

ODOT Bridge Division

A 15 Minute Overview

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**Oklahoma Department
of Transportation**

- What is a Bridge?
- **A305-4** A bridge is defined in section 650.305 Definitions as "A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than **20 feet** between under copings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.



Oklahoma has its share of challenges.

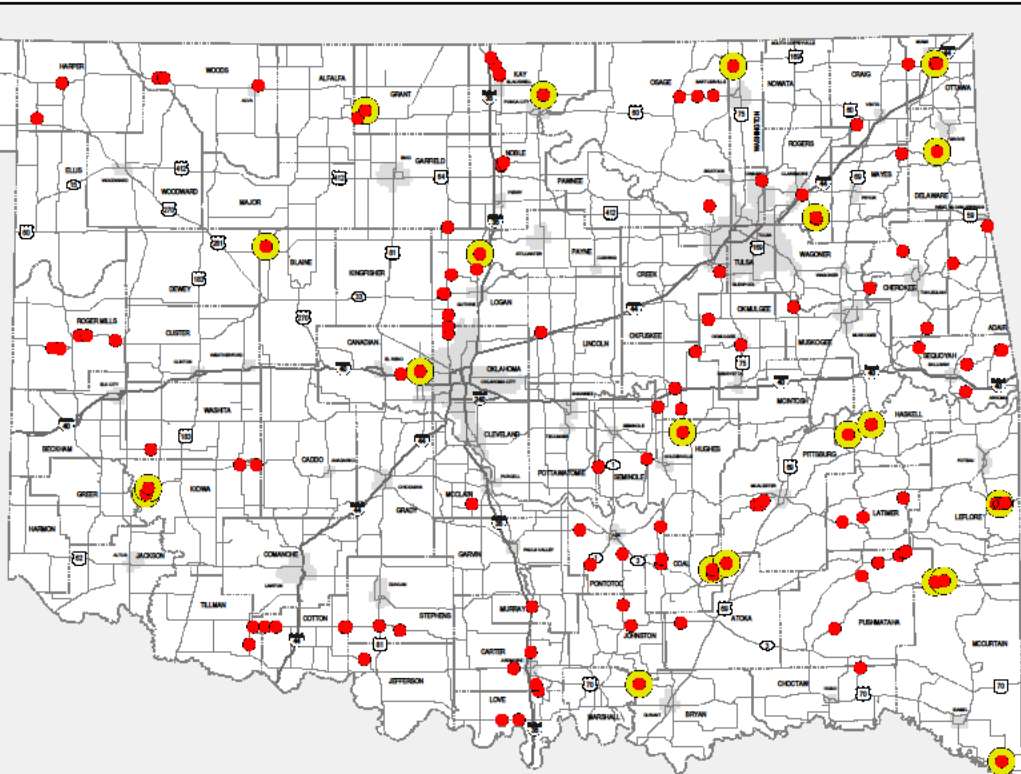
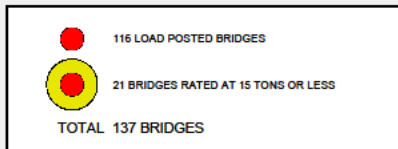
TEXAS	52,937
OHIO	26,986
ILLINOIS	26,588
CALIFORNIA	25,406
KANSAS	25,085
MISSOURI	24,385
IOWA	24,300
OKLAHOMA	23,147
PENNSYLVANIA	22,691
TENNESSEE	20,077

Top 10 States in number of Bridges.

- Of these 23,147 bridges 6,794 are owned and maintained by ODOT.
- 15,445 are owned and maintained by local governments.
- The remainder are owned and maintained by OTA, Federal Lands, USACE, GRDA.

OKLAHOMA DEPARTMENT OF TRANSPORTATION

**137 BRIDGES THAT WERE
LOAD POSTED ON
JANUARY 11, 2006**



OKLAHOMA DEPARTMENT OF TRANSPORTATION
PLANNING & RESEARCH DIVISION
300 N.E. 24TH STREET
OKLAHOMA CITY, OKLAHOMA 73105

LOAD POSTED BRIDGE PROGRAM

(On System Bridges Only)

August 20, 2007

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Structurally Deficient (SD):

A bridge can be inadequate to carry loads, whether caused by obsolete design standards, structural deterioration, or waterway inadequacy. Structures in this category may include those posted to restrict load limits as well as those closed to all traffic. An 'SD' bridge rating is determined from the results of field inspection findings where NBI **Condition Rating of 4 or less is assigned to the Bridge Deck, Superstructure, Substructure or Culvert.**

Functionally Obsolete (FO):

