

The Fix We're In For: The State of Minnesota's Bridges

TRANSPORTATION FOR AMERICA

The Fix We're In For: The State of Minnesota's Bridges

Today, **one out of every 11 bridges** that motorists in Minnesota cross each day are likely to be deteriorating to some degree; and **8.8 percent** of bridges statewide are rated "structurally deficient" according to government standards, compared to 11.5 percent nationwide.

Out of 50 states and the District of Columbia, Minnesota ranks **34th worst** nationally in terms of the overall condition of the state's bridges. (1 being the worst, 51 being the best.)

As of 2010, Minnesota had **13,068** highway bridges: 3,651 of them owned by the state; 9,312 owned by local counties, cities and towns; and 105 owned by other entities, such as private business and federal agencies. **1,149** of those 13,068 bridges were structurally deficient.

Minnesota has **28 out of 87** counties where the average bridge condition is worse than the statewide average of 8.8%

Regardless of the amount of wear and tear experienced by a specific bridge, most bridges are designed to last roughly 50 years. The average age of bridges in the U.S. is 42 years old. Minnesota's average is **35.2 years old**. While Minnesota bridges are younger than the national average, a tidal wave of bridges will be reaching 50 over the next 20 years. Today, Minnesota already has almost **2,900** bridges that are older than 50 years. By 2030, that number could more than double to over **7,200**.

In 2008, Minnesota received **\$36 million** in federal funds for bridge repair and they **spent \$144 million**, or **16.2 percent** of all federal funds, on bridge upkeep. (It's possible to spend more on bridge repair than a state received because of other federal programs that can be shifted or "flexed" into bridge repair.) The U.S. average is **13 percent**.

Minnesota spent **\$205 million or 23 percent** of all federal transportation funds on new capacity. The U.S. average is **30 percent**.

National Overview

America's infrastructure is beginning to show its age. Our nation's roads, highways and bridges have increasingly received failing scores on maintenance and upkeep. The American Society of Civil Engineers has rated our country's overall infrastructure a "D" and our bridges a "C." For roads and highways, this manifests itself in rutted roadways, cracked pavement and abundant potholes, creating significant costs for drivers and businesses due to increased wear and tear on their vehicles. For the nation's bridges, lack of maintenance can result in the sudden closure of a critical transportation link or, far worse, a collapse that results in lost lives and a significant loss in regional economic productivity.

Despite billions of dollars in annual federal, state and local funds directed toward the maintenance of existing bridges, 69,223 bridges – representing more than 11 percent of total highway bridges – are classified as "structurally deficient," according to the Federal Highway Administration (FHWA.) "Structurally deficient" bridges require significant maintenance, rehabilitation or replacement. In addition, a number of bridges exceed their expected lifespan of 50 years. The average age of an American bridge is 42 years.

The maintenance backlog will only worsen as bridges age and costs rise. According to FHWA's 2009 statistics, \$70.9 billion is needed to address the current backlog of deficient bridges.¹ This figure will likely increase as many of our most heavily traveled bridges – including those built more than 40 years ago as part of the Interstate System – near the end of their expected lifespan.

The good news is that some states have worked hard to address the problem and have seen their backlog of deficient bridges shrink in number. The bad news is that, critical as these efforts are, they are not nearly enough. Two key problems persist: (1) An absence of real incentives and assurances at the federal level that fixing aging bridges is a top funding priority; (2) Federal investment in fixing the nation's infrastructure is not currently tied to performance and accountability measures, leaving Americans no concrete assurances of progress. As bridges continue to age and fall into disrepair, our nation's policymakers must make a greater commitment to maintaining and repairing these crucial assets.

Minnesota's Bridge Backlog

Out of 50 states and the District of Columbia, Minnesota ranks 34th nationally in terms of the overall condition of the state's bridges. (1 being the worst, 51 being the best.)

¹ SAFETEA-LU Funding Tables, FY2009, Table 3, Part 1, "Weighted Needs", p.27, <http://www.fhwa.dot.gov/safetealu/fy09comptables.pdf>

Today, one out of every 11 bridges that motorists in Minnesota cross each day are likely to be deteriorating to some degree; and 8.8 percent of bridges statewide are rated “structurally deficient” according to government standards, compared to 11.5 percent nationwide.

As of 2010, Minnesota had 13,068 highway bridges: 3,651 of them owned by the state; 9,312 owned by local counties, cities and towns; and 105 owned by other entities, such as private business and federal agencies.² Ownership of a particular bridge matters because it often determines which jurisdiction is responsible for maintenance and repair. Table 1 shows the number and average annual daily traffic³ on Minnesota's bridges.

What Qualifies a Bridge as “Structurally Deficient?”

Federal law requires states to inspect all bridges 20 feet or longer at least every two years. Bridges in “very good” condition may go four years between inspections, while those rated “structurally deficient” must be inspected every year.

