

Bridge Infrastructure

Compiled by Marian G. Rogers, October 2007

www.legis.wisconsin.gov/lrb/pubs/tapthepower.htm

Since the August 1, 2007, collapse of the I-35W bridge in Minneapolis, MN, a spotlight has been focused on bridge safety, maintenance, and inspection throughout the country. States have responded quickly to reevaluate bridges – particularly those categorized as deficient or obsolete. A “structurally deficient” bridge is restricted because of at least one deteriorating component and may have limits set restricting vehicle speed and weight. A “functionally obsolete” bridge is an older design that may not adequately accommodate current traffic volumes or vehicle sizes and weights. This bibliography provides links to information on this important subject.

Audit of Oversight of Load Ratings and Postings on Structurally Deficient Bridges on the National Highway System / U.S. Federal Highway Administration. March 21, 2006. (386.7/X2) Weight limits protect from stresses exceeding a bridge's capacity. www.oig.dot.gov/StreamFile?file=/data/pdfdocs/mh2006043.pdf

“Bridge Basics: A Spotter's Guide to Bridge Design” / Bruce S. Criddlebaugh, Bridges and Tunnels of Allegheny County and Pittsburgh, Pennsylvania, November 2, 2001. Illustrated with dozens of line drawings. <http://pghbridges.org/basics.htm>

“Bridge Collapse Points to National Problem” / Eric Kelderman, Stateline.org, August 3, 2007. www.stateline.org/live/details/story?contentId=229551

Bridge Formula Weights / U.S. Federal Highway Administration, Office of Freight Management and Operations. 2006. (386.7/X5) Paraphrases the provisions in 23 U.S.C. 127 and 23 CFR 658. <http://purl.access.gpo.gov/GPO/LPS76061>

Chapter Trans 212: Standards for the Inspection of Bridges in Wisconsin / Wisconsin Revisor of Statutes Bureau. www.legis.wi.gov/rsb/code/trans/trans212.pdf

“Data on Demand: Bridge Safety Resources” / Milwaukee Journal Sentinel, August 2, 2007. www.jsonline.com/story/index.aspx?id=641874

An Evaluation, Bridge Inspection Program, Department of Transportation / Wisconsin Legislative Audit Bureau. 2001. (386.7/W7c) A review of the complex bridge inspection program and recommendations for improvements. www.legis.wi.gov/lab/reports/01-17full.pdf

- ***“DOT: Bridges, Inspections Have Improved Since 2001 Audit” / Ryan J. Foley, Green Bay Press-Gazette, September 18, 2007.*** www.greenbaypressgazette.com/apps/pbcs.dll/article?AID=/20070918/GPG0101/709180621/1207

Federal Highway Administration's Oversight of Structurally Deficient Bridges / U.S. House Transportation and Infrastructure Committee. September 5, 2007. (386.7/X3) Statement of the Honorable Calvin L. Scovel III, Inspector General, U.S. Department of Transportation. www.oig.dot.gov/StreamFile?file=/data/pdfdocs/OIG_Final_Bridge_Hearing_Statement_090507.pdf

Freedom and Information: Assessing Publicly Available Data Regarding U.S. Transportation Infrastructure Security / Eric Landree, et al., Rand Corporation. 2007. (380.4/R15) www.rand.org/pubs/technical_reports/2007/RAND_TR360.pdf

“Governor Doyle Announces 24 Hour Monitoring of 15 Deck Truss Bridges in Wisconsin” / Carla Vigue, Office of the Governor, August 7, 2007. WisDOT to install “accelerometers.” This article lists deck truss bridges and their scheduled inspection dates, all in August 2007. www.wisgov.state.wi.us/journal_media_detail.asp?locid=19&prid=2838

- ***How Does an Accelerometer Work? / Bob Jonathan. August 30, 2006.*** <http://ezinearticles.com/?How-does-an-Accelerometer-Work?&id=285604>

Highway Bridges: Conditions and the Federal/State Role / U.S. Congressional Research Service. August 10, 2007. (386.7/X4) www.fas.org/sgp/crs/homesec/RL34127.pdf

Historic Highway Bridges in Wisconsin / Wisconsin Department of Transportation. 1996-1998. (386.7/W7a) 7 pts. in 3 volumes. Series prepared to assist WisDOT in fulfilling its historic preservation responsibilities. V.1: Stone and concrete arch bridges; V.2: Truss bridges; V.3: Movable bridges.

