

# Are Highways Crumbling? State Performance Summaries, 1989–2008

by David T. Hartgen, Ph.D., P.E., M. Gregory Fields and Elizabeth San José



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# Are Highways Crumbling? State Performance Summaries, 1989–2008

By David T. Hartgen, Ph.D., P.E., M. Gregory Fields and Elizabeth San José

Project Director: Adrian T. Moore, Ph.D.

Seven key measures:	
1. Change in percentage of rural interstate roads in poor condition 1989–2008	U.S. avg = -4.7 percentage points
2. Change in percentage of urban interstate roads in poor condition 1989–2008	U.S. avg = -1.2 percentage points
3. Change in percentage of rural arterial roads in poor condition 1989–2008	U.S. avg = -2.0 percentage points
4. Change in percentage of congested urban interstate roads 1989–2008	U.S. avg = -4 percentage points
5. Change in percentage of deficient bridges 1989–2008	U.S. avg = -14 percentage points
6. Change in rate of highway fatalities per 100 million vehicle miles (MVM) 1989–2008	U.S. avg = -0.91 fatalities / 100
	million vehicle miles
7. Change in percentage of narrow lanes on rural primaries (major roads) 1993–2008	U.S. avg = -3.3 percentage points

Perfo	ormance S	Summ	ary by	State, 19	89-200	8				
	Change in Percentage or Rate, 1989-2008 Total Disbursemen						Total Disbursements/			
State	2008 Miles	Rural Int % Poor	Urban Int % Poor	Rural Primary % Poor	Urban Int % Cong	Deficient Bridges	Fatality Rate	Rural Primary Narrow Lanes	Measures Improved	Mile (\$M), 1989-2008
U.S.	16,312	-4.7	-1.2	-2.0	-4.0	-14.0	-0.91	-3.3	7	2.85
ND	7,407	-0.2	0.0	-2.9	0.0	-30.6	-0.05	-6.6	7	0.67
VA	57,957	-13.7	-10.3	-6.8	-26.9	-5.8	-0.69	-0.1	7	0.83
M0	33,677	-28.2	-45.4	-5.0	-23.3	-30.1	-0.78	-2.1	7	0.89
NE	10,208	-9.7	-2.7	-6.6	-15.8	-31.5	-1.06	-3.9	7	0.89
MT	11,135	-13.4	-3.1	-16.7	0.0	-6.7	-0.07	-5.5	7	0.97
ME	8,665	-3.5	-1.9	-7.2	-8.4	-8.9	-0.58	-2.9	7	1.09
TN	14,220	-3.8	-16.0	-2.5	-11.2	-22.7	-0.89	-7.4	7	1.56
KS	10,607	-7.2	-9.4	-1.4	-3.5	-19.2	-0.65	-8.0	7	1.83
WI CO	11,839 9,764	-17.0 -3.3	-2.9 -6.2	-3.5 -0.2	-12.2 -1.7	-15.6 -20.4	-0.85 -0.76	-10.0 -1.7	7	1.94 2.06
FL	· '	-3.3 -7.2		-0.2			-1.24	-1. <i>1</i> -7.1	7	
SC	12,084 41,620	-7.2 -7.3	-1.7 -2.7	-2. <i>1</i> -1.3	-17.3 -21.8	-7.5 2.1	-1.24	-7.1	6	7.13 0.43
SD	8,895	0.0	6.6	-1.3 -1.7	-21.8	-14.2	-0.95	-2.3 -3.9	6	0.43
KY	27,886	-0.5	-14.2	0.0	33.9	-14.2	-0.95	-3.9 -4.8	6	0.78
NM	12,166	-0.3	-14.2	-0.1	0.6	-1.7	-2.01	- <del>4.0</del> -5.1	6	1.10
OR	8,166	-9.7	-11.0	-3.2	-12.3	0.5	-1.18	-3.2	6	1.33
TX	80,212	-1.1	-2.6	-1.4	-1.5	-13.6	-0.66	2.2	6	1.43
AK	8,453	-15.6	-20.6	-23.4	-25.7	10.5	-0.89	0.3	6	1.51
MN	12,905	-3.0	0.0	0.0	36.2	-10.6	-0.83	-5.9	6	1.61
PA	43,612	-6.1	-0.9	-1.3	5.3	-0.1	-0.88	-1.9	6	1.81
NV	5,921	-22.0	-46.2	-4.1	8.7	-14.0	-1.71	0.0	6	1.91
GA	18,294	-10.5	-7.5	-4.1	-11.0	-14.4	-0.79	2.3	6	1.93
AR	16,431	-0.9	-0.5	0.6	18.6	-19.9	-1.36	-15.7	5	0.85
WY	7,854	0.1	3.3	-0.1	0.0	-0.2	-0.53	-0.6	5	0.94
ID	4,959	-23.2	-1.3	-12.0	22.0	6.2	-1.31	-3.0	5	1.29
IA	9,444	-3.5	-0.9	1.7	24.2	-20.4	-0.94	-5.6	5	1.51
NH	4,025	-9.4	0.4	0.3	-12.2	-13.7	-0.83	-2.4	5	1.94
DE	5,372	NA	5.0	0.0	-43.9	-6.0	-0.45	-1.4	5	2.38
IN	11,215	-3.3	2.0	0.0	10.2	-21.1	-0.58	-0.4	5	2.52
MI	9,688	1.9	5.6	-0.9	-2.0	-8.5	-1.08	-9.5	5	3.21
IL	16,747	-2.6	3.9	1.0	-5.5	-15.2	-1.17	-2.2	5	3.38
AZ	7,142	-12.5	-12.6	-2.8	11.6	6.1	-1.00	-0.4	5	4.11
MD	5,407	-3.6	2.5	-0.1	-14.3	-3.5	-0.80	0.4	5	4.72
RI	1,111	-23.8	-20.4	-2.0	7.0	6.3	-0.69	-20.5	5	5.58
CT	4,048	0.0	3.1	0.6	-12.3	-24.5	-0.72	-1.6	5	6.66
MA	3,605	-1.2	-1.3	0.6	-26.9	9.0	-0.84	-1.7	5	14.27
NJ	3,332	-2.6	6.7	0.8	-10.8	-1.0	-0.69 1.01	-15.5	5	21.82
NC	80,214	0.7	2.1	-1.7	-12.6 -14.7	-18.1	-1.01 1.20	2.4	4	0.59
OK	34,456 13,490	0.1 0.4	-5.9 9.9	1.0 -0.6	10.0	-24.9 -24.1	-1.30 -0.43	11.9 -2.2	4	0.59 1.49
LA	16,702	1.5	8.2	-0.0	6.8	-14.5	-0.43	-2.2	4	1.57
WA	17,835	2.0	0.6	0.1	-19.4	-5.3	-0.29	-3.7	4	1.64
AL	11,107	2.2	1.7	0.0	22.7	-26.1	-0.89	-6.8	4	1.77
OH	20,394	-2.2	-9.6	0.4	15.2	3.4	-1.00	-12.0	4	2.04
MS	11,062	0.0	0.9	0.4	21.7	-31.7	-1.38	4.6	3	1.33
VT	2,840	-8.4	14.6	0.4	2.5	-31.7	-1.01	4.5	3	1.48
UT	5,841	1.0	1.9	0.5	-13.5	5.0	-1.12	0.0	3	2.43
NY	16,302	6.1	9.1	0.7	-15.1	-10.7	-1.21	10.5	3	5.60
HI	1,005	NA	25.0	2.7	-2.1	14.3	-0.88	-47.6	3	6.34
CA	18,273	10.0	20.7	1.1	0.9	-3.9	-1.10	0.1	2	5.84

# **Table of Contents**

State-by-State Summaries	
Alabama	
Alaska	
Arizona	
Arkansas	
California	
Colorado	6
Connecticut	
Delaware	{
Florida	<u> </u>
Georgia	
Hawaii	
Idaho	
Illinois	
Indiana	
lowa	
Kansas	
Kentucky	
Louisiana	
Maine	
Maryland	
Massachusetts	
Michigan	22
Minnesota	
Mississippi	24
Missouri	
Montana	
Nebraska	
Nevada	
New Hampshire	
New Jersey	
New Mexico	
New York	32

About the Authors	51
Wyoming	50
Wisconsin	49
West Virginia	48
Washington	47
Virginia	46
Vermont	45
Utah	44
Texas	43
Tennessee	42
South Dakota	41
South Carolina	40
Rhode Island	39
Pennsylvania	38
Oregon	37
Oklahoma	36
Ohio	35
North Dakota	34
North Carolina	33

#### Part 1

# **State-by-State Summaries**

#### Alabama

Performance: Improved in 3 / Worsened in 3 Categories



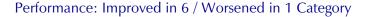
Between 1989 and 2008, Alabama improved in only three key categories of highway performance. It grew worse in three others. It improved the state of its deficient bridges, it lowered its highway fatality rate, and it minimized the amount of narrow lanes on its major rural primary roads.