Highway bridges have three components: 1) the **superstructure**, which supports the deck; 2) the **substructure**, which uses the ground to support the superstructure; and 3) the **deck**, which is the top surface of the bridge that cars, trucks and people cross. During inspection, each of these bridge features is given a rating between 0 and 9, with 9 signifying the best condition. Federal guidelines classify bridges as “**structurally deficient**” if one of the three key components is rated at 4 or less (poor or worse), meaning engineers have identified a major defect in its support structure or its deck.¹ If a bridge is rated “structurally deficient,” the bridge requires significant maintenance, rehabilitation or replacement. A state may restrict heavy vehicle traffic, conduct immediate repairs to allow unrestricted use or close the bridge to traffic until repairs can be completed.

*Sources: Federal Highway Administration. “Non-Regulatory Supplement.” U.S. Department of Transportation. http://www.fhwa.dot.gov/legsregs/directives/fapg/0650dsup.htm#N_2
Federal Highway Administration. “Conditions & Performance.” U.S. Department of Transportation, 2006.*

² In this analysis, we use only highway bridges, since that is all that the National Bridge Inspection Program requires states to report in the National Bridge Inventory. Limited data is available for pedestrian bridges

³ Average amount of traffic that crosses over the bridge each day.

Table 1: Overview of Minnesota Bridge Statistics

	State system	Local system	Other	Structurally Deficient Bridges	Total
Number of bridges	3,651	9,312	105	1,149	13,068
Bridge average annual daily traffic	43,521,640	7,616,793	116,095	2,436,031	51,254,528

Rural bridges often provide crucial access to jobs and medical services for residents in sparsely populated areas. Urban bridges, on the other hand, carry high volumes of traffic to and within regional economic centers. Most bridges in the National Highway System are in rural areas, but urban bridges carry more traffic. Nationally, rural bridges account for 77 percent of all bridges. However, the 23 percent of bridges in urban areas carry almost three-quarters of all national bridge traffic.⁴

Between 1992 and 2010, the number of vehicles traveling across structurally deficient bridges on a daily basis was virtually unchanged (-2 percent), despite billions of dollars spent annually on bridge construction and repair.⁵ An increasing number of American individuals and businesses rely on bridges that are subject to closure or weight restriction if increased maintenance and reconstruction are not undertaken — a potentially crippling impact on personal travel and freight movement.

Drivers in Minnesota are regularly traveling across heavily trafficked bridges with “poor” ratings — bridges that could become dangerous or closed without repair. Table 2 lists the most heavily used structurally deficient bridges throughout Minnesota, ranked by average annual daily traffic (ADT) counts.

⁴ Research and Innovative Technology Administration. Highway Bridges in the United States — An Overview. http://www.bts.gov/publications/special_reports_and_issue_briefs/special_report/2007_09_19/html/entire.html

⁵ T4 America's Analysis of FHWA's National Bridge Inventory Data. <http://www.fhwa.dot.gov/bridge/britab.cfm>.

