



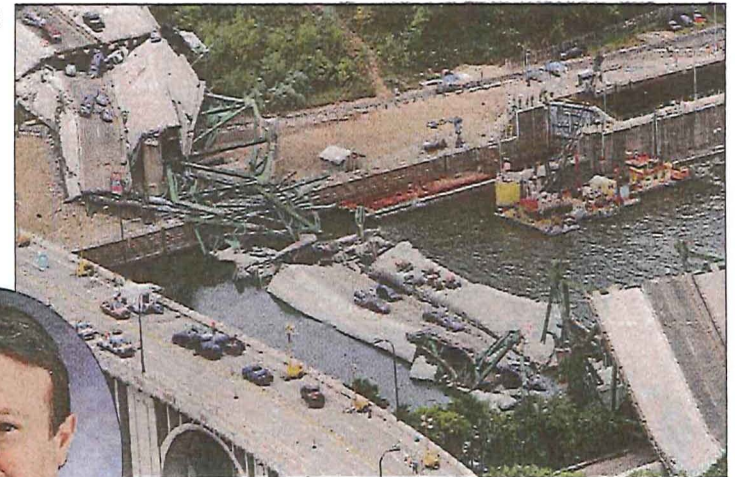
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COMMERCIAL REALESTATE

BRIDGE OF SIZE

Tappan Zee, like many other US bridges, is falling down...



Mandel Ngan/AFP/Getty Images

The August 2, 2007 bridge failure in Minnesota (right) caused 13 deaths. It's a tragedy that could be repeated on the Tappan Zee bridge (above) according to author Barry LePatner (inset.)



By LOIS WEISS

AN entirely new \$16 billion Tappan Zee Bridge can't come fast enough for Barry LePatner. The attorney and author of "Too Big To Fall, America's Failing Infrastructure and the Way Forward" (Foster, \$27.95) said he's been told by people in the know to avoid the two-mile long bridge that connects New York's Westchester and Rockland Counties.

The structure was also cited in the New York state comptroller's recent report as being in "dire need of replacement" yet no funding for a new bridge has so far been allotted in the state's five-year capital plan.

LePatner said the Tappan Zee has "lots of cracks and section loss and deep-seated corrosion," thereby threatening the lives of the 140,000 people who cross it every day.

"What are we waiting for, folks?" asks LePatner of a proposed replacement that to date, has not had one penny allocated for it. "I've talked to the experts and the Tappan Zee is 'fracture-critical' and structurally deficient and no one can say it won't go down. It could be [the day you are on it] — that's the day."

In the 1960s and 70s, tens of thousands of bridges were designed in a fracture-critical way, LePatner said. While it was cheap and fast, if one piece failed, there was no redundancy to hold up the bridge. In other words, the failure of any one of its supporting structural members could result in the collapse of the entire bridge.

According to LePatner, one in four bridges in the nation is rated

either poor, structurally deficient or structurally obsolete. "What is more scary," he said, "is by not attending to these bridges, we have lost track of how poorly maintained they are."

Since 1989 nearly 600 bridges across the country have failed. While, luckily, most haven't killed anybody, the August 2, 2007 bridge failure along Minnesota's I-35W sent 111 vehicles plunging into the Mississippi river and causing 13 deaths. LePatner said this could have been prevented with remedial work that experts had earlier recommended.

designed for 60,000 vehicles per day, and was later modified to have thicker decks, more lanes and newer, but heavier, safety medians and such. Additionally, today's vehicles weigh more. By 2007, 160,000 cars a day were using the bridge and its ongoing load far exceeded what the bridge had been designed for.

LePatner compared the Minnesota scenario to a watershed event in New York City, in 1988, when then Department of Transportation chief engineer Sam Schwartz was given a report on the Williamsburg Bridge that "frightened the Dickens out of him."

"Schwartz forced the city to close the Williamsburg Bridge and do everything it could to keep it from collapsing," LePatner said.