However, Alabama also saw the state of rural and urban interstate roads deteriorate, and suffered a considerable increase in congestion on urban interstate roads.

It is interesting to note that Alabama had far fewer deficient bridges in 2008 than it did 1989, a decrease of 26.1 percentage points—almost double the U.S. average over that time period. However, its urban congestion increased by 22.7 percentage points, well above the U.S. average decrease of only 4 percentage points.

Category	<b>-2008</b>
Overall Performance and Spending Efficiency	43
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	25
Rural Interstate in Poor Condition	46
Rural Arterials in Poor Condition	30
Rural Arterials with Narrow Lanes	11
Urban Interstates in Poor Condition	33
Urban Interstate Congestion	47
Deficient Bridges	5
Fatality Rate	22
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	46

#### Alaska





Between 1989 and 2008, Alaska improved on six measures of its highways, while worsening in one category. It greatly improved the state of its rural interstate, urban interstate and rural arterial roads, exceeding the national averages in each of these categories. Alaska also significantly improved

urban congestion and it lowered highway fatality rates. However, the state saw an increase in deficient bridges and a slight decrease in the number of narrow lanes on major rural primary roads.

According to the data, Alaska made significant steps in improving road conditions. In 2008 the state had far fewer urban interstate roads classified as being in "poor condition" than it had in 1989, a change of 20.6 percentage points. Alaska also improved congestion by 85.5%, far above the U.S. average improvement of 7.6%. However, 22.8% of the state's bridges were deficient in 2008, up from just 12.2% in 1989—a rise of 10.5 percentage points.

Category Rank Showing Most Improvement 1	989–2008
Overall Performance and Spending Efficiency	18
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	34
Rural Interstate in Poor Condition	6
Rural Arterials in Poor Condition	1
Rural Arterials with Narrow Lanes	42
Urban Interstates in Poor Condition	3
Urban Interstate Congestion	4
Deficient Bridges	49
Fatality Rate	24
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	ase) 12

#### **Arizona**





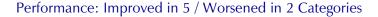
Arizona saw an improvement in five key aspects in its highway infrastructure between 1989 and 2008. It improved the condition of rural interstate, urban interstate and rural arterial roads across the board. The state also had success in lowering highway fatality rates and decreasing the

quantity of narrow lanes on rural primary roads. On the other hand, Arizona declined in two key aspects. It saw a considerable increase in urban interstate congestion and an increased number of deficient bridges.

Arizona generally saw many of its improvements hover somewhere near the national averages. This includes improvements in rural arterial road conditions, fatality rates and the proportion of narrow lanes on rural primaries. Rural and urban interstate road conditions saw even higher improvements than the national average.

Category	-2008
Overall Performance and Spending Efficiency	32
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	38
Rural Interstate in Poor Condition	9
Rural Arterials in Poor Condition	13
Rural Arterials with Narrow Lanes	36
Urban Interstates in Poor Condition	7
Urban Interstate Congestion	42
Deficient Bridges	45
Fatality Rate	19
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	39

#### **Arkansas**





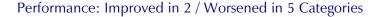
Arkansas improved in five key categories between 1989 and 2008, and declined in just two. It made a small amount of progress in taking care of its rural and urban interstate roads, it lowered its highway fatality rates, and it significantly reduced its quantity of narrow lanes on major rural

primary roads. However, urban interstate congestion increased greatly and Arkansas saw slightly more rural arterial roads in poor condition in 2008 than in 1989.

Although Arkansas may have technically improved the state of its rural interstate and urban interstate roads, the improvements were almost insignificant—0.9 and 0.5 percentage points respectively— and well below national average improvements. Similarly, although the condition of Arkansas's rural arterial roads worsened in technical terms, the change was nearly insignificant. Arkansas did, however, have 45.4% urban interstate congestion in 2008, up from just 26.8% in 1989.

CategoryRa	ank Showing Most Improvement 1989–2008	3
Overall Performance and Spending Efficiency		3
State-Administered Highway Mileage (ranked largest to s	mallest based on system size in 2008)15	5
Rural Interstate in Poor Condition	31	l
Rural Arterials in Poor Condition	40	)
Rural Arterials with Narrow Lanes	3	3
Urban Interstates in Poor Condition	27	7
Urban Interstate Congestion	44	1
Deficient Bridges	14	1
Fatality Rate	4	1
Total Disbursements Per Mile (1=biggest spending	increase, 50=biggest spending decrease) 23	3

#### **California**





California was one of the least successful states in terms of its highway infrastructure between 1989 and 2008. The state improved in only two categories and worsened in five. The number of roads in poor condition increased in the rural interstate, urban interstate and rural arterial roads

categories. California did, however, manage to have fewer deficient bridges and a lower fatality rate in 2008 than in 1989.

While California did grow worse in five categories, some of these were only very slight deteriorations. For instance, the state's proportion of rural arterial roads in poor condition, its urban congestion, and its quantity of narrow lanes on rural arterials all only slightly increased between 1989 and 2008, with changes of just 1.1, 0.9, and 0.1 percentage points respectively. California did, on the other hand, see major deterioration in rural and urban interstate road conditions.

Category Rank Showing Most Improvement 1989	-2008
Overall Performance and Spending Efficiency	50
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	11
Rural Interstate in Poor Condition	48
Rural Arterials in Poor Condition	48
Rural Arterials with Narrow Lanes	41
Urban Interstates in Poor Condition	49
Urban Interstate Congestion	34
Deficient Bridges	35
Fatality Rate	13
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	5

#### **Colorado**





Colorado is one of only 11 states to show improvements in all seven key measures of its highways. It reduced its quantity of rural interstate, urban interstate and rural arterial roads in poor condition between 1989 and 2008. The amount of urban congestion, the number of deficient bridges

and the amount of narrow lanes on rural primaries also decreased, while the highway fatality rate improved.

Colorado was successful across the board, although many of the improvements were lower than the national average. The exceptions are the number of urban interstate roads in poor condition and the number of deficient bridges, which fell by 48.3% and 59.7%, respectively. On the other hand, rural arterial roads only improved by 0.2 percentage points between 1989 and 2008.

Category Rank Showing Most Improvement 198	9-2008
Overall Performance and Spending Efficiency	10
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	29
Rural Interstate in Poor Condition	23
Rural Arterials in Poor Condition	26
Rural Arterials with Narrow Lanes	31
Urban Interstates in Poor Condition	13
Urban Interstate Congestion	28
Deficient Bridges	12
Fatality Rate	35
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease	e) 7

#### **Connecticut**





Connecticut improved in four measures of highway infrastructure and worsened in two. The state decreased urban congestion, significantly improved the state of its deficient bridges, improved its highway fatality rate, and slightly lowered the number of narrow lanes on rural primaries

between 1989 and 2008. However, the number of urban interstates and rural arterial roads in poor condition increased. The condition of Connecticut's rural interstate roads, meanwhile, did not see any change.

Connecticut is one of only eight states to see no positive improvements in the three categories of road conditions, but this likely has to do with the fact that the state had almost no roads in poor condition in the first place. Connecticut did considerably decrease its percentage of deficient bridges by 24.5 percentage points, well above the national average improvement of 14 percentage points. The state also successfully decreased congestion by 12.3 percentage points, also above the national average of 4 percentage points.

Category	Rank Showing Most Improvement 1989-	<b>-2008</b>
Overall Performance and Spending Efficiency		35
State-Administered Highway Mileage (ranked largest to	o smallest based on system size in 2008)	44
Rural Interstate in Poor Condition		35
Rural Arterials in Poor Condition		43
Rural Arterials with Narrow Lanes		33
Urban Interstates in Poor Condition		38
Urban Interstate Congestion		16
Deficient Bridges		7
Fatality Rate		36
Total Disbursements Per Mile (1=biggest spendir	ig increase, 50=biggest spending decrease)	50

#### **Delaware**





Between 1989 and 2008, Delaware improved in four key categories and grew worse in just one. The state reduced its urban congestion, its number of deficient bridges, its highway fatality rate and the number of narrow lanes on its rural primaries. However, the amount of urban interstate roads

in poor condition increased and the percentage of poor rural arterial roads remained unchanged. Delaware has no rural interstates.

