

# Update on Oklahoma Bridges and Highways by the Oklahoma Department of Transportation



August 10, 2010

# Oklahoma Bridges

## Oklahoma's Transportation Infrastructure

### Condition and Needs Summary

Oklahoma's bridge problem is well recognized. Of the more than 6,800 bridges on the state highway system, 1,379 are either too narrow to support today's traffic or have structural deficiencies, or both. In January of 2006, approximately 137 had restricted load limits. The Oklahoma Department of Transportation has accelerated our bridge replacement efforts through a focused and concerted effort made possible by the funding provisions of Senate Bill 1288 and House Bill 1176. This effort has allowed the department to replace or rehab over 530 bridges since January 2006. The current 2011-2018 Construction Work Plan includes the replacement or major rehabilitation of 650 bridges which includes all the remaining load posted bridges.

#### **Proposed bridge replacements / major rehabilitation in the 8 Year Construction Work Plan.....650**

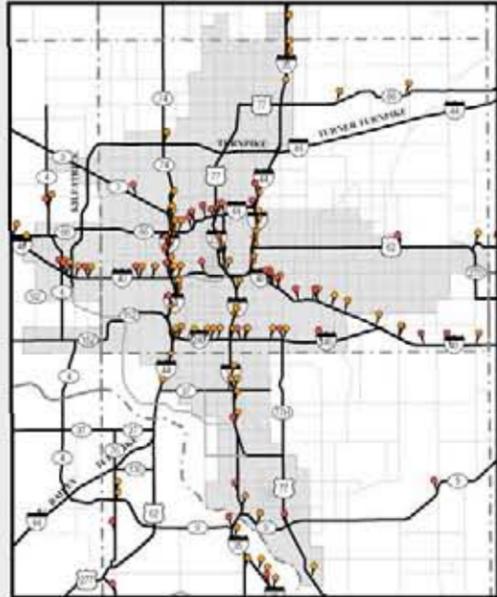
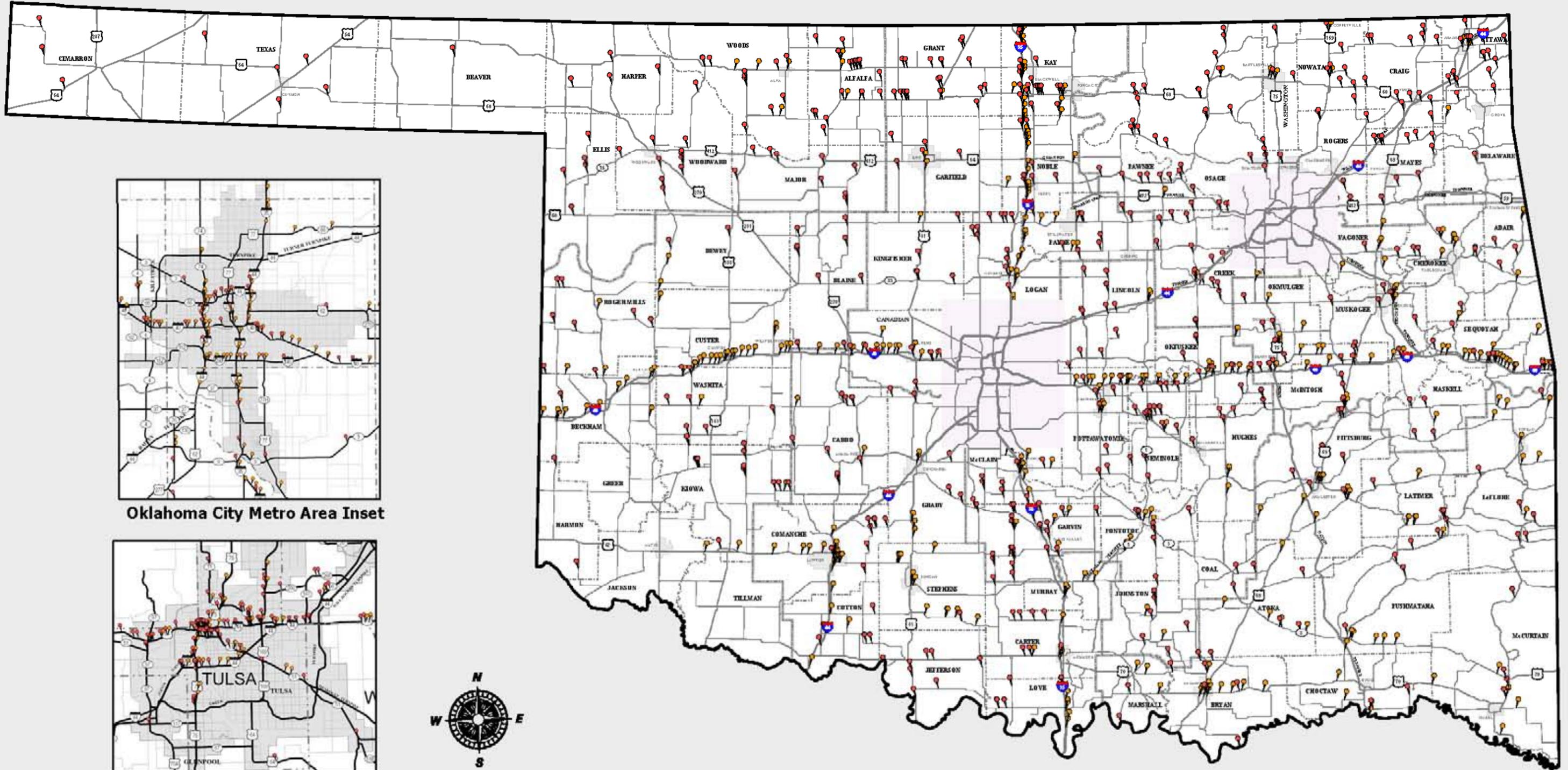
The Oklahoma Department of Transportation has always envisioned the development of an aggressive bridge rehabilitation program formulated to effect badly needed improvements on marginal bridges, but had never had the opportunity to earmark the funding required to launch a meaningful initiative. The department has instituted a bridge specific program designed to be flexible and somewhat reactive. This bridge rehabilitation program allows the department to stretch our scarce regular maintenance dollars farther while slowing or stemming further deterioration or functional decline until such time that our resources will allow a full replacement project.

#### **Annual investment in bridge rehabilitation.....\$20 M**

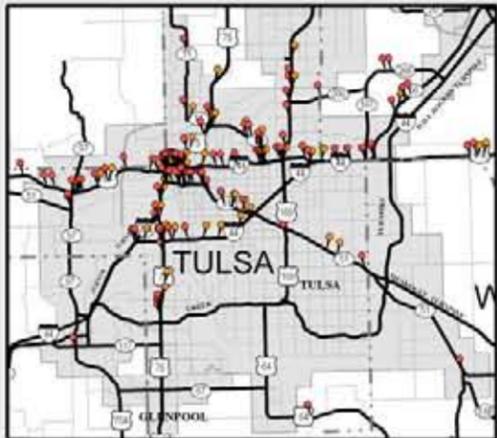
While these efforts exemplify the wise investment of these newly available resources, today the department recognizes there are 345 bridges not in the current 2011-2018 Construction Work Plan in need of complete rehabilitation or replacement. Also, we must consider that a continuing long term annual bridge replacement commitment will be required to keep pace with the projected aging and deterioration rates of our current inventory.