LePatner's research has discovered that in the US today, there are 7,980 bridges like the I-35W just waiting to fall down. Warned LePatner: "There is corrosion all through, they are cracked and crappy, and they are fracture-critical — it will be a disaster 8,000 times over."

While the total number of fracture-critical bridges averages 160 per state, more than 100 are in New York State. In New York City, aware of the dire situation, Mayors Rudolph Giuliani and Michael Bloomberg have already spent over \$3 billion fixing bridges.

Part of that money was spent on replacing the entire Willis Ave. Bridge last year. But the replacement of a part of the Kosciusko Bridge between Brooklyn and Queens that could cost \$1.7 billion has now been delayed by the state.

"The city spends over \$500 million a year on maintenance and

it's good for us we understand and get it," said LePatner.

A recent report by New York State Comptroller Thomas DiNapoli

found the state is concentrating on short-term fixes, not long term planning. The state spent \$63.2 billion on capital projects from 2000 to 2010. Additionally, another \$46.6 billion will be spent on capital infrastructure through 2014-2015, yet the comptroller says 42 percent of the state's bridges are considered deficient or obsolete.

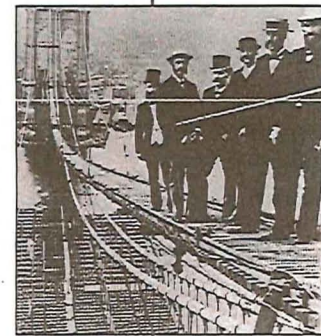
Most of the bridges in the US were built for a lifetime of 50 years and already over half of them have exceeded that lifetime.

LePatner also explained that if a bridge was built 20 years ago and \$2 million in maintenance was put in each year, the bridge would be as safe as the day it was built. But if the money was not allocated for maintenance, at the 20-year point it goes downhill so fast that instead of having spent \$40 million on maintenance, the bridge must be replaced for \$200 million. By about 25 years out, LePatner says, the cracks and corrosion get to a point where the bridge is simply not salvageable.

Currently, LePatner said, there are only a few area bridges where portions are seriously imperiled. These include a ramp on the Brooklyn Bridge and the Outerbridge Crossing. "The scary of all scaries is the Tappan Zee," insisted LePatner, "You shouldn't go over it any more than necessary."

For more information: TooBigToFall.com; tzbsite.com

BRIDGES OF NEW YORK



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There are 2,027 bridges in New York City, operated by the New York State Department of Transport, New York City Department of Parks and Recreation, the New York City Department of Environmental Protection, the

New York State Department of Transportation, Amtrak, the Port Authority of New York and New Jersey, and several units of the Metropolitan Transportation Authority (MTA).

New York City's first bridge was the King's Bridge, built in 1693 from stone and timber, connecting Manhattan and the Bronx. It was demolished in 1917.

The oldest existing Manhattan bridge open to passengers or vehicles is the Brooklyn Bridge (pictured above), which opened in 1883. The world-famous bridge, designed by John Augustus Roebling and completed by his son Washington, was the longest suspension bridge in the world at the time, with a main span of 1,595.5 feet. The Williamsburg Bridge, completed in 1903, took the record away, at 1,600 feet long. The title is now held by the 1998 Akashi Kaikyo bridge in Japan at 6,532 feet.



A TO ZEE, BY THE NUMBERS

- The bridge opened in 1955 and was constructed during the Korean War, at a time of materials shortages
- The bridge is 3.1 miles long. The cantilever span is 1,212 feet
- 140,000 to 170,000 vehicles traverse the bridge every day, up from 18,000 when it opened
- An average of 3 traffic accidents a day occur on the bridge
- Replacement cost: \$16 billion

But state honchos only wanted to spend their money on new projects, not for maintenance.

"They found \$3.5 million in the budget to re-deck the bridge, but failed to pass along to the contractor that it was in terrible shape," said LePatner. "The contractor piled on 500,000 pounds of construction materials and the bridge went straight down."

That 1967 bridge had been