There are two categories that stand out in Delaware's highway infrastructure. In urban interstate congestion, Delaware improved by a whopping 43.9 percentage points, the highest rate of improvement in the country by 17 percentage points. However, Delaware saw an improvement in the rate of highway fatalities (per 100 million vehicle miles) of only 0.45, the fifth smallest improvement in the country between 1989 and 2008.

Category Rank Showing Most Improvement 198	<b>39–2008</b>
Overall Performance and Spending Efficiency	28
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	42
Rural Interstate in Poor Condition	
Rural Arterials in Poor Condition	30
Rural Arterials with Narrow Lanes	34
Urban Interstates in Poor Condition	41
Urban Interstate Congestion	1
Deficient Bridges	32
Fatality Rate	46
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decreas	e)49

#### **Florida**





Florida showed improvement in all seven key metrics of its highway conditions between 1989 and 2008 (one of only 11 states to do so). It was successful in reducing poor road conditions on rural intestates, urban interstates and rural arterials. In addition, the state significantly reduced

urban interstate congestion, the number of deficient bridges, the fatality rate and the quantity of narrow lanes on rural primaries.

Florida hovered around the national average improvement in all seven key measures of its highways. Urban congestion was an exception, which improved by 17.3 percentage points as compared to the national average of 4 percentage points. The quantity of narrow lanes on major rural primaries was also reduced by 7.1 percentage points between 1989 and 2008, more than double the national average of 3.3 percentage points.

Category	2008
Overall Performance and Spending Efficiency	11
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	21
Rural Interstate in Poor Condition	16
Rural Arterials in Poor Condition	14
Rural Arterials with Narrow Lanes	10
Urban Interstates in Poor Condition	22
Urban Interstate Congestion	8
Deficient Bridges	30
Fatality Rate	7
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	2

# Georgia



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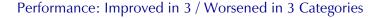
Between 1989 and 2008, Georgia improved in six categories and grew worse in only one. It vastly improved road conditions, with decreases in the percentage of rural interstate, urban interstate and rural arterial roads in poor condition. The state also significantly reduced urban interstate

congestion and the number of deficient bridges, while lowering the fatality rate. However, the amount of narrow lanes on rural primary roads did increase, albeit not by a huge amount.

Across the board, Georgia saw above-average improvements in road conditions. Rural interstates, urban interstates and rural arterials all saw great reductions in the number of roads in poor condition, far more than the national U.S. average. Urban congestion also improved by 11 percentage points, far better than the national average of 4 percentage points.

Category Rank Showing Most Improvement 1989	<i>}</i> –2008
Overall Performance and Spending Efficiency	22
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	10
Rural Interstate in Poor Condition	10
Rural Arterials in Poor Condition	9
Rural Arterials with Narrow Lanes	45
Urban Interstates in Poor Condition	12
Urban Interstate Congestion	20
Deficient Bridges	20
Fatality Rate	33
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease	)9

#### Hawaii





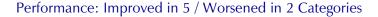
Between 1989 and 2008, Hawaii improved in only three categories, and deteriorated in three others. The state posted a slight improvement in urban congestion, an average improvement in its highway fatality rate, and a vast improvement in the reduction of narrow lanes on rural primary roads. On

the other hand, Hawaii saw more roads in poor condition among urban interstates and rural arterials, and more deficient bridges. Hawaii has no rural interstates.

Hawaiian highway infrastructure between 1989 and 2008 is a story of extremes. Its urban interstate roads deteriorated more than any other state's, with the percentage of such roads in poor condition rising by 25 percentage points. On average, the U.S. improved in this category by 1.2 percentage points. On the other hand, Hawaii went from 80% narrow lanes on its rural primaries in 1993 to just 32.4% in 2008, the biggest improvement in the country at 47.6 percentage points.

Category Most Improvement 1989	-2008
Overall Performance and Spending Efficiency	49
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	50
Rural Interstate in Poor Condition	
Rural Arterials in Poor Condition	50
Rural Arterials with Narrow Lanes	1
Urban Interstates in Poor Condition	50
Urban Interstate Congestion	26
Deficient Bridges	50
Fatality Rate	25
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	31

#### Idaho





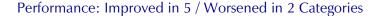
Between 1989 and 2008, Idaho improved in five key measures of highway infrastructure and deteriorated in two. It lowered its percentage of roads in poor condition among rural interstates, urban interstates and rural arterials. It also improved its highway fatality rate and its amount of narrow lanes

on rural primaries. However, urban congestion grew vastly, while the number of deficient bridges also rose.

Idaho lowered its number of rural interstates and rural arterials in poor condition significantly, with changes of 23.2 and 12 percentage points respectively—far better than national averages. However, the state also saw congestion on urban interstate roads go up by 22 percentage points between 1989 and 2008, while the rest of the country lowered its urban congestion by 4 percentage points.

CategoryRank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	25
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	43
Rural Interstate in Poor Condition.	3
Rural Arterials in Poor Condition	3
Rural Arterials with Narrow Lanes	22
Urban Interstates in Poor Condition	23
Urban Interstate Congestion	46
Deficient Bridges	46
Fatality Rate	5
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	8

#### Illinois





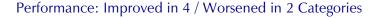
Illinois was able to improve in five categories of highway conditions while managing to worsen in only two between 1989 and 2008. It improved its rural interstate roads, while lowering urban congestion and the amount of deficient bridges. The state also improved its highway fatality rate and

reduced the quantity of narrow lanes among rural primary roads. However, a higher percentage of Illinois's urban interstate and rural arterial roads were in poor condition in 2008 than in 1989.

Most key indicators of highway infrastructure in Illinois were near national averages. Something to note is that Illinois was generally unable to improve its roads in poor condition. Its urban interstates in poor condition went up by 3.9 percentage points and its rural arterials in poor condition went up by 1 percentage point. Its percentage of rural interstates in poor condition did improve, but only by 2.6 percentage points—below the national average.

CategoryRank Showing	<b>Most Improvement 1989–2008</b>
Overall Performance and Spending Efficiency	31
State-Administered Highway Mileage (ranked largest to smallest based or	n system size in 2008)13
Rural Interstate in Poor Condition	26
Rural Arterials in Poor Condition	46
Rural Arterials with Narrow Lanes	26
Urban Interstates in Poor Condition	40
Urban Interstate Congestion	24
Deficient Bridges	18
Fatality Rate	11
Total Disbursements Per Mile (1=biggest spending increase, 50=b	piggest spending decrease) 15

#### Indiana





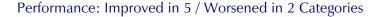
Between 1989 and 2008, Indiana improved in four key measures of highway management and worsened in two. The state improved the condition of its rural interstate roads, it significantly reduced its number of deficient bridges, it lowered the fatality rate, and it reduced the amount

of narrow lanes on rural primary roads. On the other hand, Indiana urban interstates experienced an increase in the percentage of roads in poor condition, and urban congestion increased. The condition of Indiana's rural arterial roads remained unchanged.

The state was generally not very successful in taking care of roads in poor condition, with an improvement of rural interstate roads of only 3.3 percentage points (below average), a deterioration of urban interstate roads of 2 percentage points, and no change in the state of its rural arterial roads. On the other hand, Indiana had 49% fewer deficient bridges in 2008 than in 1989, a large improvement.

Category	Rank Showing Most Improvement 1	989–2008
Overall Performance and Spending Efficiency		29
State-Administered Highway Mileage (ranked largest t	to smallest based on system size in 2008)	23
Rural Interstate in Poor Condition		23
Rural Arterials in Poor Condition		30
Rural Arterials with Narrow Lanes		36
Urban Interstates in Poor Condition		35
Urban Interstate Congestion		41
Deficient Bridges		10
Fatality Rate		43
Total Disbursements Per Mile (1=biggest spending	ng increase, 50=biggest spending decrea	ase)6

#### lowa





Between 1989 and 2008, Iowa improved in five categories of its highway infrastructure and declined in two. The state slightly improved the condition of its rural and urban interstate roads, it took care of many of its deficient bridges, and it lowered both its highway fatality rate and its

quantity of narrow lanes on rural primaries. Despite its improvements, Iowa saw a decline in road conditions on rural arterials and an increase in urban congestion.