#### **Recognized critical bridges not funded.....345**

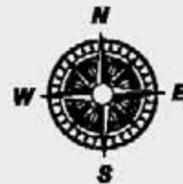




Oklahoma City Metro Area Inset



Tulsa Metro Area Inset



OKLAHOMA DEPARTMENT OF TRANSPORTATION  
 PLANNING & RESEARCH DIVISION  
 GIS MANAGEMENT BRANCH  
 200 N. E. 21ST STREET  
 OKLAHOMA CITY, OKLAHOMA 73105

-  Structurally Deficient (783)
-  Functionally Obsolete (596)
-  County Line
-  2000 Urban Area

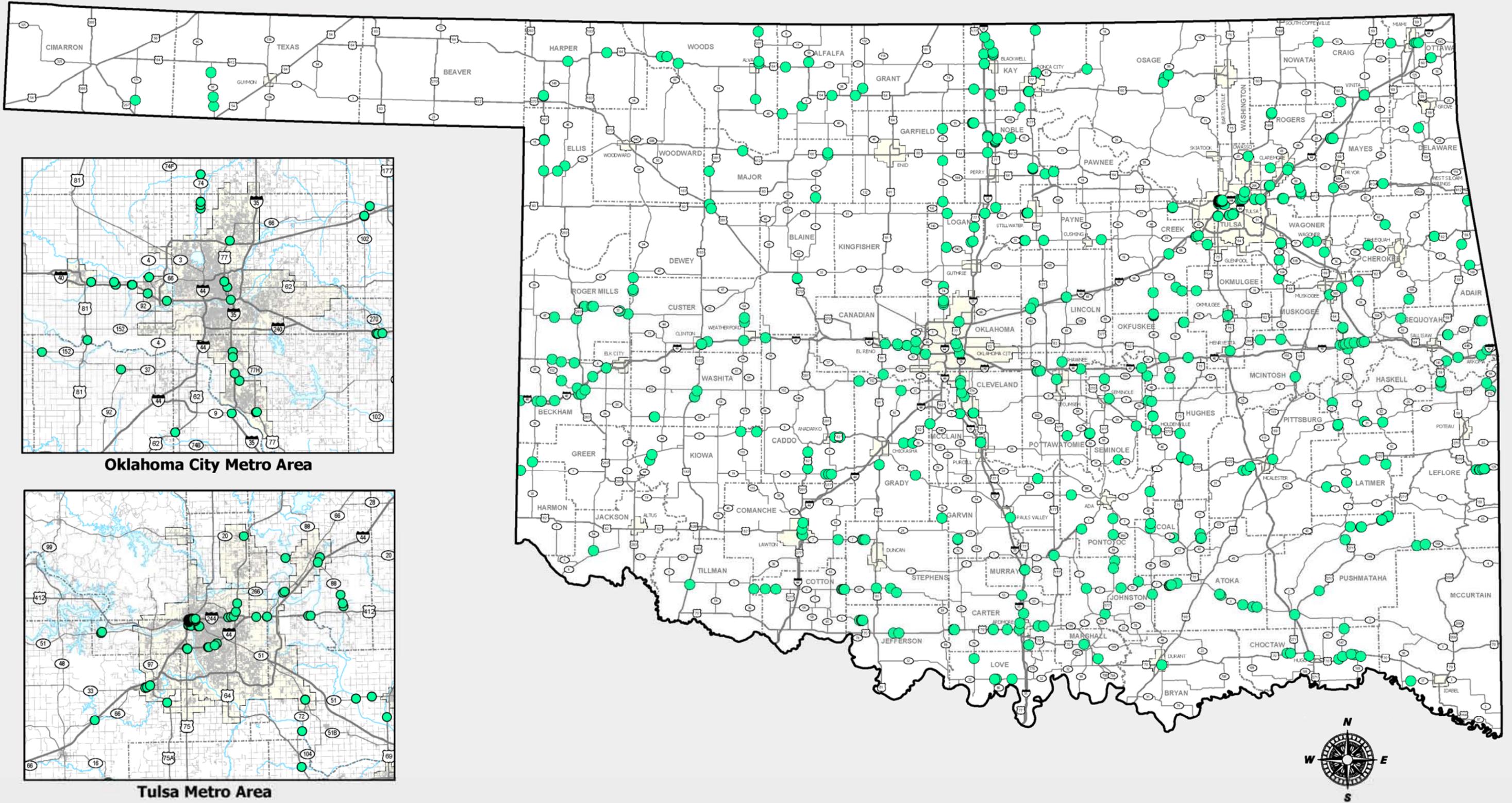
# STRUCTURALLY DEFICIENT / FUNCTIONALLY OBSOLETE BRIDGES

\*STATE HIGHWAY SYSTEM BRIDGES ONLY

NOTE: The information provided is generated from the National Bridge Inventory system therefore, some of the identified bridges are either under construction or have recently finished construction