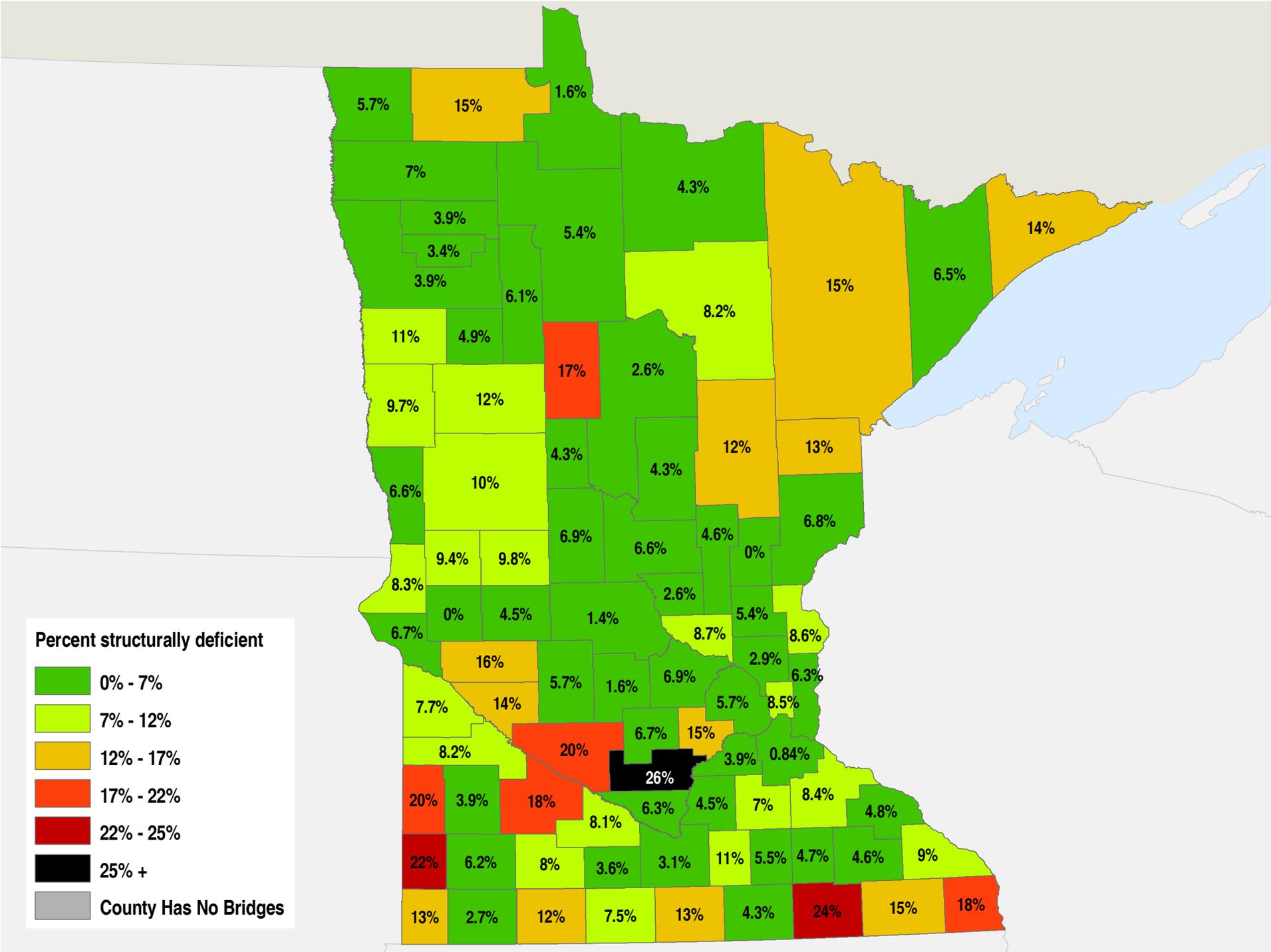
Table 2: Minnesota's Structurally Deficient Bridges with Highest Traffic Volumes

Rank	County	Bridge Facility	Crosses Feature	Proximity to	Average annual daily traffic
1	Ramsey County	I 35E	PENNSYLVANIA AVE	0.5 MI N OF E JCT TH 94	154,000
2	Ramsey County	I 35E	BNSF RR	0.7 MI N OF E JCT TH 94	149,000
3	Ramsey County	I 35E	Cayuga St & BNSF RR	0.9 MI N OF E JCT TH 94	148,000
4	Ramsey County	TH 36	LEXINGTON AVE(CSAH 51)	1.0 Mi East of Jct TH 51	85,000
5	Ramsey County	US 52(Lafayette)	MISS R, RR & STREETS	0.2 MI SE OF JCT TH 94	81,000
6	Ramsey County	US 52 (Lafayette)	Plato Blvd (CSAH 40)	1.0 MI SE OF JCT TH 94	74,000
7	Ramsey County	Lafayette (US 52)	UP RR & Eaton ST	0.2 MI N OF JCT TH 56	74,000
8	Hennepin County	I 35W SB	TH 65 NB	0.7 MI S OF JCT TH 94	48,500
9	St. Louis County	I 35	Recycle Way & Oneota St.	3.7 MI SW OF JCT TH 535	44,000
10	Hennepin County	I 494 SB	CP RAIL	2.5 MI N OF JCT TH 55	42,000

Minnesota has 28 out of 87 counties where the average bridge condition is worse than the statewide average. Table 3 reveals the five counties with the best and worst average bridge conditions. In Figure A, counties are shaded based on their overall percentage of “structurally deficient” bridges. Although smaller or more rural counties have fewer bridges than more populated counties, this measurement allows for cross-comparison between counties of various sizes.

Table 3: Counties in Minnesota With Best and Worst Average Bridge Conditions

County	# of Highway Bridges	# of Structurally Deficient Bridges	% Structurally Deficient
Sibley County	102	27	26.5%
Mower County	327	77	23.5%
Pipestone County	177	39	22.0%
Renville County	136	27	19.9%
Lincoln County	102	20	19.6%
Meeker County	62	1	1.6%
Stearns County	216	3	1.4%
Dakota County	237	2	0.8%
Kanabec County	78	0	0.0%
Stevens County	45	0	0.0%



Nobles County, Minnesota, despite having a low percentage of structurally deficient bridges, has eight bridges needing rehabilitation at a total cost of \$4 million. Last year, a section of bridge collapsed during road repairs. The bridge deck was not listed as structurally deficient, but a deteriorated outside pile on a pier line failed under the weight of construction equipment working on the bridge.