Many of the state's improvements are near U.S. national averages. The state was able to fix many of its deficient bridges, which were at only 26.9% in 2008 after being as high as 47.3% in 1989. The one major problem was urban congestion, which more than doubled to 38.8% in 2008, having been 14.6% in 1989. This means Iowa experienced the third worst decline in the country in that particular category.

Category	. Rank Showing Most Improvement 1	989–2008
Overall Performance and Spending Efficiency		26
State-Administered Highway Mileage (ranked largest	to smallest based on system size in 2008)	31
Rural Interstate in Poor Condition		21
Rural Arterials in Poor Condition		49
Rural Arterials with Narrow Lanes		14
Urban Interstates in Poor Condition		26
Urban Interstate Congestion		48
Deficient Bridges		12
Fatality Rate		21
Total Disbursements Per Mile (1=biggest spendi	ng increase, 50=biggest spending decrea	ase)47

#### **Kansas**





Kansas was one of only 11 states to improve in all seven measures of highway conditions between 1989 and 2008. It improved road conditions among rural interstates, urban interstates and rural arterials. It also lowered congestion, the quantity of deficient bridges and the fatality rate, while

reducing the amount of narrow lanes on rural primary roads.

The state was particularly successful in taking care of its roads. By 2008, it had fixed *all* of its rural interstate, urban interstate and rural arterial roads in poor condition. The state also fixed many of its deficient bridges, with a drop of 19.2 percentage points in the time period. Kansas was one of the most successful states in the country in terms of its highway infrastructure.

Category Rank Showing Most Improvement 1989	<del>)</del> –2008
Overall Performance and Spending Efficiency	8
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	27
Rural Interstate in Poor Condition	17
Rural Arterials in Poor Condition	20
Rural Arterials with Narrow Lanes	8
Urban Interstates in Poor Condition	11
Urban Interstate Congestion	25
Deficient Bridges	15
Fatality Rate	42
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease	) 16

# **Kentucky**





Between 1989 and 2008, Kentucky improved in five measures of its highways, and managed to decline in only one category. It improved the state of its rural and urban interstate roads, it lowered its number of deficient bridges, it lowered its fatality rate, and it minimized its narrow

lanes on major rural primary roads. Kentucky's rural principal arterials in poor condition remained unchanged.

The state was enormously successful in taking care of its roads. Only 0.5% of rural interstate roads were in poor condition in 1989, and they were fixed in their entirety by 2008. Similarly 14.7% of urban interstates were in poor condition in 1989, and by 2008 only 0.5% remained. Kentucky's one major blight was its urban interstate congestion, which increased by 33.9 percentage points, the second worst deterioration in the country.

Category	-2008
Overall Performance and Spending Efficiency	14
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	8
Rural Interstate in Poor Condition	32
Rural Arterials in Poor Condition	30
Rural Arterials with Narrow Lanes	17
Urban Interstates in Poor Condition	6
Urban Interstate Congestion	49
Deficient Bridges	10
Fatality Rate	41
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	27

#### Louisiana





Louisiana was able to improve in four measures of its highways between 1989 and 2008, but also suffered declines in three measures. It slightly improved its rural arterial roads, it fixed many of its deficient bridges, it improved its fatality rate, and it reduced its narrow lanes on major rural

primaries. However, urban and rural interstate road conditions worsened, and urban congestion went up.

Although rural and urban interstate road conditions did decline, Louisiana only had a few roads in poor condition in 1989, so the decline isn't as bad as the numbers seem to indicate. One problem that Louisiana faced, however, was its highway fatality rate. Although it improved by 0.29, this represents the third lowest improvement in the country (every single state improved in this category).

Category	-2008
Overall Performance and Spending Efficiency	41
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	14
Rural Interstate in Poor Condition	43
Rural Arterials in Poor Condition	16
Rural Arterials with Narrow Lanes	20
Urban Interstates in Poor Condition	45
Urban Interstate Congestion	37
Deficient Bridges	19
Fatality Rate	48
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	32

#### **Maine**





Maine was one of only 11 states to improve in all seven metrics between 1989 and 2008. It managed to improve its road conditions across the board—on its rural interstates, its urban interstates, and its rural arterials. The state lowered urban congestion, fixed its deficient bridges, lowered its

fatality rate, and reduced its quantity of narrow lanes on major rural primary roads.

The state improved in every category, but almost all the improvements were below average. The reason for this is that Maine already had great road conditions, low congestion, and a low highway fatality rate in 1989. For instance, Maine was able to reduce its rural interstate roads in poor condition from 3.5% to 0%, its urban interstates in poor condition from 1.9% to 0%, and its rural arterials in poor condition from 9.5% to only 2.3% (the fourth biggest improvement in the country).

Category	-2008
Overall Performance and Spending Efficiency	6
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	33
Rural Interstate in Poor Condition	21
Rural Arterials in Poor Condition	4
Rural Arterials with Narrow Lanes	23
Urban Interstates in Poor Condition	21
Urban Interstate Congestion	23
Deficient Bridges	28
Fatality Rate	44
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	19

#### Maryland





Between 1989 and 2008, Maryland managed to improve in five key measures of its highways while declining in two. The state improved road conditions on rural interstates and rural arterials, and vastly reduced congestion. It also improved its deficient bridges and lowered its fatality

rate. Maryland did, however, experience deteriorating road conditions on urban interstates, and a higher proportion of narrow lanes on rural primary roads.

Although Maryland deteriorated in two categories, the data indicates that they were marginal declines. Urban interstates in poor condition only declined by 2.5 percentage points, and narrow lanes on primary roads only increased by 0.4 percentage points. Urban congestion was one of the state's bright spots. Maryland had the country's highest urban congestion at 83.5% in 1989, and improved by 17.1% through 2008—a drop of 14.3 percentage points.

Category	<del>)</del> –2008
Overall Performance and Spending Efficiency	33
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	41
Rural Interstate in Poor Condition	20
Rural Arterials in Poor Condition	27
Rural Arterials with Narrow Lanes	43
Urban Interstates in Poor Condition	37
Urban Interstate Congestion	12
Deficient Bridges	36
Fatality Rate	32
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease	) 42

#### **Massachusetts**

## Performance: Improved in 5 / Worsened in 2 Categories



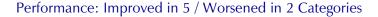
Between 1989 and 2008, Massachusetts managed to improve in five key categories of its highway infrastructure while only getting worse in two. It improved road conditions on its urban and rural interstates and alleviated urban congestion enormously. The state also lowered its fatality rate and

reduced its percentage of narrow lanes on rural primary roads. The condition of its rural arterial roads did worsen slightly, along with the state of its deficient bridges.

The state, which had very few roads in poor condition in 1989, was able to fix whatever remaining rural and urban interstate roads there were in poor condition. In addition, although rural arterial roads did get slightly worse, the change was negligible. Massachusetts's primary improvement was lowering urban congestion by a whopping 26.9 percentage points, the second biggest improvement in the country. Perhaps its only problem was the growing number of deficient bridges, which were up 9 percentage points compared with 1989, the third worst result in the country.

CategoryRank Showing Most Improvement 198	89–2008
Overall Performance and Spending Efficiency	36
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	46
Rural Interstate in Poor Condition	29
Rural Arterials in Poor Condition	42
Rural Arterials with Narrow Lanes	31
Urban Interstates in Poor Condition	23
Urban Interstate Congestion	2
Deficient Bridges	48
Fatality Rate	29
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decreas	se) 13

# Michigan





Michigan was able to improve in five key measures of its highways, while worsening in only two between 1989 and 2008. Although the state's road conditions deteriorated on rural and urban interstates, they did slightly improve on rural arterial roads. Michigan was able to lower congestion,

improve the state of its deficient bridges, lower its fatality rate, and reduce the amount of narrow lanes on major rural primaries.

According to the data, many of Michigan's improvements were well under the U.S. national average. For instance, urban congestion improved from 70.1% to 68.1%, dropping only 2 percentage points (the U.S. average was 4 percentage points). The state's one area of major improvement was minimizing the amount of narrow lanes on major rural primaries. These dropped by 9.5 percentage points, well above the U.S. average of 3.3 percentage points.