July 2010



Oklahoma City Metro Area

Tulsa Metro Area

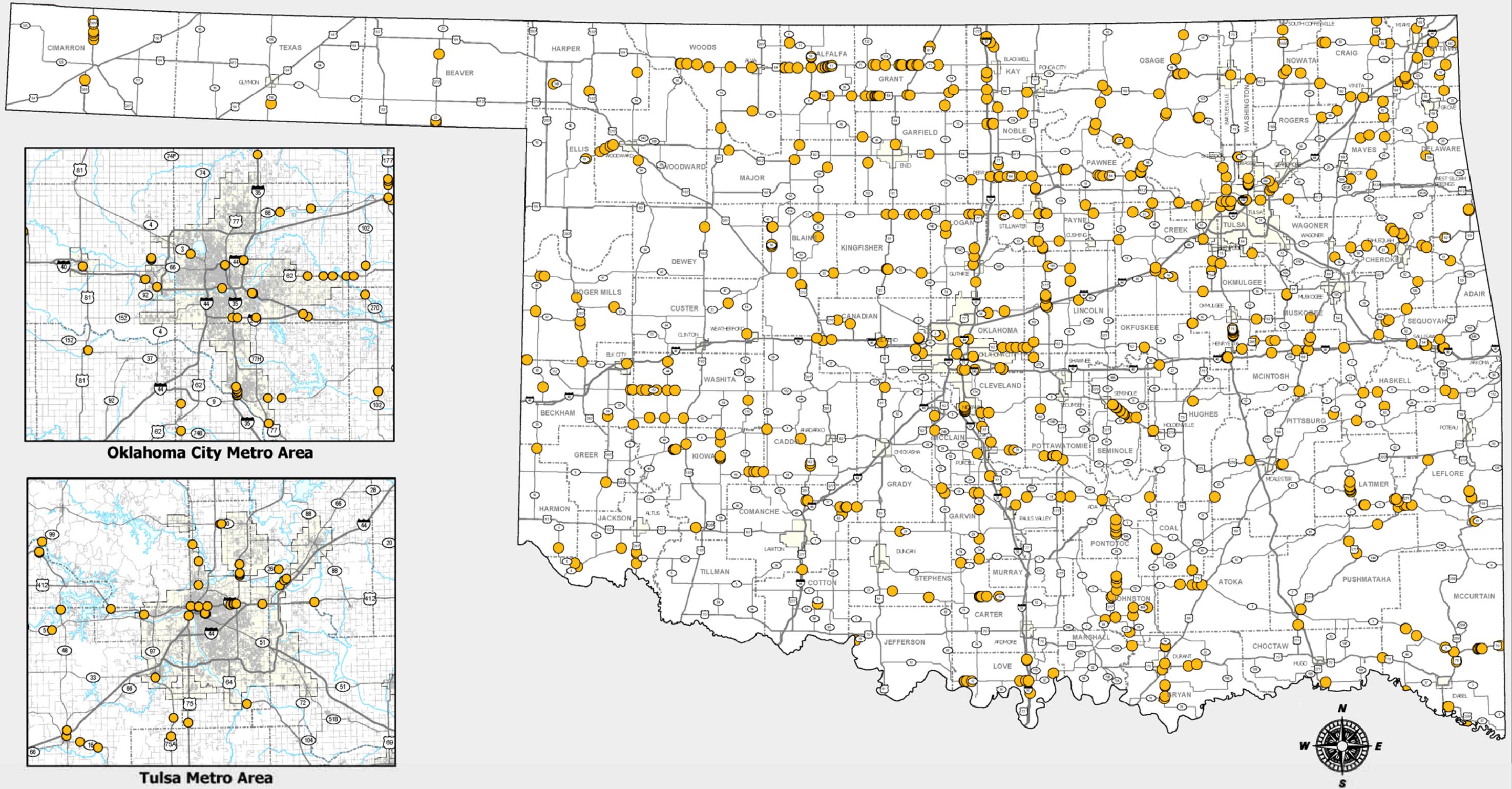


Oklahoma Department of Transportation  
 Planning & Research Division  
 GIS Management Branch  
 200 N.E. 21st Street  
 Oklahoma City, Oklahoma 73105

531 Bridge Replacements/Major Rehabilitation  
 Projects Completed or Under Construction between  
 January 2006 and October 2010

AUGUST 10, 2010

GIS Data: MapHARRON\_LOWPUR\_BR\_MKT\_01\_PRR\_080109.mxd



Oklahoma City Metro Area

Tulsa Metro Area

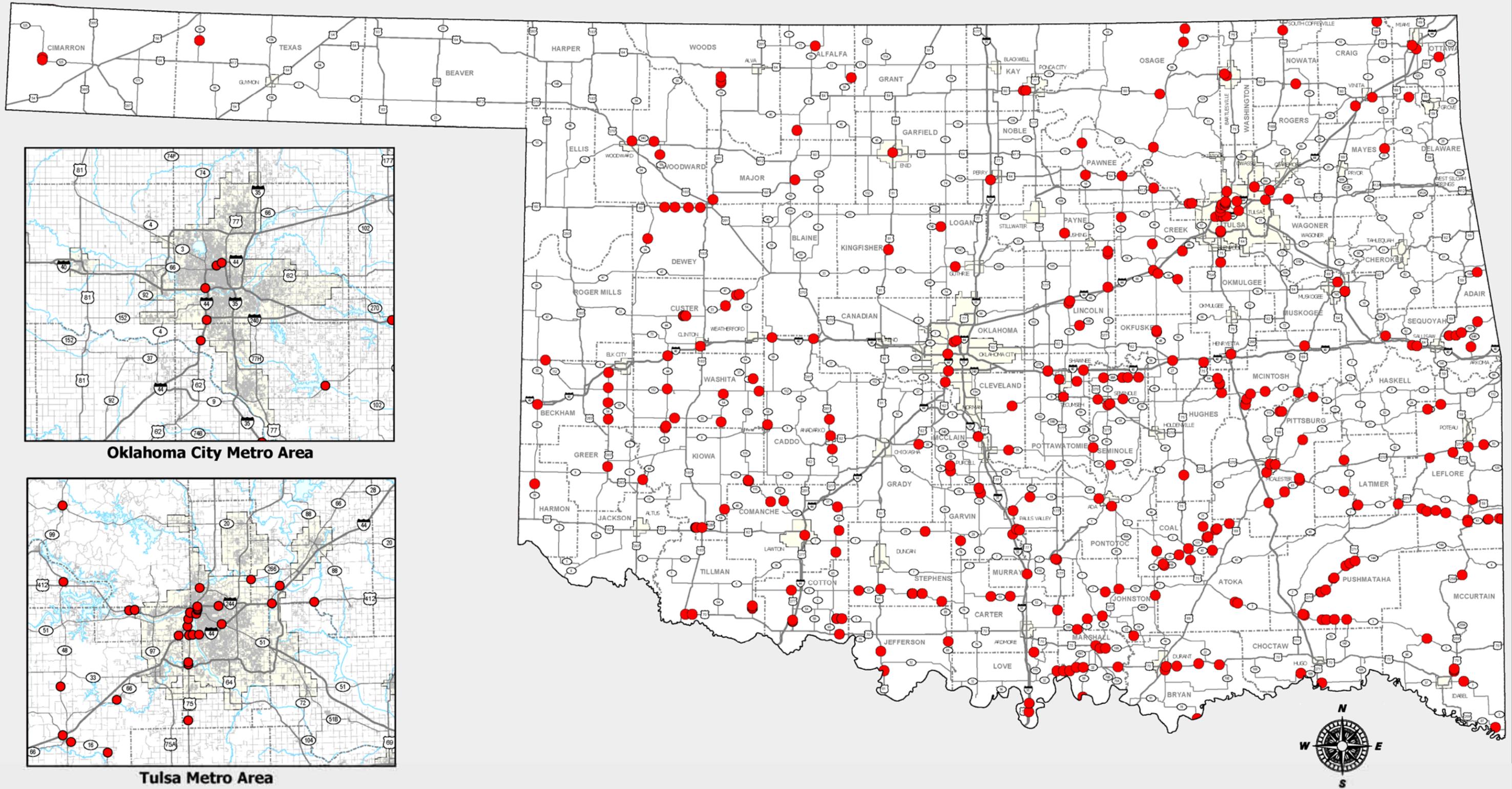


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8 Year Construction Workplan  
 650 Bridge Replacements/Major Rehabilitation  
 Fiscal Years 2011 - 2018