This collapse — like that of the infamous I-35 bridge due to defective gusset plates — shows that even when bridges are not identified as structurally deficient risks still exist.

Absent state or federal assistance, officials will be forced to choose which repairs to pursue. The county has secured \$150,000 in state funding from the most recent bonding bill, which it will use to replace the bridge on County State Aid Highway 1 (CSAH 1).

“We’ll just have less money to use on the roads,” Nobles County Public Works Director Stephen Schnieder told the *Worthington Daily Globe*. “That is a key transportation system for us, and we can’t leave that bridge there waiting for bonding money from the legislature.”

County officials say they have no choice but to prioritize their bridges — and this bridge in particular — because any gap in the system would undermine the entire network, especially for trucks and other heavy vehicles.

The community of Brewster has three major county roadways leading to it, and three important industries that serve the agricultural area: a soybean oil processing plant, a major grain elevator and a fertilizer plant that generate significant truck traffic during the year. Without three bridges that restrict truck traffic, long detours are needed to move products in and out of the community.

“More structures have been added to the deficiency list in the past year,” says Schnieder. “There isn’t sufficient funding available to have them replaced. Next year more bridges will be added to the list and the available routes for truckers to use will be reduced even more. It will not take too many more years and the trucks will not be able to get to their destinations without going through a maze of roadways to find the ones with bridges open to truck traffic.”

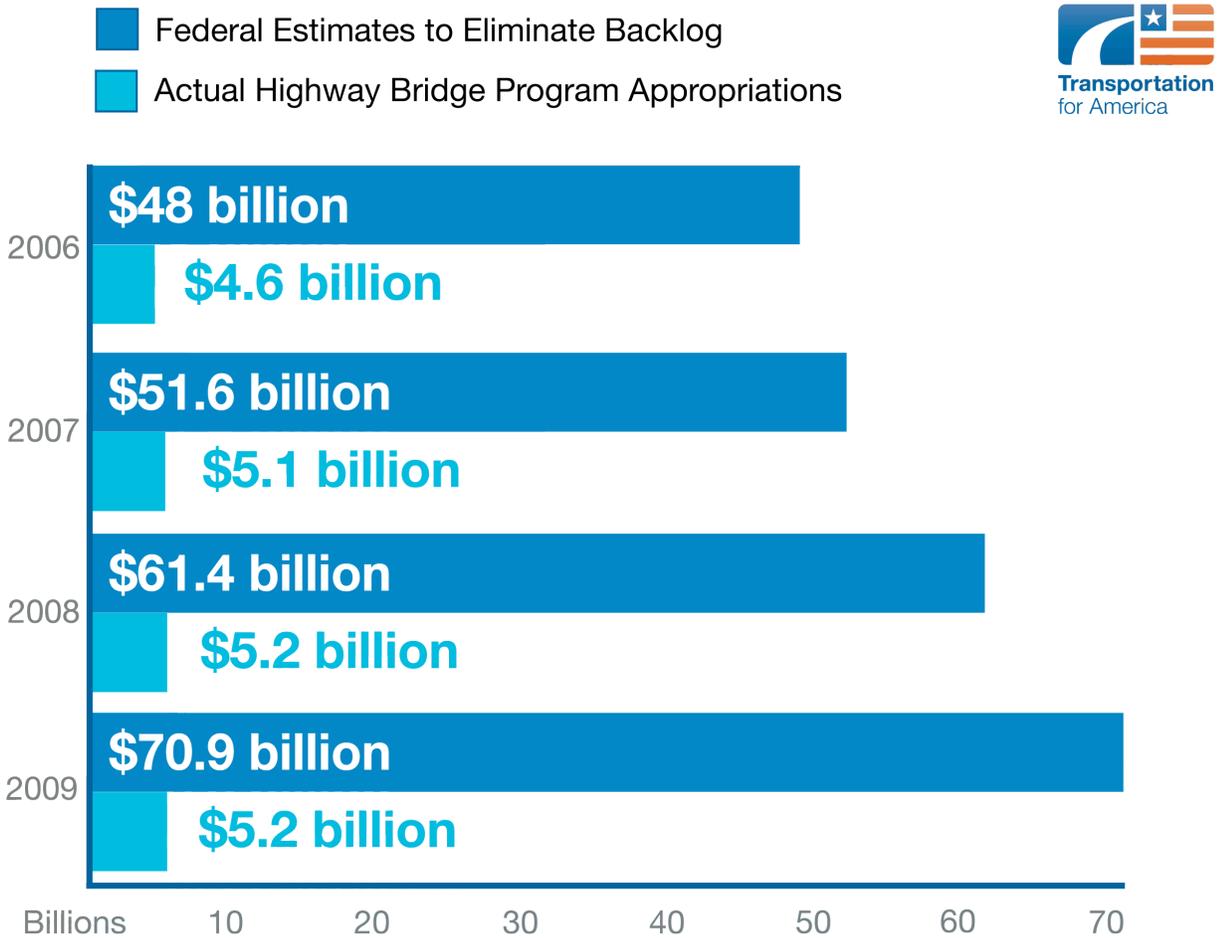
Minnesota did take a proactive step in 2008 by passing the Trunk Highway Bridge Improvement Program, providing \$2.5 billion in state funds over ten years to rehabilitate or reconstruct structurally deficient bridges, prioritizing those with higher traffic volumes and those classified as “fracture critical.”