CategoryRank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	30
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	30
Rural Interstate in Poor Condition	44
Rural Arterials in Poor Condition	24
Rural Arterials with Narrow Lanes	7
Urban Interstates in Poor Condition	42
Urban Interstate Congestion	27
Deficient Bridges	29
Fatality Rate	14
Total Disbursements Per Mile (1=biggest spending increase 50=biggest spending decrease)	28

#### Minnesota





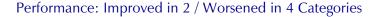
Between 1989 and 2008, Minnesota's highways improved in four categories, and grew worse in one. It improved the state of its rural interstate roads, although the condition of its urban interstates and rural arterials did not change during the time period. The state also managed to

improve its deficient bridges, lower its fatality rate, and lower the amount of narrow lanes on major rural primary roads. On the downside, Minnesota saw urban interstate congestion rise significantly.

Minnesota improved or stayed the same in nearly every category, but suffered perhaps more than every other state in urban interstate congestion. It went from 41.5% congestion in 1989 to 77.7% in 2008, giving it the second highest level of urban interstate congestion in the country after California. This rise in urban interstate congestion—36.2 percentage points—was the highest in the country.

Category	<del>)</del> –2008
Overall Performance and Spending Efficiency	19
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	19
Rural Interstate in Poor Condition	25
Rural Arterials in Poor Condition	30
Rural Arterials with Narrow Lanes	13
Urban Interstates in Poor Condition	28
Urban Interstate Congestion	50
Deficient Bridges	27
Fatality Rate	31
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease	) 33

### Mississippi





Mississippi only managed to improve in two categories while declining in four between 1989 and 2008. Its percentage of rural interstate roads in poor condition stayed the same, while its percentage of urban interstate roads and rural arterial roads in poor condition rose slightly. Urban

congestion increased, as did the amount of narrow lanes on rural primary roads. The state did, however, vastly improve its deficient bridges and lowered its fatality rate.

Although the data tells us that Mississippi highway infrastructure declined significantly, a closer look renders the outlook less unhappy. For example, although road conditions did not improve in any category, they only declined slightly or stayed constant. And although urban congestion increased by 21.7 percentage points, the sixth biggest deterioration in the country, urban interstate congestion was still only 29.8% in 2008, well below the U.S. average of 48.6%. Mississippi did manage to have its percentage of deficient bridges drop 31.7 percentage points, the biggest improvement in the country in that category.

Category	Rank Showing Most Improvement	1989–2008
Overall Performance and Spending Efficiency		45
State-Administered Highway Mileage (ranked largest to	o smallest based on system size in 2008)	26
Rural Interstate in Poor Condition		35
Rural Arterials in Poor Condition		37
Rural Arterials with Narrow Lanes		48
Urban Interstates in Poor Condition		32
Urban Interstate Congestion		45
Deficient Bridges		1
Fatality Rate		3
Total Disbursements Per Mile (1=biggest spendir	ig increase, 50=biggest spending decre	ease)18

#### Missouri





Missouri was able to improve in all seven measures of highway infrastructure between 1989 and 2008, a feat accomplished by only eight other states. It considerably improved road conditions on rural interstates, urban interstates and rural arterials, while lowering congestion and fixing

many of its deficient bridges. The state also lowered its fatality rate and minimized the amount of narrow lanes on rural primary roads.

Missouri was a model of success in terms of its highway infrastructure. It virtually eliminated poor road conditions, reaching near-zero levels on rural interstates (the best improvement in the country), urban interstates (the second best improvement in the country), and rural arterials (0.1% of roads in poor condition). In addition, the state improved urban congestion by 34.7%, and it improved its deficient bridges by 50.5%.

Category Rank Showing Most Improvement 1989	<b>-2008</b>
Overall Performance and Spending Efficiency	3
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	7
Rural Interstate in Poor Condition	1
Rural Arterials in Poor Condition	7
Rural Arterials with Narrow Lanes	29
Urban Interstates in Poor Condition	2
Urban Interstate Congestion	5
Deficient Bridges	4
Fatality Rate	34
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	11

#### **Montana**





Between 1989 and 2008, Montana managed to improve in six key metrics of highway infrastructure, and did not worsen in any. Across the board, the state improved road conditions, seeing fewer roads in poor condition among rural interstates, urban interstates and rural arterials. The state

improved its deficient bridges and slightly improved its fatality rate, while also lowering the amount of narrow lanes on its rural primary roads.

Montana was able to take care of road conditions, exceeding the national average improvement among rural interstates, urban interstates and rural arterials (rural arterials, for instance, dropped from 16.7% in poor condition to 0%, the second biggest improvement in the country). The state maintained urban congestion at 0% between 1989 and 2008, a difficult feat. One cause for concern was that the highway fatality rate only improved by 0.07, the second lowest improvement in the country. The state had the worst fatality rate in the country in 2008 at 2.12 fatalities per 100 million vehicle miles.

Category Rank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	5
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	24
Rural Interstate in Poor Condition	8
Rural Arterials in Poor Condition	2
Rural Arterials with Narrow Lanes	15
Urban Interstates in Poor Condition	15
Urban Interstate Congestion	30
Deficient Bridges	31
Fatality Rate	49
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	35

#### **Nebraska**





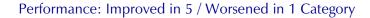
The state of Nebraska was able to improve in all seven categories of highway infrastructure between 1989 and 2008. It significantly improved the road conditions of its rural interstates, urban interstates and rural arterials, while also reducing urban congestion considerably and fixing

many of its deficient bridges. In addition, the state lowered its fatality rate and reduced the amount of narrow lanes on rural primary roads.

Nebraska improved above the national average in every single category between 1989 and 2008. Specifically, it improved urban interstate congestion by 27.8% and its percentage of deficient bridges dropped by 31.5 percentage points, the second biggest improvement in the country in that category.

Category Rank Showing Most Improvement 198	9-2008
Overall Performance and Spending Efficiency	4
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	28
Rural Interstate in Poor Condition	12
Rural Arterials in Poor Condition	6
Rural Arterials with Narrow Lanes	18
Urban Interstates in Poor Condition	17
Urban Interstate Congestion	9
Deficient Bridges	2
Fatality Rate	15
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease	e)29

#### Nevada





Between 1989 and 2008, Nevada improved on five key measures of its highways and only worsened on one measure. It significantly improved the condition of rural interstate, urban interstate and rural arterial roads, in addition to improving its deficient bridges. The state also managed to

considerably improve its fatality rate. It did, however, experience an increase in urban interstate congestion. Nevada's percentage of narrow lanes was unchanged throughout the time frame.

In road conditions specifically, Nevada experienced some of the best improvements in the country. The percentages of urban interstates, rural interstates and rural arterials in poor condition fell dramatically to zero or near-zero levels. The percentage of urban interstate roads in poor condition dropped by 46.2 percentage points, which was the biggest improvement in the country. The state also managed to improve its fatality rate by 1.71 fatalities per 100 million vehicle miles—far above the U.S. average improvement of 0.91.

CategoryRa	ank Showing Most Improvement 1989–200	18
Overall Performance and Spending Efficiency		21
State-Administered Highway Mileage (ranked largest to s	mallest based on system size in 2008)	39
Rural Interstate in Poor Condition		4
Rural Arterials in Poor Condition		8
Rural Arterials with Narrow Lanes	3	39
Urban Interstates in Poor Condition		. 1
Urban Interstate Congestion	3	39
Deficient Bridges	2	22
Fatality Rate		2
Total Disbursements Per Mile (1=biggest spending	increase, 50=biggest spending decrease) 2	20

# **New Hampshire**





New Hampshire improved on five key metrics of highway infrastructure between 1989 and 2008, and declined on two. Road conditions on rural interstates improved, but conditions worsened slightly on urban interstates and rural arterials. Urban interstate congestion improved, as did the

proportion of deficient bridges. The state was able to improve highway fatality rates and reduce the amount of narrow lanes on rural primary roads.

Although urban interstates and rural arterials saw slight deteriorations in road conditions (0.4 and 0.3 percentage points respectively), their 2008 percentages were still far better than national averages. Many other metrics hover around the national average improvements, except for urban congestion, which improved by 25.6% between 1989 and 2008.