AUGUST 10, 2010

GIS Data: MapHARRON\_L000007\_BR\_001\_01\_PRR\_040109.gdb



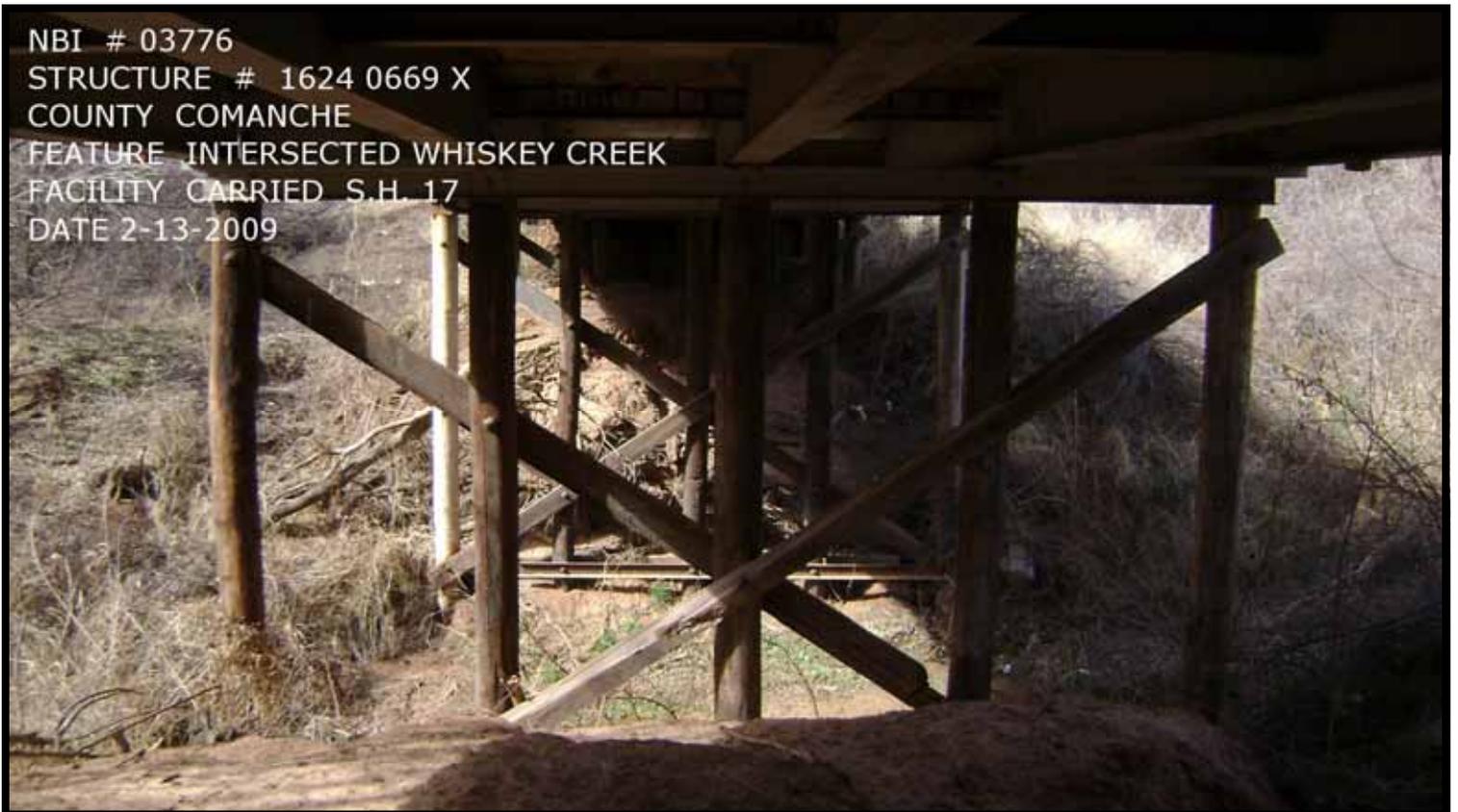
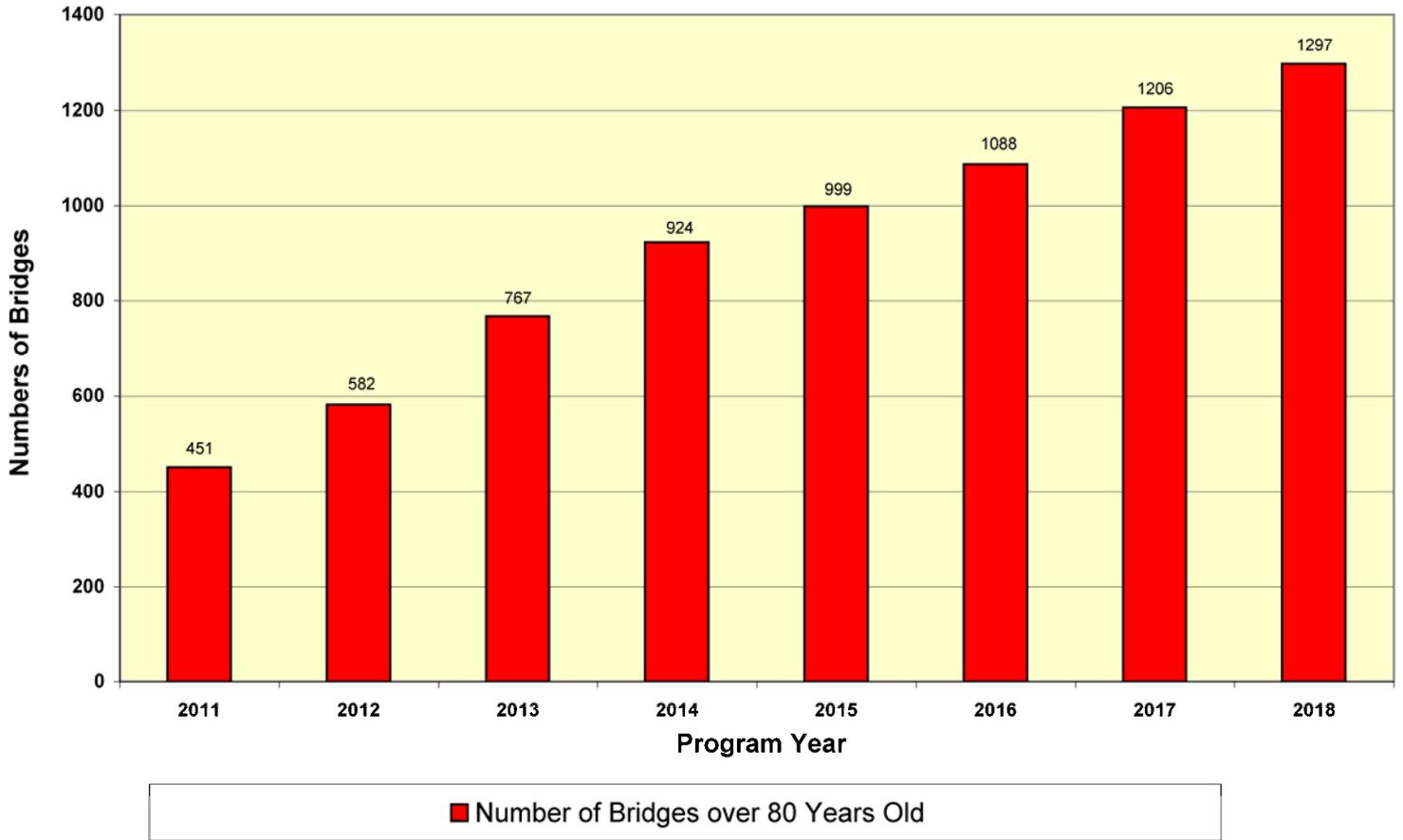
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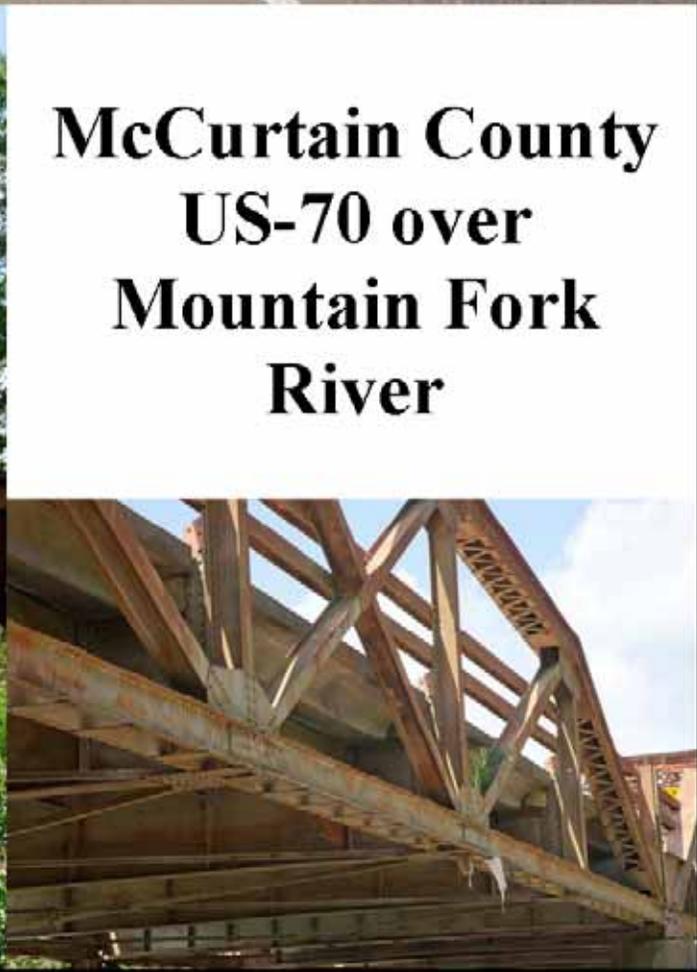
**HIGHWAY SYSTEM NEEDS**  
 345 NARROW OR LOW SUFFICIENCY BRIDGES  
 ODOT HAS IDENTIFIED AS CRITICAL  
 THAT ARE NOT IN THE 8 YEAR WORK PLAN