The Minnesota County Engineers Association is in the midst of discussions about a potential 2011 bonding bill targeted at the bridges currently unfunded for repair.

Source: *Worthington Daily Globe*

Congress created the Federal Highway Bridge Program to fix and replace deficient bridges throughout the country, yet current funding is insufficient to keep up with the rapid deterioration rate of U.S. bridges. Figure B compares the size of the bridge program from 2006 through 2009 with FHWA estimates of the sums needed to catch up on the current backlog of repairs. While appropriations have increased by \$650 million, bridge needs over the same time period have increased by \$22.8 billion.

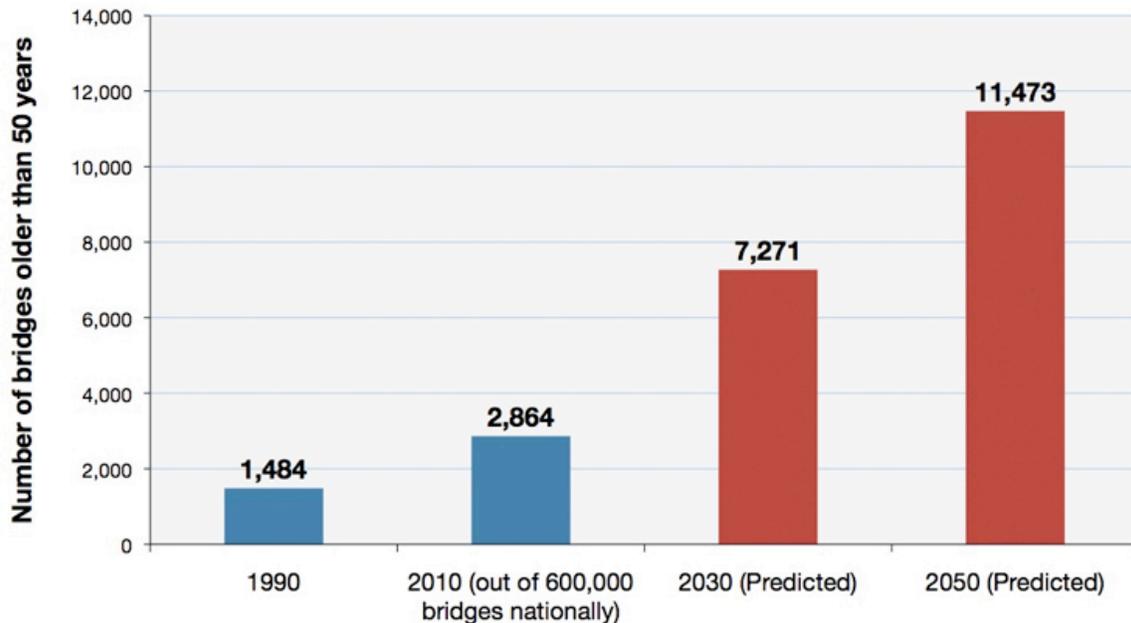
Figure B: Bridge Repair Funding Levels Versus FHWA Needs Estimate



The Cost of Aging Bridges

Regardless of the amount of wear and tear experienced by a specific bridge, most bridges are designed to last roughly 50 years. The average age of bridges in the U.S. is 42 years old. Minnesota's average is 35.2 years old. The number of "structurally deficient" bridges is virtually guaranteed to increase over time, as a wave of old bridges reach the end of their designed lives. Nationally, more than 185,000 highway bridges (out of 600,000 total) are now 50 years old or older. By 2030, that number could double without substantial bridge replacement, and it has the potential to triple by 2050. With one in five bridges built over 50 years ago, almost half of all the nation's bridges may require major structural investments within the next 15 years.⁶

Figure C: Minnesota Bridges over 50 Years Old



⁶ *Bridging the Gap: Restoring and Rebuilding the Nation's Bridges*. American Association of State Highway and Transportation Officials. July 2008. <http://roughroads.transportation.org/>

Fixing Them First: Florida's Success Story

By prioritizing repair and maintenance of their existing bridges and setting repair performance standards, Florida's bridges are some of the safest and highest-rated in the country. Florida has the second lowest percentage of poorly rated bridges of any state in the U.S: only 290 out of 11,899 total bridges, or 2.4 percent, are classified as structurally deficient.