Category	2008
Overall Performance and Spending Efficiency	27
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	45
Rural Interstate in Poor Condition.	12
Rural Arterials in Poor Condition	36
Rural Arterials with Narrow Lanes	24
Urban Interstates in Poor Condition	30
Urban Interstate Congestion	18
Deficient Bridges	24
Fatality Rate	30
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	30

### **New Jersey**





Between 1989 and 2008, New Jersey improved on five key measures of its highways, while declining in two categories. Although rural interstate road conditions improved, urban interstate and rural arterial road conditions deteriorated. However, urban congestion went down, deficient bridges

were slightly improved, the highway fatality rate improved, and the amount of narrow lanes on rural primary roads was drastically reduced.

Although the number of rural interstate roads in poor condition improved by 2.6%, New Jersey's 2008 score of 6.2% of rural interstate roads in poor condition was the third worst in the country, and well above the 2008 national average of just 1.93%. On the other hand, the state managed to reduce narrow lanes on rural primaries from 15.5% in 1989 to 0% in 2008, the fourth biggest decrease in the country. New Jersey was one of only eight states to reduce this category to zero.

CategoryRa	nk Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency		37
State-Administered Highway Mileage (ranked largest to sn	nallest based on system size in 2008)	47
Rural Interstate in Poor Condition		26
Rural Arterials in Poor Condition		45
Rural Arterials with Narrow Lanes		4
Urban Interstates in Poor Condition		44
Urban Interstate Congestion		22
Deficient Bridges		38
Fatality Rate		37
Total Disbursements Per Mile (1=biggest spending in	ncrease, 50=biggest spending decrease).	44

#### **New Mexico**





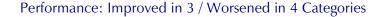
Between 1989 and 2008, New Mexico improved in six key categories of its highway infrastructure, while only worsening in one. The condition of rural interstate, urban interstate and rural arterial roads improved. Deficient bridges were also taken care of. In addition, the state

experienced a drastic reduction in highway fatalities and reduced the amount of narrow lanes on rural primaries. Urban congestion, however, increased slightly.

The percentage of roads in poor condition fell to zero or near-zero levels throughout the state. In addition, although urban congestion rose, it was only by 0.6 percentage points. Furthermore, the 2008 level of congestion in New Mexico—18.7%—was far lower than the national average of 48.6%. The other statistic that stood out was the fatality rate, which improved by 2.01 fatalities per 100 million vehicle miles. This was the biggest improvement in the entire country.

Category Rank Showing Most Improvement 19	989–2008
Overall Performance and Spending Efficiency	15
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	20
Rural Interstate in Poor Condition	33
Rural Arterials in Poor Condition	27
Rural Arterials with Narrow Lanes	16
Urban Interstates in Poor Condition	20
Urban Interstate Congestion	33
Deficient Bridges	37
Fatality Rate	1
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	ase)41

## **New York**





New York was only able to improve on three measures of its highways between 1989 and 2008. It got worse on four. The percentage of roads in poor condition increased across the board, as road conditions deteriorated on rural interstates, urban interstates and rural arterials. In addition, the

amount of narrow lanes on rural primary roads increased considerably. On the flip side, urban congestion in New York actually decreased, and the state managed to reduce its number of deficient bridges and lower its fatality rate.

More specifically, the number of rural interstates in poor condition increased by 6.1 percentage points, the second biggest deterioration in the country for that category. The percentage of narrow lanes on rural primary roads rose by 10.5 percentage points, the second worst score in the country. On the other hand, urban interstate congestion fell by 15.1 percentage points, far better than the national average of 4 percentage points.

Category	Rank Showing Most Improvement 1989	<b>-2008</b>
Overall Performance and Spending Efficiency		48
State-Administered Highway Mileage (ranked largest to	o smallest based on system size in 2008)	16
Rural Interstate in Poor Condition		47
Rural Arterials in Poor Condition		44
Rural Arterials with Narrow Lanes		49
Urban Interstates in Poor Condition		46
Urban Interstate Congestion		10
Deficient Bridges		26
Fatality Rate		8
Total Disbursements Per Mile (1=biggest spendir	ig increase, 50=biggest spending decrease)	) 17

#### **North Carolina**

## Performance: Improved in 4 / Worsened in 3 Categories



Although North Carolina improved in four categories of highway performance between 1989 and 2008, it also worsened in three. Road conditions worsened on rural and urban interstates, but improved on rural arterials. In addition, urban congestion decreased, deficient bridges were

fixed, and the highway fatality rate was reduced. Narrow lanes on rural primaries, however, became more numerous.

Even though North Carolina experienced generally worsened road conditions, the 2008 numbers were not as bad as the national average percentages for roads in poor condition. In addition, urban congestion dropped by 12.6 percentage points, which was significantly better than the national average of 4 percentage points.

CategoryRank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	38
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	1
Rural Interstate in Poor Condition	41
Rural Arterials in Poor Condition	18
Rural Arterials with Narrow Lanes	46
Urban Interstates in Poor Condition	36
Urban Interstate Congestion	14
Deficient Bridges	16
Fatality Rate	17
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	14

#### **North Dakota**





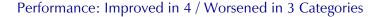
Between 1989 and 2008, North Dakota managed to improve in five categories of highway infrastructure, and did not get worse in any. Road conditions improved on rural interstates and rural arterials, and stayed constant on urban interstates. Urban congestion remained at zero, the

number of deficient bridges was drastically reduced, and the amount of narrow lanes on rural primaries was lowered. The highway fatality rate, however, only improved very slightly.

Roads in poor condition, which were few in number to begin with, reached zero or near-zero levels between 1989 and 2008. The amount of deficient bridges also dropped by 30.6 percentage points, the third best improvement in the country. The one concern was that the highway fatality rate only improved by 0.05, the smallest improvement in the country. Apart from that, North Dakota was one of the most successful states in the U.S. in terms of its highway infrastructure.

Category	2008
Overall Performance and Spending Efficiency	1
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	37
Rural Interstate in Poor Condition	34
Rural Arterials in Poor Condition	12
Rural Arterials with Narrow Lanes	12
Urban Interstates in Poor Condition	28
Urban Interstate Congestion	31
Deficient Bridges	3
Fatality Rate	50
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	10

#### Ohio





Ohio was able to improve in four key categories of highway infrastructure between 1989 and 2008, but it also worsened in three categories. Rural and interstate road conditions improved, but the state saw a slight increase in the number of rural arterial roads in poor condition. The highway fatality

rate improved and the quantity of narrow lanes on rural primaries was reduced. On the other hand, urban congestion rose considerably, while the percentage of deficient bridges went up.

Ohio improved road conditions significantly, especially among rural and urban interstates. The state was also very successful in getting rid of narrow lanes on its rural primaries, going from 22.9% narrow lanes in 1989 to just 10.9% in 2008, a drop of 12 percentage points (the fifth best improvement in the country). The only blight for Ohio was urban congestion, which rose by 15.2 percentage points, while the rest of the country lowered urban congestion by an average of 4 percentage points.

Category	Rank Showing Most Improvement 1989–20	08
Overall Performance and Spending Efficiency		44
State-Administered Highway Mileage (ranked largest to	smallest based on system size in 2008)	9
Rural Interstate in Poor Condition		28
Rural Arterials in Poor Condition		37
Rural Arterials with Narrow Lanes		5
Urban Interstates in Poor Condition		10
Urban Interstate Congestion		43
Deficient Bridges		43
Fatality Rate		18
Total Disbursements Per Mile (1=biggest spendin	g increase, 50=biggest spending decrease)	24

#### Oklahoma





Oklahoma improved on four measures of its highways between 1989 and 2008, but also worsened in three categories. Road conditions improved on rural arterial roads, but worsened on rural and urban interstates. The state successfully took care of a large proportion of its deficient bridges, as well

as lowering its fatality rate and reducing the number of narrow lanes on rural primary roads. On the other hand, urban interstate congestion rose by 10 percentage points.

The state experienced a deterioration of road conditions, especially among urban interstates, where the proportion of roads in poor condition increased by 9.9 percentage points, the fourth worst decline in the country. Another concern was that the highway fatality rate only improved by 0.43 fatalities per 100 million vehicle miles, the fourth lowest improvement in the U.S. Oklahoma was able, however, to reduce its number of deficient bridges by 45.3%.