A History of Wisconsin Highway Development / A joint project of the Wisconsin State Highway Commission and the Public Roads Administration, Federal Works Agency. 1989. (Trans/h) (library use only) pt.1: 1835-1945, pt.2: 1945-1985. The history of bridges in Wisconsin is included. ⇒

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Bridge Infrastructure Continued

Informational Papers / Wisconsin Legislative Fiscal Bureau.
www.legis.wi.gov/lfb/Informationalpapers/info.html

- **Local Transportation Assistance Programs. Paper 43. (386.4/W7c2/2007)** Provides information on “programs that distribute state and federal funds for capital improvements on local roads, bridges, [etc.]” (page 1).
- **State Trunk Highway Program. Paper 42. (386.3/W7k1/2007)** The State Bridge Improvement Program is funded under the State Highway Rehabilitation Program.
- **Transportation Aid: General Transportation and Connecting Highway Aids. Paper 22. (386.4/W7c/2007)** Includes lift bridge aid reimbursements if on a connecting highway.
- **Transportation Finance. Paper 40. (386.4/W7c1/2007)** Discusses the three sources of Wisconsin transportation funding. Bridge assistance is one of the funded programs.

“Inspectors Still Rely On Old Techniques: Tap, Look and Listen” / Richard Meryhew, et al., *StarTribune.com*, August 4, 2007. www.startribune.com/10204/story/1344466.html

“National Bridge Inventory (NBI)” / U.S. Federal Highway Administration. Modified July 10, 2007.
www.fhwa.dot.gov/BRIDGE/nbi.htm

***Repairing and Reconstructing Disaster-Damaged Roads and Bridges* / U.S. Congressional Research Service. 2005. (386.3/X4)** <http://fpc.state.gov/documents/organization/53684.pdf>

***16th Annual Report on the Performance of State Highway Systems (1984-2005)* / Reason Foundation. 2007. (386.3/R23)**
www.reason.org/ps360.pdf

“State by State: ‘Deficient’ or ‘Obsolete’ Bridges” / *MSNBC.com*, August 2, 2007. “As of 2005, 155,144 of the nation’s 592,473 bridges – or 26.2 percent – were rated structurally deficient or functionally obsolete.” Click on the map to get information on a specific state. www.msnbc.msn.com/id/20093413

“States Act Swiftly on Bridge Repairs” / Judy Keen, *USA Today*, September 3, 2007.
www.usatoday.com/news/nation/2007-09-03-bridges_N.htm

***Trends in Public Spending on Transportation and Water Infrastructure, 1956 to 2004* / U.S. Congressional Budget Office. August 2007. (380.4/X)** www.docuticker.com/?p=15568

***2006 Status of the Nation’s Highways, Bridges and Transit: Conditions and Performance* / U.S. Federal Highway Administration. www.fhwa.dot.gov/policy/2006cpr**

***2007 Report Card on Wisconsin’s Infrastructure* / American Society of Civil Engineers, Wisconsin Section. 2007. (331.8631/Am3)** <http://sections.asce.org/wisconsin/2007ReportCardCompleteReport.pdf>

“US DOT Information on the Minneapolis Bridge Collapse” / U.S. Department of Transportation. Updated August 7, 2007.
www.dot.gov/affairs/minnbridge.htm

***Wisconsin State Highway Plan, 2020* / Wisconsin Department of Transportation. 2000. (386.3/W7c6)** 2 pts. The *Summary Report* (part 1) is available online.
www.dot.wi.gov/projects/state/docs/hwy2020-plan.pdf

***Wisconsin Statutes, s. 84.17, Bridge Inspection and Inventory, and 84.18, Local Bridge Program* / Wisconsin Revisor of Statutes Bureau. www.legis.wi.gov/statutes/Stat0084.pdf**

Related Web Sites

American Association of State Highway and Transportation Officials: www.transportation.org Click on “U.S. Bridge Information.”

Minnesota Legislative Reference Library:
www.leg.state.mn.us/lrl/issues/bridges.asp
“Minneapolis Interstate 35W Bridge Collapse.”

TRIP – A National Transportation Research Group:
www.tripnet.org/roadsandbridges.htm “Roads and Bridges.”

U.S. Federal Highway Administration:
www.fhwa.dot.gov/bridge “Bridge Technology.” Links to bridge construction, inspection, rehabilitation, and many more resources.

U.S. House Transportation and Infrastructure Committee:
<http://transportation.house.gov> “Structurally Deficient Bridges on the National Highway System.”

U.S. Turner-Fairbank Highway Research Center:
www.tfhrc.gov/structur “Bridge and Structures Research and Development.”

University of Minnesota Libraries:
<http://govpubs.lib.umn.edu/bridge.phtml>
U.S. federal and Minnesota information on the I-35W bridge.

Wisconsin Department of Transportation, “Doing Business”:
www.dot.wi.gov/business/engrserv/structures/listserv.htm
“Bridge Manual Electronic Mailing List.”

Wisconsin Department of Transportation, “Programs for Local Government”: www.dot.wi.gov/localgov/highways
“Highways and Bridges.”

Wisconsin Department of Transportation, “Research & Library”: www.dot.wi.gov/library/research/reports/structures.htm “Structures.”

Wisconsin Highway Research Program: www.whrp.org/Research/Structures/structures.html “Structures.” The program “is intended to integrate ... research efforts ... to strategically improve Wisconsin’s highways and transportation system.”

Clippings: ([Library use only](#))

- Bridges: 386.7/Z (clippings prior to 1970 are on microfiche)