AUGUST 10, 2010

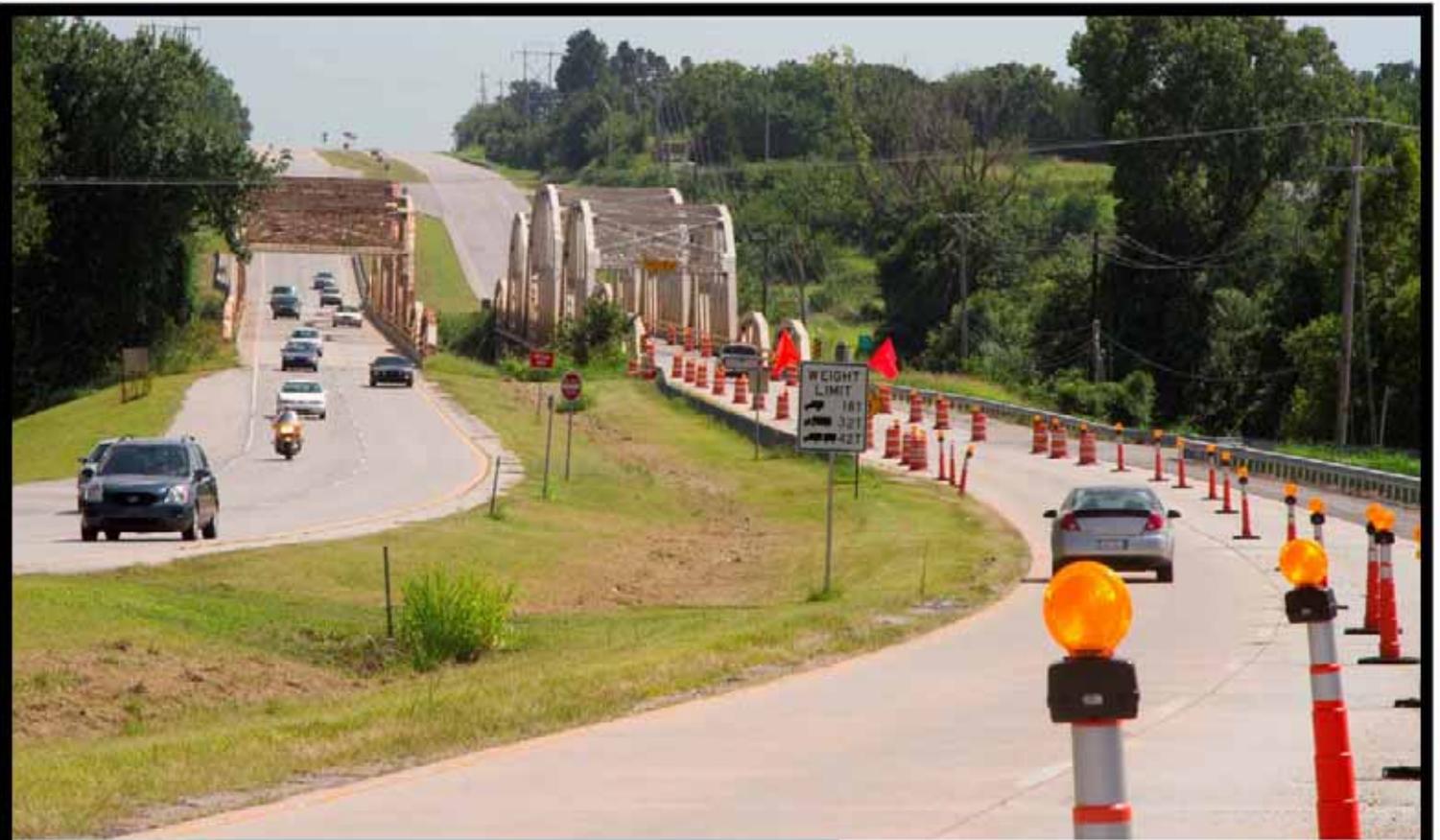
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# BRIDGE AGING





**McCurtain County  
US-70 over  
Mountain Fork  
River**



**Rogers County  
US-66 over  
Bird Creek**





**Oklahoma  
County  
I-40 over  
SE 15th St.**

# Highways & Safety

## Oklahoma's Transportation Infrastructure

### Condition and Needs Summary

Oklahoma's rural nature and historically agricultural based economy has witnessed the conversion of many farm-to-market roads and bridges into highways. While these roads were ideal for transporting livestock and crops to market seventy years ago, they are less than adequate when supporting today's heavier trucks, increased traffic demands and higher operating speeds. In fact, based on an evaluation of safety features such as passing opportunities, adequate sight distances, existence of paved shoulders, recovery areas for errant vehicles, and the severity of hills and curves about 24% (approximately 2,980) of our 12,261 miles of highway rate as critical or inadequate. Almost 4,700 miles of Oklahoma highways are two-lane facilities without shoulders.

**Shoulders and roadway improvements to two-lane highways without paved shoulders in the 8 Year Construction Work Plan.....485 miles**

Traffic on our major highways has increased dramatically in the past two decades and is expected to continue to compound for the foreseeable future. The daily vehicle miles traveled (DVMT) on facilities with more than two lanes in 2009 was 46 million miles. Improvements to these facilities are often our most expensive and resource consuming projects, but also yield high returns and have an immediate impact on regional traffic patterns. Over 211 miles of interstate pavement have been rehabilitated or reconstructed since 2003 and an additional 90 miles are included in the Construction Work Plan.