Category	-2008
Overall Performance and Spending Efficiency	40
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	18
Rural Interstate in Poor Condition.	40
Rural Arterials in Poor Condition	25
Rural Arterials with Narrow Lanes	26
Urban Interstates in Poor Condition	47
Urban Interstate Congestion	40
Deficient Bridges	8
Fatality Rate	47
Total Disbursements Per Mile (1=biggest spending increase 50=biggest spending decrease)	34

## **Oregon**





Between 1989 and 2008, Oregon managed to improve on six key measures of highway performance, while only getting worse on one. Road conditions improved, with the proportion of roads in poor condition declining among rural interstates, urban interstates and rural arterials.

Additionally, urban interstate congestion was considerably alleviated, the highway fatality rate was improved, and the number of narrow lanes on rural primary roads was reduced. The one area of deterioration was a slight increase in the proportion of deficient bridges in the state.

Roads in poor condition in Oregon were reduced to near-zero levels between 1989 and 2008. Indeed, rural interstates, urban interstates and rural arterials saw reductions of roads in poor condition of 9.7, 11, and 3.2 percentage points respectively (better than the national averages in each case). The one area of decline, the proportion of deficient bridges, only had 23% of its bridges listed as deficient, below the national average of 23.7%. Aside from bridges, Oregon was very successful in its highway management.

Category	Rank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency		16
State-Administered Highway Mileage (ranked largest t	o smallest based on system size in 2008)	35
Rural Interstate in Poor Condition		11
Rural Arterials in Poor Condition		11
Rural Arterials with Narrow Lanes		21
Urban Interstates in Poor Condition		8
Urban Interstate Congestion		15
Deficient Bridges		41
Fatality Rate		10
Total Disbursements Per Mile (1=biggest spending	ng increase, 50=biggest spending decrease).	3

# **Pennsylvania**





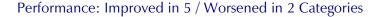
Pennsylvania improved on six key measures of its highways and only declined in one category between 1989 and 2008. Road conditions improved across the board, with improvements on rural interstates, urban interstates and rural arterials. While urban interstate congestion did get

worse, the state's proportion of deficient bridges was slightly reduced, the highway fatality rate was improved, and the quantity of narrow lanes on rural primary roads was lowered.

The state was able to make numerous improvements between 1989 and 2008, but many of these improvements were near or below national average improvements. One cause for concern was urban interstate congestion, which increased 5.3 percentage points. Nonetheless, Pennsylvania's 2008 level of 42.3% of its urban interstates congested was still below the 2008 national average of 48.6%.

CategoryRank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	20
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	4
Rural Interstate in Poor Condition	17
Rural Arterials in Poor Condition	22
Rural Arterials with Narrow Lanes	30
Urban Interstates in Poor Condition	25
Urban Interstate Congestion	36
Deficient Bridges	40
Fatality Rate	26
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	36

#### **Rhode Island**





Between 1989 and 2008, Rhode Island improved in five categories of highway performance and got worse in two. Rural and urban interstate roads in poor condition were fully taken care of; the percentage of rural arterial roads in poor condition fell slightly too. In addition, the highway

fatality rate was improved and the number of narrow lanes on rural primaries was considerably lowered. However, urban congestion went up 7 percentage points and the proportion of deficient bridges rose 6.3 percentage points.

Rural and urban interstate roads in poor condition fell by 23.8 and 20.4 percentage points respectively, among the best improvements in the country. Furthermore, the percentage of narrow lanes on major rural primary roads dropped by 20.5 percentage points, the second best improvement in the country. Rhode Island made significant progress in road management between 1989 and 2008.

Category	Rank Showing Most Improvement 1989–2	2008
Overall Performance and Spending Efficiency		34
State-Administered Highway Mileage (ranked largest to	o smallest based on system size in 2008)	49
Rural Interstate in Poor Condition		2
Rural Arterials in Poor Condition		16
Rural Arterials with Narrow Lanes		2
Urban Interstates in Poor Condition		4
Urban Interstate Congestion		38
Deficient Bridges		47
Fatality Rate		39
Total Disbursements Per Mile (1=biggest spendir	ng increase, 50=biggest spending decrease)	45

#### **South Carolina**





South Carolina improved on six key measures of its highways between 1989 and 2008, and only got worse in one category. Roads in poor condition were fixed throughout the state, with improvements on rural interstates, urban interstates and rural arterials. Urban interstate congestion

was reduced significantly, the highway fatality rate was improved, and the quantity of narrow lanes on rural primaries was lowered. The only deterioration was the proportion of deficient bridges, which increased by 2.1 percentage points.

Although the state did not see big improvements in the number of roads in poor condition, that was largely because there were so few bad roads to begin with. Indeed, by 2008 roads in poor condition had reached near-zero levels in South Carolina. The state, which had a high urban congestion rate in 1989, had reduced urban congestion by 30.4% by 2008.

CategoryRank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	12
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	5
Rural Interstate in Poor Condition.	15
Rural Arterials in Poor Condition	22
Rural Arterials with Narrow Lanes	25
Urban Interstates in Poor Condition	17
Urban Interstate Congestion	6
Deficient Bridges	42
Fatality Rate	9
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	22

#### **South Dakota**





Between 1989 and 2008, South Dakota improved in five categories of highway performance and got worse in just one. The state had mixed success with road conditions: rural arterials improved but urban interstates deteriorated and rural interstates did not change. South Dakota was more

successful in other categories: urban congestion improved considerably, the proportion of deficient bridges was lowered, the highway fatality rate was improved, and the quantity of narrow lanes on rural primary roads was reduced.

South Dakota, which had 10.9% of its urban interstates congested in 1989, was able to eliminate urban interstate congestion in the state by 2008. It was only one of four states to do so.

Category Rank Showing Most Improvement 1989	<del>)</del> –2008
Overall Performance and Spending Efficiency	13
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	32
Rural Interstate in Poor Condition.	35
Rural Arterials in Poor Condition	18
Rural Arterials with Narrow Lanes	18
Urban Interstates in Poor Condition	43
Urban Interstate Congestion	21
Deficient Bridges	21
Fatality Rate	20
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease	) 40

#### **Tennessee**





Tennessee managed to improve on all seven key measures of its highways between 1989 and 2008, one of only 11 states to do so. There were across the board improvements in the condition of rural interstate, urban interstate and rural arterial roads. Urban congestion and the proportion of

deficient bridges in the state were significantly improved. The state was additionally able to improve its highway fatality rate and minimize the amount of narrow lanes on its rural primary roads.

Tennessee was particularly successful in taking care of its roads, improving road conditions on rural interstates, urban interstates and rural arterials. In fact, the proportion of urban interstate roads in poor condition fell by 16 percentage points, the fifth biggest improvement in the country. Furthermore, as well as improving in all seven categories, Tennessee eclipsed the national average improvements in many cases, making it one of the most successful states in the U.S. in terms of highway infrastructure.

Category Rank Showing Most Impro	vement 1989–2008
Overall Performance and Spending Efficiency	7
State-Administered Highway Mileage (ranked largest to smallest based on system size in	n 2008)17
Rural Interstate in Poor Condition	19
Rural Arterials in Poor Condition	15
Rural Arterials with Narrow Lanes	9
Urban Interstates in Poor Condition	5
Urban Interstate Congestion	19
Deficient Bridges	9
Fatality Rate	23
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spend	ling decrease)48
Rural Arterials with Narrow Lanes Urban Interstates in Poor Condition Urban Interstate Congestion Deficient Bridges Fatality Rate	

#### **Texas**





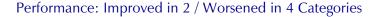
Between 1989 and 2008, Texas improved in six categories of highway performance and only declined in one. The state reduced the proportion of its rural interstate, urban interstate and rural arterial roads in poor condition. In addition, urban interstate congestion fell slightly, the

proportion of deficient bridges was improved, and the highway fatality rate was reduced. The only failure was an increase of 2.2 percentage points in narrow lanes on rural primary roads.

The improvement in road conditions on Texas's rural interstates, urban interstates and rural arterials throughout the state between 1989 and 2008, meant that the state's 2008 levels were better than national averages. Although the state saw an increase in the number of narrow lanes on rural primaries, its 2008 percentage of narrow lanes was only 7.8%, below the national 2008 average of 9.6%.