How has Florida managed this? Preserving existing infrastructure is one of three core principles of the Florida Department of Transportation (FDOT), which is committed to protecting state investments. *Preservation is defined as:* ensuring that 80 percent of the pavement on the State Highway System meets department standards and that 90 percent of department-maintained bridges meet department standards.

In order to meet these targets, maintenance, repair and replacement projects receive funds before all other projects. The state uses data and analytical tools to determine the amount of funding that will be necessary to meet the department repair standards.

In addition, Florida has a specific state initiative to replace and repair bridges. The State Maintenance Office develops an annual list of bridges to be replaced with funds from the State Bridge Replacement Program, while the State Bridge Repair Program is used to take care of periodic maintenance and specified rehabilitation activities. Each district receives funding based on its portion of the total state bridge inventory and then also uses a computer program to prioritize and manage repair.

Florida's practices of prioritizing repair and maintenance, tracking repair needs, and setting measurable goals for success have helped the state have some of the best roads and bridges in the country.

The Tension Between Fixing the Old and Building the New

Under the existing federal program, transportation agencies have tended to delay needed repairs and preventive maintenance by directing funds toward new construction. In 2008, all states combined spent more than \$18 billion, or 30 percent of federal transportation funds, to build new roads or add capacity to existing roads. In that same year, states spent \$8.1 billion of federal funds on repair and rehabilitation of bridges, or about 13 percent of total funds. In 2008, Minnesota spent \$144 million, or 16.2 percent of total federal funds, on bridge upkeep.⁷ Though we need to continue

⁷ Ibid.

expanding our transportation system, the safety and preservation of existing bridges and roads must be a higher priority for our long-term economic competitiveness and fiscal sustainability.

States Can't Keep Up Without Federal Support

Bridges provide crucial access between regions and cities, linking workers to jobs, goods to markets and people to essential services. According to the FHWA, transportation agencies would need \$70.9 billion to overcome the current backlog of deficient bridges.⁸ This investment would be money well spent, as poor bridge conditions have major implications for traveler safety, mobility and economic activity.

Allowing roads and bridges to slip into disrepair ultimately costs state and local governments billions more than the cost of regular, timely repair. Over a 25-year period, deferring maintenance of bridges and highways can cost three times as much as preventative repairs. The backlog also increases safety risks, hinders economic prosperity and significantly burdens taxpayers. Preservation efforts can also extend the expected service life of a road for an additional 18 years, preventing the need for major reconstruction or replacement.⁹ It is imperative that Minnesota maximize precious tax dollars by extending the useful service life of roads and bridges before major rehabilitation or replacement is required.

⁸ SAFETEA-LU Funding Tables, FY2009, Table 3, Part 1, "Weighted Needs", p.27.
<http://www.fhwa.dot.gov/safetealu/fy09comptables.pdf>

⁹ American Association of State Highway and Transportation Officials. *Bridging the Gap: Restoring and Rebuilding the Nation's Bridges*. July 2008. <http://roughroads.transportation.org/>

The Consequences of Deferred Maintenance

Neglecting bridge repair and maintenance won't just cost more money down the road — the consequences can be far more immediate and disastrous. Deferred maintenance can result in crippling delays if a vital artery is closed, or even worse, if lives are put in danger as aging bridges become unsafe and at risk for collapse.

Crown Point Bridge Closing

On October 16, 2009, the Champlain/Crown Point bridge linking New York and Vermont was closed without warning. An inspection performed on the bridge as part of a rehabilitation or replacement process, set to start in 2012, revealed that two of the bridge's support piers were not structurally sound. The bridge was a vital economic connection between the states, carrying about 3,500 cars across each day. Thousands of daily commuters now have to drive about 100 miles out of their way to another bridge or pay at least \$8 a trip for a ferry. A month later, officials in Vermont and New York announced that the bridge was beyond repair and would have to be demolished. Jim Bonnie, with the New York Department of Transportation, told NPR, "We set aside about \$30 million a year for our bridge program, but we need on the order of \$100 million to maintain our 830 bridges. So, it's just an epidemic."

Minneapolis' I-35W Collapse

On August 1, 2007, the I-35W bridge in Minneapolis, Minnesota abruptly failed, falling into the Mississippi River, killing 13 people and injuring 145. Following the incident, the National Transportation Safety Board (NTSB) undertook a year-long investigation to determine the cause of the collapse. Though the "structurally deficient" bridge was being inspected every year, the NTSB found that the bridge design was flawed; its gusset plates were undersized and not meant to support the kind of loads the bridge was carrying. The cause of the collapse, in the NTSB's opinion, was the increased weight of the bridge itself due to previous modifications, and the concentrated weight of construction materials present on the deck of the bridge on the day of the collapse.