**Surface, operational and capacity improvements to high-volume major highways in the 8 Year Construction Work Plan (estimated total investment).....\$1.86 B**

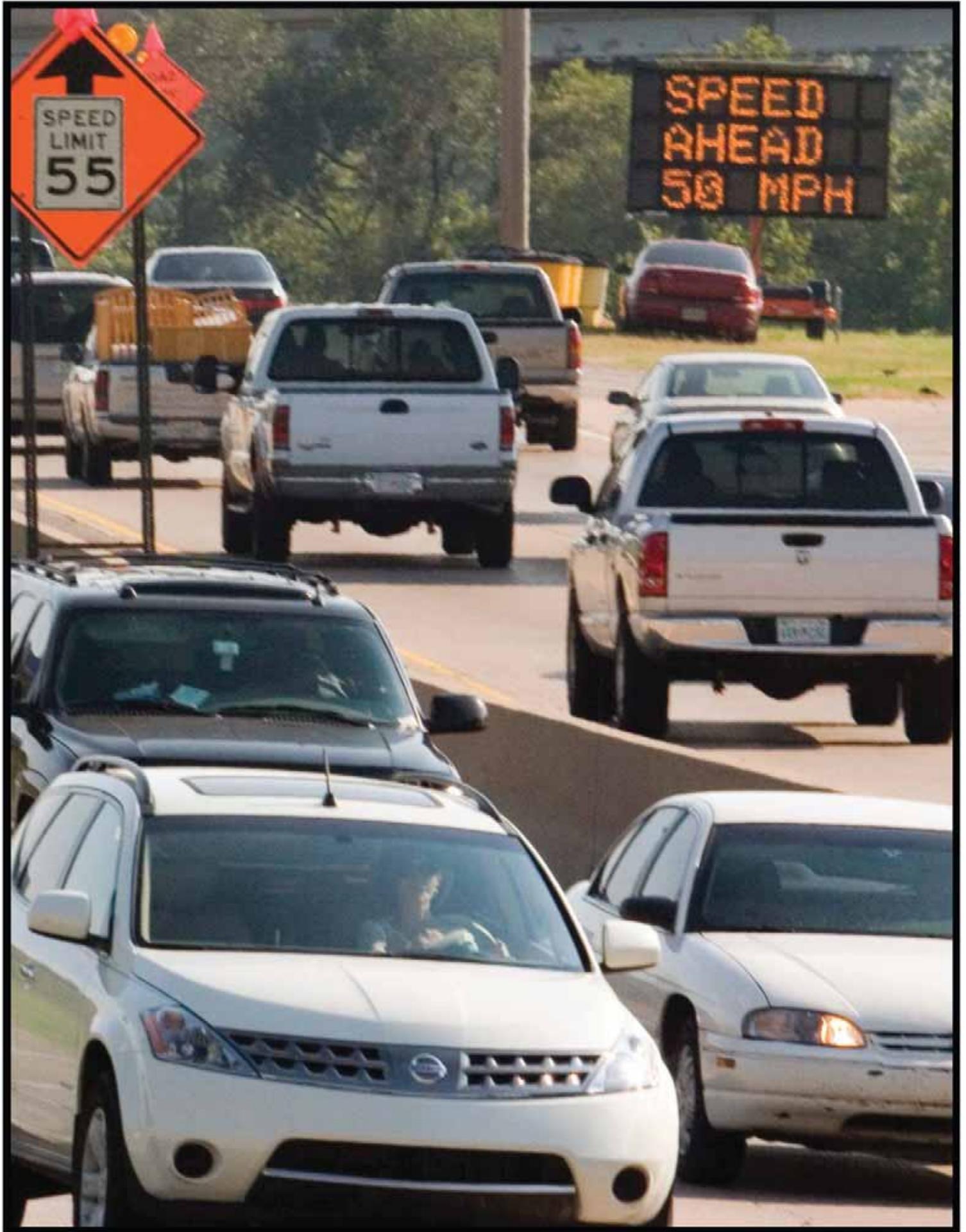
The greatest potential for tragic crossover accidents exists on divided high volume, high speed roads. Crossover accidents resulted in 94 fatalities in a three year period from 2004 to 2006. The installation of median barriers minimizes the opportunity for such occurrences. The department has under construction or completed 423 miles of median barrier since 2001.

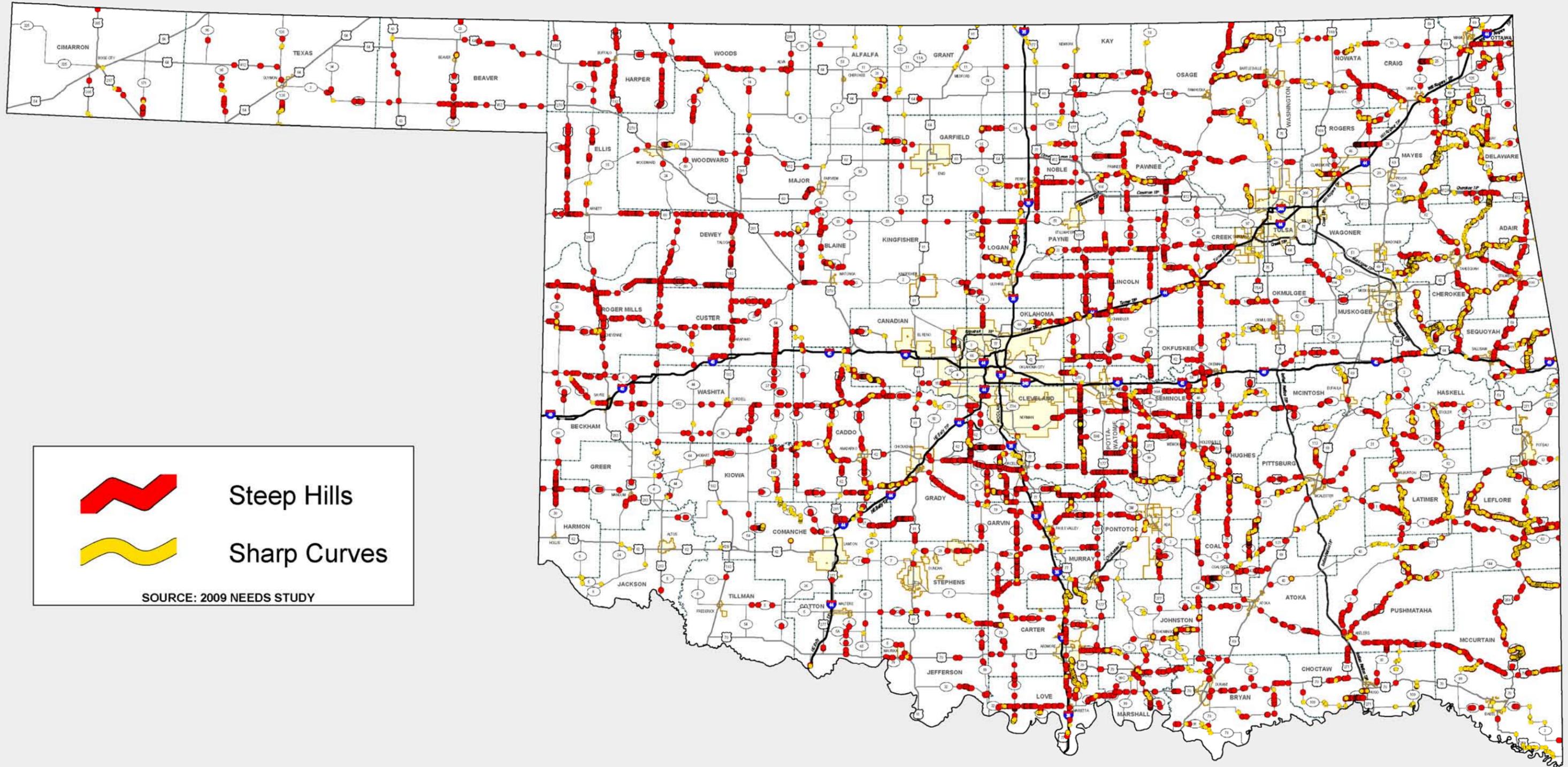
**Median Barrier scheduled.....85 miles**

Much like our bridges, our pavement surfaces require systematic rehabilitative attention in order to maximize the life cycle of our highways. In the past it has been impossible for the Department to afford the consideration of such initiatives. As budgetary conditions improve we can invest in and develop a timely surface rehabilitation program with a focus on extending the life of our pavements.