CategoryRa	nk Showing Most Improvement 1	1989–2008
Overall Performance and Spending Efficiency		17
State-Administered Highway Mileage (ranked largest to sn	nallest based on system size in 2008)	2
Rural Interstate in Poor Condition		30
Rural Arterials in Poor Condition		20
Rural Arterials with Narrow Lanes		44
Urban Interstates in Poor Condition		19
Urban Interstate Congestion		29
Deficient Bridges		25
Fatality Rate		40
Total Disbursements Per Mile (1=biggest spending in	ncrease, 50=biggest spending decre	ase)1

## **Utah**





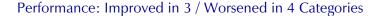
Between 1989 and 2008, Utah only improved on two measures of highway performance. It declined in four categories. Road conditions deteriorated on rural interstates, urban interstates and rural arterials, while the proportion of deficient bridges increased. On the other hand, the highway

fatality rate was improved and urban interstate congestion was reduced by 13.5 percentage points.

Although Utah suffered worse road conditions between 1989 and 2008, this was only a marginal deterioration (Utah had almost no roads in poor condition in 1989). The state's 25% reduction in urban congestion was far better than the national average improvement of just 7.6%.

Category	-2008
Overall Performance and Spending Efficiency	47
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	40
Rural Interstate in Poor Condition.	42
Rural Arterials in Poor Condition	39
Rural Arterials with Narrow Lanes	39
Urban Interstates in Poor Condition	34
Urban Interstate Congestion	13
Deficient Bridges	44
Fatality Rate	12
Total Disbursements Per Mile (1=biggest spending increase 50=biggest spending decrease)	21

#### **Vermont**





Between 1989 and 2008, Vermont improved on three metrics of highway infrastructure, and got worse on four. Although rural interstates in poor condition improved, urban interstates deteriorated significantly and rural arterials slightly declined. Urban interstate congestion increased, along

with the number of narrow lanes on rural primaries. However, Vermont did successfully lower its proportion of deficient bridges, in addition to improving its highway fatality rate.

Vermont's success in taking care of its roads was mixed: the state managed to reduce its proportion of rural interstates in poor condition by 8.4 percentage points, but at the same time it increased the proportion of urban interstates in poor condition by 14.6 percentage points.

Category	-2008
Overall Performance and Spending Efficiency	46
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	48
Rural Interstate in Poor Condition	14
Rural Arterials in Poor Condition	41
Rural Arterials with Narrow Lanes	47
Urban Interstates in Poor Condition	48
Urban Interstate Congestion	35
Deficient Bridges	23
Fatality Rate	16
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease)	26

## Virginia



Performance: Improved in 7 Categories

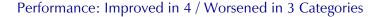
Virginia improved on all seven key measures of highway performance between 1989 and 2008, and was one of only 11 states to experience such sweeping improvements. The state significantly reduced its proportion of urban interstate, rural interstate and rural arterial roads in poor condition.

In addition, it vastly reduced urban interstate congestion, reduced its proportion of deficient bridges, lowered its highway fatality rate, and slightly reduced its proportion of narrow lanes on rural primary roads.

Virginia was one of the most successful states in the country in terms of its highway infrastructure. The state lowered its proportion of roads in poor condition to near-zero levels across the board. Its improvement in urban interstate congestion was also considerable, with 64.8% of its urban interstates congested in 1989 compared to just 37.9% in 2008, a drop of 26.9 percentage points. This was the second highest improvement in the country in urban congestion.

Category Rank Snowing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	2
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	3
Rural Interstate in Poor Condition	7
Rural Arterials in Poor Condition	5
Rural Arterials with Narrow Lanes	38
Urban Interstates in Poor Condition	9
Urban Interstate Congestion	3
Deficient Bridges	33
Fatality Rate	38
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	38

## Washington





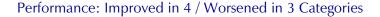
Between 1989 and 2008, the state of Washington improved in four categories of highway infrastructure, but got worse in three. The decline was in road conditions: the state experienced an increased proportion of rural interstate, urban interstate and rural arterial roads in poor condition.

However, urban interstate congestion was significantly reduced, the proportion of deficient bridges was minimized, the highway fatality rate was improved, and the proportion of narrow lanes on rural primary roads was lowered.

Although the state experienced worse road conditions in 2008 as compared with 1989, most of this deterioration was marginal. The 2008 percentages of roads in poor condition in Washington remained below national averages for urban interstates and rural arterials. The state's improvement in urban interstate congestion—19.4 percentage points—was far above the national average improvement of 4 percentage points.

CategoryRank Showing Most Improvement 1989-	-2008
Overall Performance and Spending Efficiency	42
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	12
Rural Interstate in Poor Condition	45
Rural Arterials in Poor Condition	35
Rural Arterials with Narrow Lanes	26
Urban Interstates in Poor Condition	31
Urban Interstate Congestion	7
Deficient Bridges	34
Fatality Rate	27
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending decrease).	4

## **West Virginia**





West Virginia improved on four key measures of highway performance between 1989 and 2008, but also got worse in three categories. Although the state did manage to improve its percentage of urban interstates in poor condition, the state of its rural interstates and rural arterials deteriorated.

Additionally, the proportion of narrow lanes on rural primaries increased considerably. West Virginia was successful in some categories, however. Urban congestion was vastly reduced, the percentage of deficient bridges was significantly improved, and the highway fatality rate was lowered.

According to the data, the state dropped its urban interstate congestion by 14.7 percentage points to just 7.5% in 2008. Additionally, West Virginia had the highest proportion of deficient bridges in 1989 at 61.3% and improved in this category by 24.9 percentage points. One source of failure was the state's proportion of narrow lanes on rural arterials, which increased by 11.9 percentage points, the worst decline in the country in this category.

CategoryRank Showing Most Imp	000 provement 1989–2008
Overall Performance and Spending Efficiency	39
State-Administered Highway Mileage (ranked largest to smallest based on system size	ze in 2008)6
Rural Interstate in Poor Condition	38
Rural Arterials in Poor Condition	46
Rural Arterials with Narrow Lanes	50
Urban Interstates in Poor Condition	14
Urban Interstate Congestion	11
Deficient Bridges	6
Fatality Rate	6
Total Disbursements Per Mile (1=biggest spending increase, 50=biggest spending increase, 50=bigg	ending decrease)43

### **Wisconsin**





Between 1989 and 2008, Wisconsin improved its highways in all seven categories, one of only 11 states to do so. Road conditions considerably improved on rural interstates, urban interstates and rural arterials. Urban interstate congestion was improved, deficient bridges were fixed, the

highway fatality rate was lowered, and the proportion of narrow lanes on rural primary roads was significantly reduced.

Wisconsin experienced sweeping improvements in its highways between 1989 and 2008. For instance, the proportion of rural interstates in poor condition was reduced by 17 percentage points, the fifth best improvement in the country. Wisconsin's proportion of narrow lanes on rural primary roads was also significantly reduced, from 11% narrow lanes in 1993 to just 1% in 2008.

Category Rank Showing Most Improvement 1989–2	2008
Overall Performance and Spending Efficiency	9
State-Administered Highway Mileage (ranked largest to smallest based on system size in 2008)	22
Rural Interstate in Poor Condition.	5
Rural Arterials in Poor Condition	10
Rural Arterials with Narrow Lanes	6
Urban Interstates in Poor Condition	16
Urban Interstate Congestion	17
Deficient Bridges	17
Fatality Rate	28
Total Dishursements Per Mile (1=higgest spending increase 50=higgest spending decrease)	25

## **Wyoming**





Wyoming improved on four key measures of highway performance between 1989 and 2008. It got worse in two categories. Rural arterials in poor condition slightly improved, but rural and urban interstates in poor condition grew more numerous. The percentage of deficient bridges did

improve somewhat, along with the highway fatality rate and proportion of narrow lanes on rural primaries.

It is important to note that urban interstate congestion technically did not *improve* because it was already at zero in 1989, where it remained through 2008. Wyoming's highway fatality rate improved by only 0.53 fatalities per 100 million vehicle miles, while the rest of the country saw an average improvement of 0.91.

Categoryl	Rank Showing Most Improvement 1989–2	2008
Overall Performance and Spending Efficiency		24
State-Administered Highway Mileage (ranked largest to	smallest based on system size in 2008)	36
Rural Interstate in Poor Condition		38
Rural Arterials in Poor Condition		27
Rural Arterials with Narrow Lanes		35
Urban Interstates in Poor Condition		39
Urban Interstate Congestion		32
Deficient Bridges		39
Fatality Rate		45
Total Disbursements Per Mile (1=biggest spending	g increase, 50=biggest spending decrease)	37

# **About the Authors**

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