financing of Local Bridges*. U.S. Department of Agriculture, Agricultural Marketing Service, Washington, D.C., 1996.

Table 6. Operation and Maintenance, 1994

<i>Item</i>	<i>Counties</i>		<i>Towns</i>	
	<i>Average</i>	<i>(n)*</i>	<i>Average</i>	<i>(n)*</i>
Miles of Roads That Need:				
Resurfacing	86	441	15	790
Widening and Resurfacing	28	333	7	480
New Construction To Meet Population Growth	16	176	4	169

*number responding

Source: IIRA, NACo/NACE Survey of County Officials and NATAT Survey of Township Highway Officials, 1994.

Table 7. Estimated Cost of Maintaining an Average Mile of Road, 1994

<i>Type of Surface</i>	<i>Counties</i>		<i>Towns</i>	
	<i>\$/mile</i>	<i>(n)*</i>	<i>\$/mile</i>	<i>(n)*</i>
Gravel or Loose Aggregate	\$7,986	301	\$1,995	1,196
Low Bituminous	3,642	255	4,024	459
High Bituminous	4,579	252	4,606	279
Paved	16,579	155	10,752	184
Concrete	7,748	85	1,787	13

*number responding

Source: IIRA, NACo/NACE Survey of County Officials and NATAT Survey of Township Highway Officials, 1994.

Summary and Future Considerations

In general, maintenance costs increase for surfaces that are better than loose aggregate, with the highest expenditures being made for paved roads for counties (\$16,579) and towns (\$10,752). Differences exist by metro status, with metro counties reporting an average of \$29,401 needed for paved roads and nonmetro counties requiring \$7,319.

Local governments, especially in rural areas, face difficulties in road maintenance and financing for several reasons. First, populations have spilled over from cities into surrounding unincorporated areas. These rural residents usually are not farm-dependent and place increased demands on the road systems as they commute to work and to shop. Because many are former urban residents accustomed to high-quality public services, they may be less tolerant of poor roads than many traditional rural residents. On the other hand, their housing may be newer and more expensive than older houses in the rural areas and, therefore, enhance the tax base. Spillover also occurs from higher levels of recreational travel on the rural road system. It is not clear if the benefits of increased tourism activity outweigh the cost with respect to the local road system.

Second, rural areas with smaller populations no longer have the political influence in the State legislature that they formerly had and this loss of political power brings less recognition of rural needs. Likewise, many suburban residents are experiencing transportation gridlock, placing even greater demands on overall transportation budgets. Rural residents must compete for these scarce revenues at both the State and Federal Government levels.

Third, increases in the rural elderly population will bring even more demands for public transportation facilities which, in many rural areas, are not yet available. Transportation budgets must accommodate these demands, which also may mean that rural roads and bridges experience greater competition for funds.

Fourth, a movement to shift the decision-making authority for public services to the local and State governments through block grants is underway with less emphasis on dedicated funds. Increased use of block grants, for reasons cited earlier, is likely to work against financing rural roads and bridges as competition from metro areas and from other transportation modes increases.

Fifth, quality-of-life considerations seem to play a greater role in business decisions now than in the past, partly because of the high housing costs and environmental difficulties facing metro areas. To attract businesses and jobs, as well as to maintain basic services such as health and education, rural areas must build on quality of life attractions. Serviceable roads and bridges are a significant part of this attraction.

Given the lagging economic base in many rural areas and the population declines in the 1980s, financing roads and bridges may be more difficult in the future. Residents often resist increases in property taxes even to maintain services. This resistance shows no signs of lessening. Cutbacks in funding by Federal and State Governments would increase budgetary pressures concerning local roads and bridges.

Revenue Expansions Counties and towns may have to examine several alternatives for raising additional revenues to support local infrastructure or to, in some way, reduce costs. Many of these ideas are not new and local governments have had to work with them in the past.

In some instances, local governments may have to seek authority for additional revenues such as local motor fuels taxes or vehicle fees. This permission will have to be obtained from the State legislature in most States. New local taxes are not likely to be welcome, but in many instances, user fees are better received by taxpayers because they are paid by those directly benefiting from the service. Alternatively, rural local officials, or highway administrators in general, may have to lobby the State capitols to obtain a greater share of the highway revenues. Accomplishing this will be difficult because of other pressing demands for services in central cities and suburbs. With the rural population a declining proportion in many States, the political leverage available to rural constituencies is less.

Sharing Resources Rural governments may also be able to reduce the costs of providing services through a greater sharing of inputs such as labor and/or equipment with other local governments or the State. Cooperative graveling and paving projects occur already, but there may be even more need for these arrangements if populations continue to decline in rural areas. There are instances when administrative personnel are shared by two or more rural counties. The relatively fixed costs of maintaining roads and bridges can sometimes be spread over a shrinking population base.

Contracting for services and purchasing in bulk also offer possibilities for cost reductions. Purchasing materials at the county level and then sharing among towns is not uncommon and perhaps could be expanded. Contracting with the private sector for specialized services can sometimes save taxpayers the cost of purchasing and maintaining expensive equipment.

Reducing Services In some areas, it may be necessary to reduce the number of road miles and/or bridges maintained. This is a relatively unpopular step politically because many affected taxpayers/residents do not see a major advantage in tax savings but do see a significant inconvenience if they must detour to conduct business activities. Travel methods have changed dramatically, however, since the road network was created and, in some instances, arrangements may be needed to provide rural residents with incentives to accept some road and/or bridge closings. This strategy would require that State motor fuels taxes not be distributed on a per mile basis. If this distribution formula is in place, then closing roads will actually reduce the revenues available to a county.

Rural roads and bridges are a vital link to public services and to markets or job sites. For the quality of life in rural areas to remain competitive, the transportation network must be maintained at a high level. In areas with declines in population and economic base, financing the transportation system may be difficult. State and Federal funds are important components in the overall financing structure, and rural areas may have even more difficulty competing for needed resources in the future.