**Annual investment in surface rehabilitation.....\$65 M**

2,580 miles of inadequate highways will remain unaddressed, of which more than 2,300 miles are two-lane highways. To put this distance in the proper perspective, that is the equivalent of driving from Barstow, California to Greensboro, North Carolina on a highway with sharp curves, no shoulders, steep hills, blind intersections or high traffic demands. Also, hundreds of millions of dollars of improvements to our high volume arterial freeways will go unfunded as the department cannot afford to be proactive or even effectively reactive to these expensive needs. The safety of our transportation system and the traveling public is paramount to our mission and always has our full attention, but many highway safety improvements that could prevent property damage, personal injuries and the tragic loss of life will remain unattended.



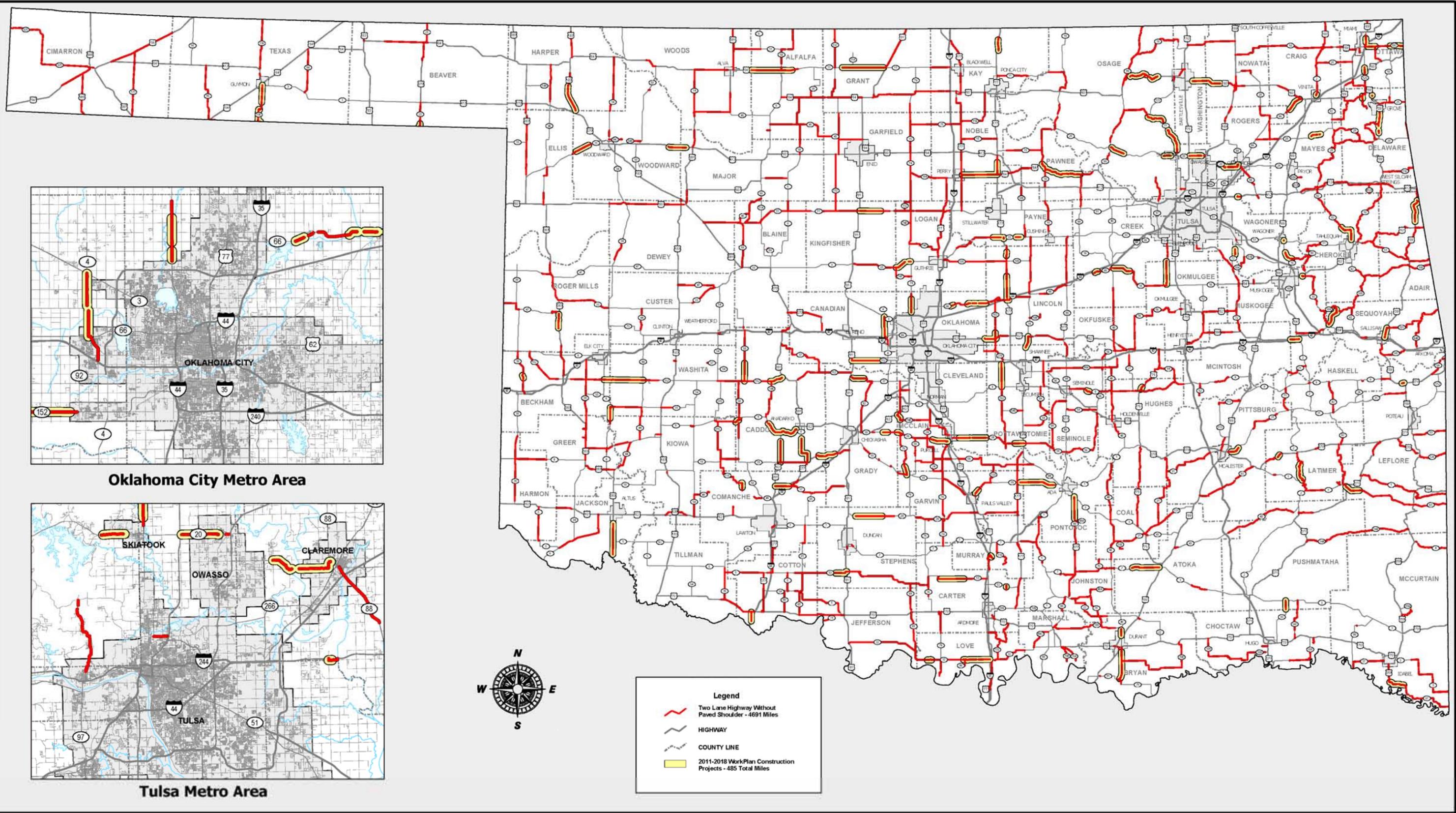


# Steep Hills and Sharp Curves









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# Two Lane Highways Without Paved Shoulders

NOTE: The information provided is generated from the Roadway Inventory system therefore, some of the identified roadways are either under construction or have recently finished construction.