In addition to the safety imperative, investing in the construction, expansion and repair of our nation's transportation infrastructure creates jobs while laying the foundation for long-term economic prosperity. Repair work on roads and bridges generates 16 percent more jobs than new bridge and road construction.¹⁰

¹⁰ Smart Growth for America. *The Best Stimulus for The Money*. www.smartgrowthamerica.org/stimulus.html

For all these reasons, Congress repeatedly has declared the condition and safety of our bridges to be of national significance. However, the current federal program is not designed to ensure that transportation agencies have enough money and accountability to get the job done.

Recommendations

As our nation's bridges continue to age Congress needs to provide states with increased resources to repair and rebuild them. As the chart earlier in this report shows, the federal transportation program currently provides only a fraction of the necessary funds for maintenance and repair. Although a number of states are making repair of existing assets a priority, more support from the federal government is essential. The nation's bridges are aging and traffic demands are increasing. Though the size of the federal program has increased by 14 percent between 2006 and 2009, state-level needs increased by 47 percent.

Congress also needs to take steps to make sure that funds sent to states for bridge repair are used only for that purpose. Today states can transfer bridge funds for other purposes – even if they have bridges that are in need of repair. These funds should only be used for other purposes if the state's bridges are in a state of good repair. In addition, states should be given the flexibility to develop long-term programs that focus on both keeping bridges in good condition and fixing or replacing bridges that are deficient. Even in instances where it is more cost-effective to perform regular repair on a bridge to prevent it from becoming deficient, the current federal program only allows states to fix a bridge that is structurally deficient with a low sufficiency rating.

Some states across the country are already taking the right steps to repair their infrastructure. These best practices could serve as a model for other states and work with an improved federal program to fix our nation's bridges. Michigan, for example, has greatly increased the ratio of spending on routine maintenance and pavement preservation vis-à-vis capacity increases and/or new roads by attempting to meet a goal of 95 percent of freeways and 85 percent of non-freeways in good condition by 2007, a goal established by Michigan's State Transportation Commission in 1997. The Florida Department of Transportation is bound by state statute that lists preservation as the first of three "prevailing principles," and sets maintenance standards for pavement and bridges.

When our aging bridges are replaced, they must be designed to provide safe access for all who need to use them, whether they are in vehicles, on foot or bicycle, or using public transit.

Conclusion

We cannot continue to ignore our transportation network's vital maintenance needs. The costs of current practices are well known, as roads and bridges continue to display the effects of wear and age, suffering the results of underinvestment. Without a change in both spending levels and overall priorities, Minnesota will need \$157 from each driver to fix all of the structurally deficient bridges. As our bridges continue to age – more than 60 percent of all bridges will be past their useful life in 2030 – this figure will only grow.

Preserving Minnesota's existing transportation system is crucial to ensuring regional prosperity, safety and a higher quality of life. The economic and social cost of neglect is simply too high. It is time for our policymakers to shore up our infrastructure and ensure Americans get the most bang for our transportation buck.

Appendix A: Minnesota Counties, Ranked by Percentage of Structurally Deficient Bridges

County	Number of bridges	Number of structurally deficient bridges	Percentage of bridges that are structurally deficient	Bridge average annual daily traffic	Average annual daily traffic on SD bridges
Sibley County	102	27	26.50%	95,987	9,266
Mower County	327	77	23.50%	330,010	68,466
Pipestone County	177	39	22.00%	70,607	5,740
Renville County	136	27	19.90%	64,087	3,311
Lincoln County	102	20	19.60%	47,869	986
Houston County	160	29	18.10%	201,122	3,858
Redwood County	194	34	17.50%	103,739	10,470
Hubbard County	41	7	17.10%	52,981	3,965
Swift County	97	16	16.50%	42,246	3,837
Fillmore County	336	51	15.20%	159,136	14,740
Carver County	115	17	14.80%	692,895	44,211
St. Louis County	682	100	14.70%	2,118,740	150,948
Roseau County	137	20	14.60%	64,204	682

County	Number of bridges	Number of structurally deficient bridges	Percentage of bridges that are structurally deficient	Bridge average annual daily traffic	Average annual daily traffic on SD bridges
Cook County	49	7	14.30%	44,775	560
Chippewa County	122	17	13.90%	82,332	3,794
Carlton County	134	18	13.40%	417,615	15,174
Rock County	251	33	13.10%	184,989	17,300
Faribault County	222	28	12.60%	123,658	6,539
Jackson County	190	23	12.10%	95,999	2,530
Aitkin County	100	12	12.00%	112,710	2,508
Becker County	52	6	11.50%	63,138	637
Waseca County	75	8	10.70%	50,488	3,779
Norman County	151	16	10.60%	40,939	6,624
Otter Tail County	146	15	10.30%	280,513	15,480
Douglas County	41	4	9.80%	146,903	29,150
Clay County	227	22	9.70%	476,996	4,329
Grant County	32	3	9.40%	91,258	1,216
Winona County	223	20	9.00%	494,923	30,257
Sherburne County	46	4	8.70%	237,302	26,022
Chisago County	58	5	8.60%	183,830	6,170
Ramsey County	317	27	8.50%	7,890,402	987,272
Goodhue County	323	27	8.40%	607,160	33,251
Traverse County	120	10	8.30%	15,553	654
Yellow Medicine County	220	18	8.20%	96,494	1,487
Itasca County	159	13	8.20%	194,970	3,577
Brown County	111	9	8.10%	90,845	2,469
Cottonwood County	150	12	8.00%	53,876	4,125
Lac qui Parle County	169	13	7.70%	38,206	2,240

