



ARE TENNESSEE BRIDGES SAFE?

By Ed Wasserman, TDOT Director of Structures Division

In the wake of the recent tragic bridge collapse in Minneapolis, the citizens of Tennessee are asking the question, "How safe are our bridges?" This is a fair question deserving of a response. The answer is that all bridges open to traffic on our public roads are safe and can be crossed with confidence. Those bridges deemed not to be safe are ordered closed until such time as repairs, rehabilitation or replacement can be accomplished.

TDOT's bridge inspection program is rated among the best in the nation and has been cited for its progressive stance. Under this program, TDOT inspects all 19,688* bridges on public roads in the state of Tennessee at a minimum of every two years. Of this total, 8,100* are state-owned and maintained. The remaining 11,588* are owned by cities and counties. TDOT has 17 seven-man inspection teams working year-round at an annual cost of \$7.6 million. TDOT has never failed to be certified according to the National Bridge Inspection Standards (NBIS).

"Structurally deficient" is a term heard often over the past few days. It is used to indicate that components of a bridge may be damaged or deteriorated, but not necessarily to a point where safety is an issue. Since 1982, TDOT has spent over \$1.5 billion to replace or rehabilitate both state- and locally-owned bridges, reducing the number of "structurally deficient" state-owned bridges from 791 to 334, and off-system, locally-owned bridges from 5,919 to 1,195. Today, only 4.1 percent of state-owned bridges are classified as structurally deficient and only 6.1 percent of off-system bridges are so classified. These figures reflect the good, overall health of Tennessee's bridges, which rank in the top 25 percent in the nation and are tied with Florida for best in the Southeast.

Annually, Tennessee spends \$39 million on repairs and preventive maintenance on its inventory of 8,100 bridges. When coupled with the average \$60 million spent annually in past years for rehabilitation and replacement, the TDOT spends around \$100 million annually on its bridge inventory, valued at \$4 billion. The department also provides about \$10 million to cities and counties for bridge replacement on their roads.

Despite the past strides made in improving the condition of Tennessee's bridges, some disturbing trends are clouding the future. Twenty-two percent of the state-owned bridges are 50 years or more in age and 55 percent of the inventory is over 30 years old. With age and traffic increasing, resources are shrinking. TDOT has lost \$22 million in Federal bridge funds in the last two years, which has forced the department to push back the schedules of some bridge replacement projects. State gas tax revenues are currently growing at an average of 1.5 percent annually, while bridge construction costs have risen 25 percent in the last three years. Efficiencies in the overall bridge program may overcome some of the foreseeable shortfalls, but the challenge still exists in balancing new initiatives with maintenance of infrastructure, such as bridges.

*These numbers include bridges inspected but, shorter in length than FHWA-defined bridges.

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