August 10, 2010



**US-75 between  
I-44 and the  
Creek Turnpike  
Current ADT  
48,700  
Vehicles per Day**

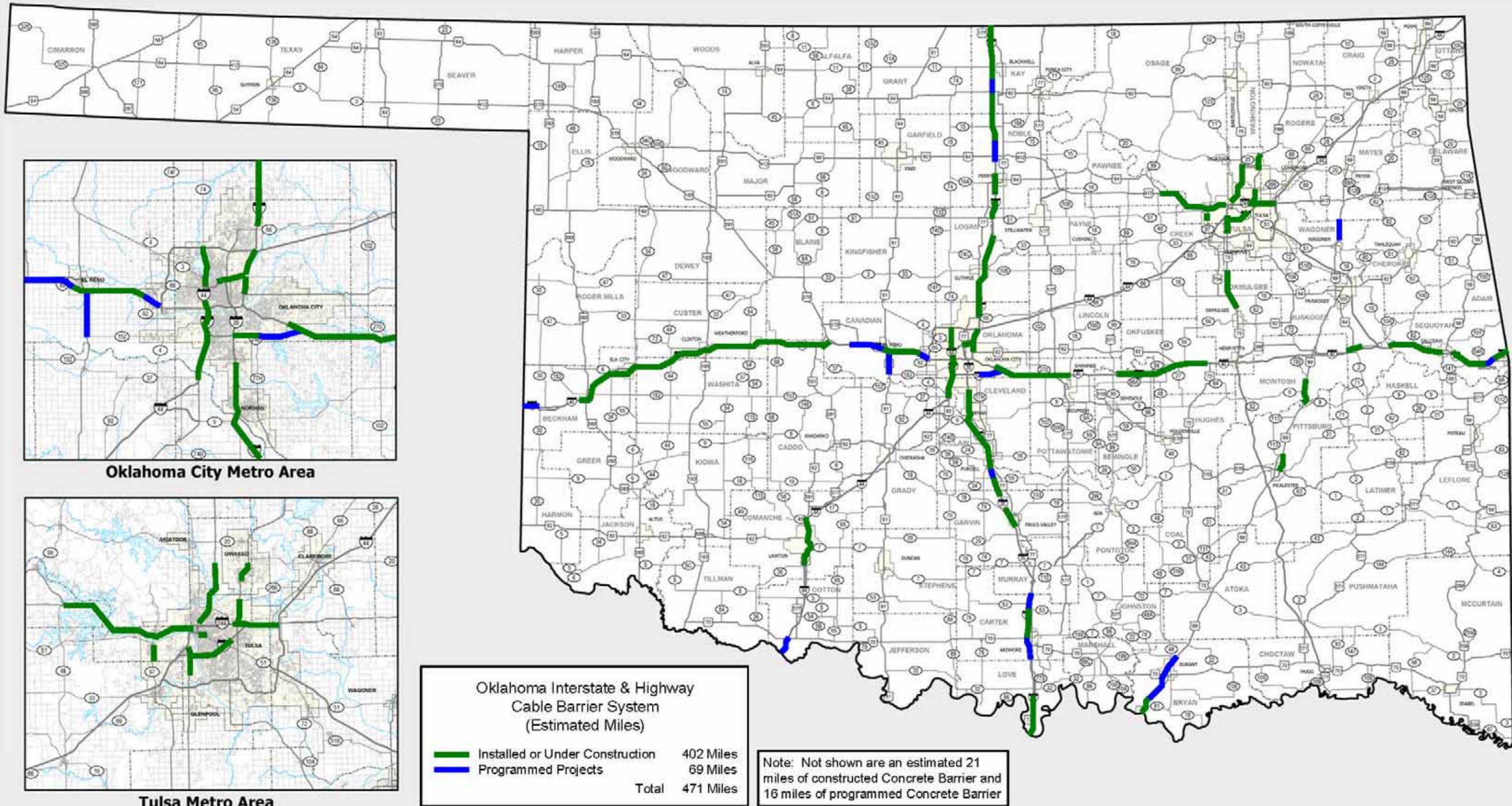




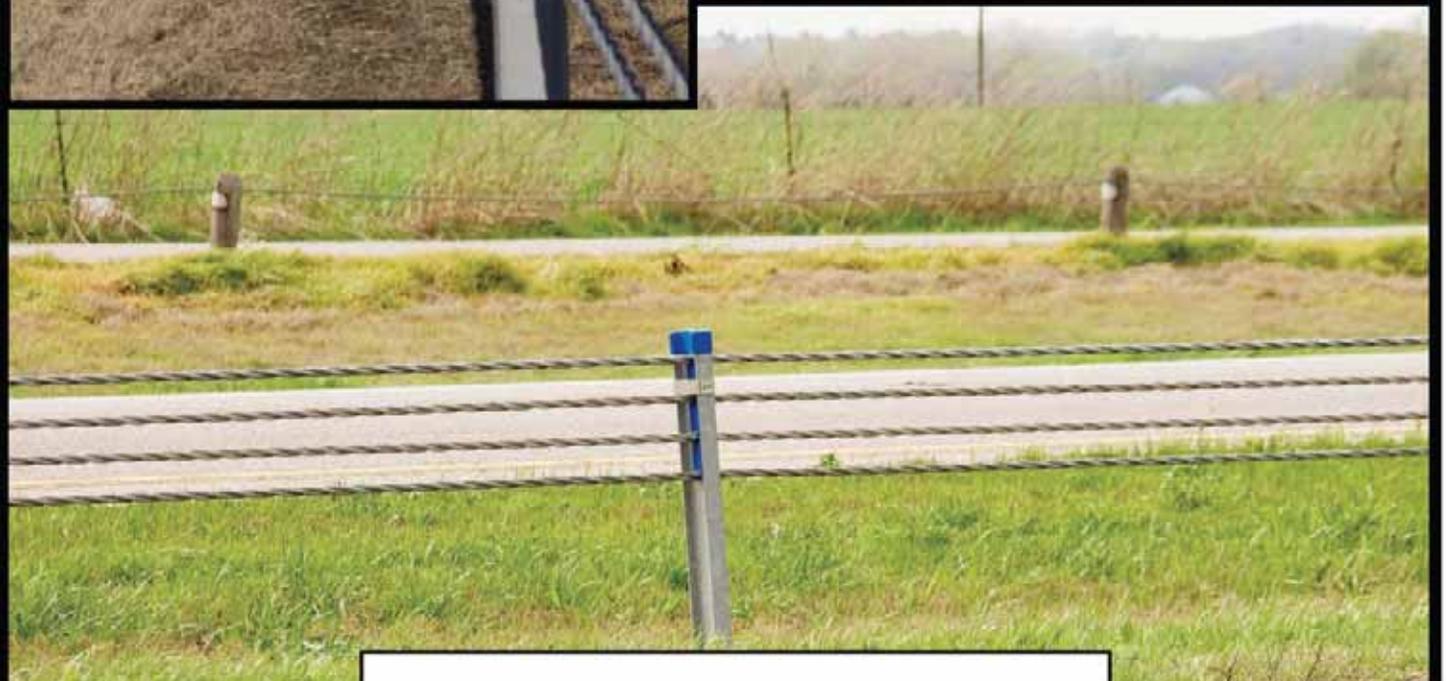
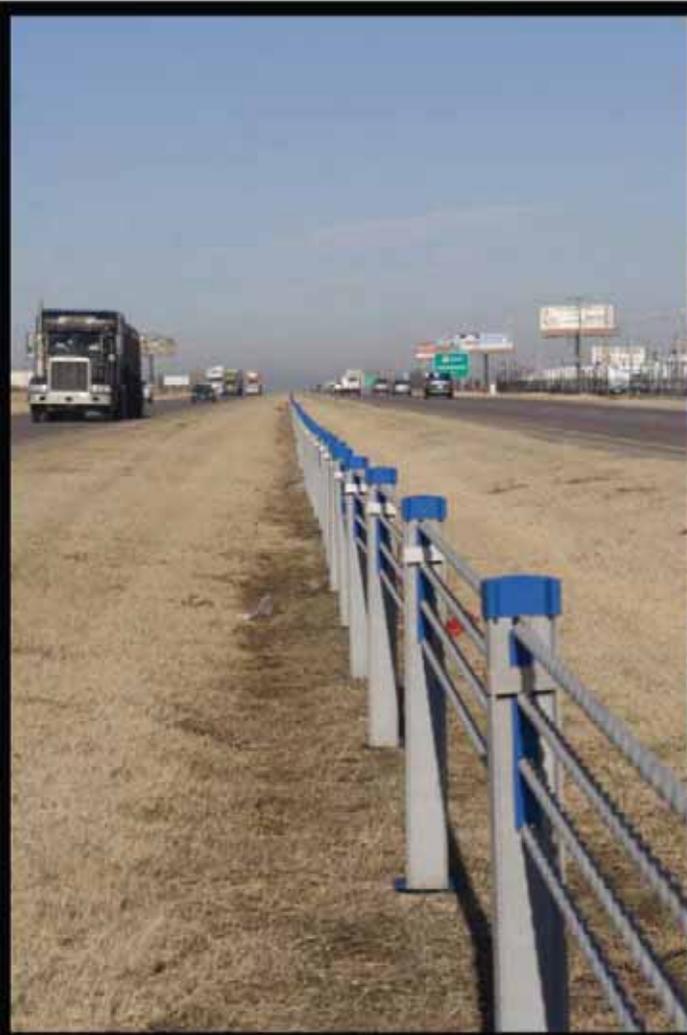
**I-44/I-235 Interchange  
Current ADT  
82,000  
Vehicles per Day**



# OKLAHOMA DEPARTMENT OF TRANSPORTATION



## STATEWIDE CABLE BARRIER LOCATIONS INTERSTATE & HIGHWAY CORRIDORS



**Narrow Median  
Cable Barrier**

# Narrow Median Concrete Barrier