County	Number of bridges	Number of structurally deficient bridges	Percentage of bridges that are structurally deficient	Bridge average annual daily traffic	Average annual daily traffic on SD bridges
Martin County	161	12	7.50%	225,036	3,002
Rice County	142	10	7.00%	563,252	21,517
Marshall County	215	15	7.00%	46,546	1,908
Wright County	72	5	6.90%	488,524	56,560
Todd County	131	9	6.90%	100,418	4,553
Pine County	162	11	6.80%	273,537	27,782
Big Stone County	15	1	6.70%	12,889	4,200
McLeod County	75	5	6.70%	124,120	2,961
Wilkin County	197	13	6.60%	69,604	2,102
Morrison County	167	11	6.60%	229,682	2,214
Lake County	77	5	6.50%	87,697	7,543
Nicollet County	48	3	6.30%	138,823	8,199
Washington County	96	6	6.30%	1,603,385	96,974
Murray County	129	8	6.20%	29,872	350
Clearwater County	49	3	6.10%	22,854	2,991
Hennepin County	842	48	5.70%	17,452,513	491,462
Kandiyohi County	88	5	5.70%	139,923	1,146
Kittson County	159	9	5.70%	33,075	2,414
Steele County	128	7	5.50%	502,158	10,439
Beltrami County	92	5	5.40%	117,332	5,672
Isanti County	37	2	5.40%	80,517	2,680
Mahnomen County	41	2	4.90%	13,371	14
Wabasha County	147	7	4.80%	148,170	6,406
Dodge County	169	8	4.70%	148,770	8,929
Mille Lacs County	108	5	4.60%	293,803	13,135
Olmsted County	351	16	4.60%	1,755,790	33,349

County	Number of bridges	Number of structurally deficient bridges	Percentage of bridges that are structurally deficient	Bridge average annual daily traffic	Average annual daily traffic on SD bridges
Pope County	44	2	4.50%	17,259	3,345
Le Sueur County	67	3	4.50%	105,693	4,543
Crow Wing County	69	3	4.30%	155,800	269
Wadena County	70	3	4.30%	46,897	1,125
Freeborn County	141	6	4.30%	427,934	1,433
Koochiching County	94	4	4.30%	45,990	180
Pennington County	51	2	3.90%	49,866	6
Scott County	102	4	3.90%	1,017,301	3,193
Lyon County	233	9	3.90%	161,953	3,185
Polk County	259	10	3.90%	147,285	1,481
Watonwan County	167	6	3.60%	93,330	1,331
Red Lake County	58	2	3.40%	22,616	1,977
Blue Earth County	191	6	3.10%	561,765	3,078
Anoka County	138	4	2.90%	2,662,439	25,376
Nobles County	300	8	2.70%	160,479	1,151
Benton County	115	3	2.60%	239,478	93
Cass County	77	2	2.60%	119,543	3,840
Lake of the Woods County	61	1	1.60%	25,815	784
Meeker County	62	1	1.60%	49,180	24
Stearns County	216	3	1.40%	1,144,503	866
Dakota County	237	2	0.80%	3,032,938	32,625
Kanabec County	78	0	0.00%	80,844	
Stevens County	45	0	0.00%	23,997	

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This report was written by Lilly Shoup, Nick Donohue and Marisa Lang with additional contributions from Tanya Mejia, Sean Barry, David Goldberg and Stephen Lee Davis for Transportation for America. Andrew Amey provided invaluable assistance compiling and analyzing the National Bridge Inventory data and Greg Vernon provided the GIS work. Our thanks to the U.S. DOT and FHWA for their cooperation.

About Transportation for America

TRANSPORTATION FOR AMERICA (T4 America) is the largest, most diverse coalition working on transportation reform today. We believe it is time for a bold new vision — transportation that guarantees our freedom to move however we choose and leads to a stronger economy, greater energy security, cleaner environment and healthier America. We're calling for more responsible investment of our federal tax dollars to create a safer, cleaner, smarter transportation system that works for everyone.

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Executive Committee

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National Association of City Transportation
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National Association of Realtors
National Housing Conference
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PolicyLink
Rails-to-Trails Conservancy
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U.S. Public Interest Research Group