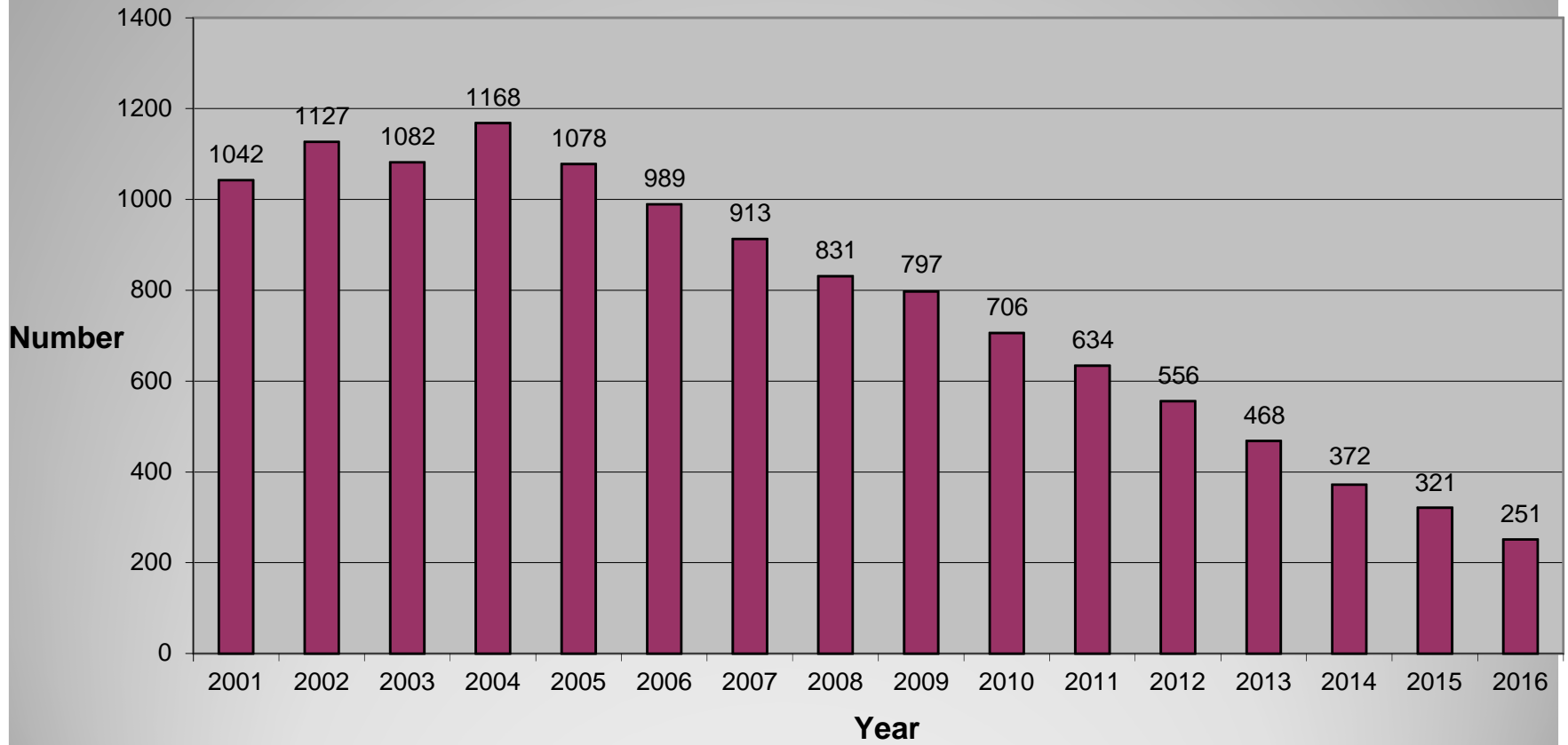
A bridge inadequate to properly accommodate local traffic due to inadequate vertical/horizontal clearance, approach roadway alignment, structural condition or waterway adequacy. An 'FO' bridge is determined from the results of field inspection findings where an **appraisal of 3 or less is assigned to the Deck Geometry, Underclearances, Approach Roadway Alignment or where an appraisal rating of 3 is assigned to the Waterway Adequacy.**

Condition Rating:

Possible Values:

- 9 – Excellent Condition.
- 8 – Very Good Condition.
- 7 – Good Condition.
- 6 – Satisfactory Condition.
- 5 – Fair Condition.
- 4 – Poor Condition
- 3 – Serious Condition
- 2 – Critical Condition
- 1 – Imminent Failure Condition
- 0 – Failed

On System SD Bridges



Based on year of the actual inspection

$$\Sigma F = 0$$

$$F = ma$$



AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS



AASHTO
THE VOICE OF TRANSPORTATION

Seventh Edition, 2014

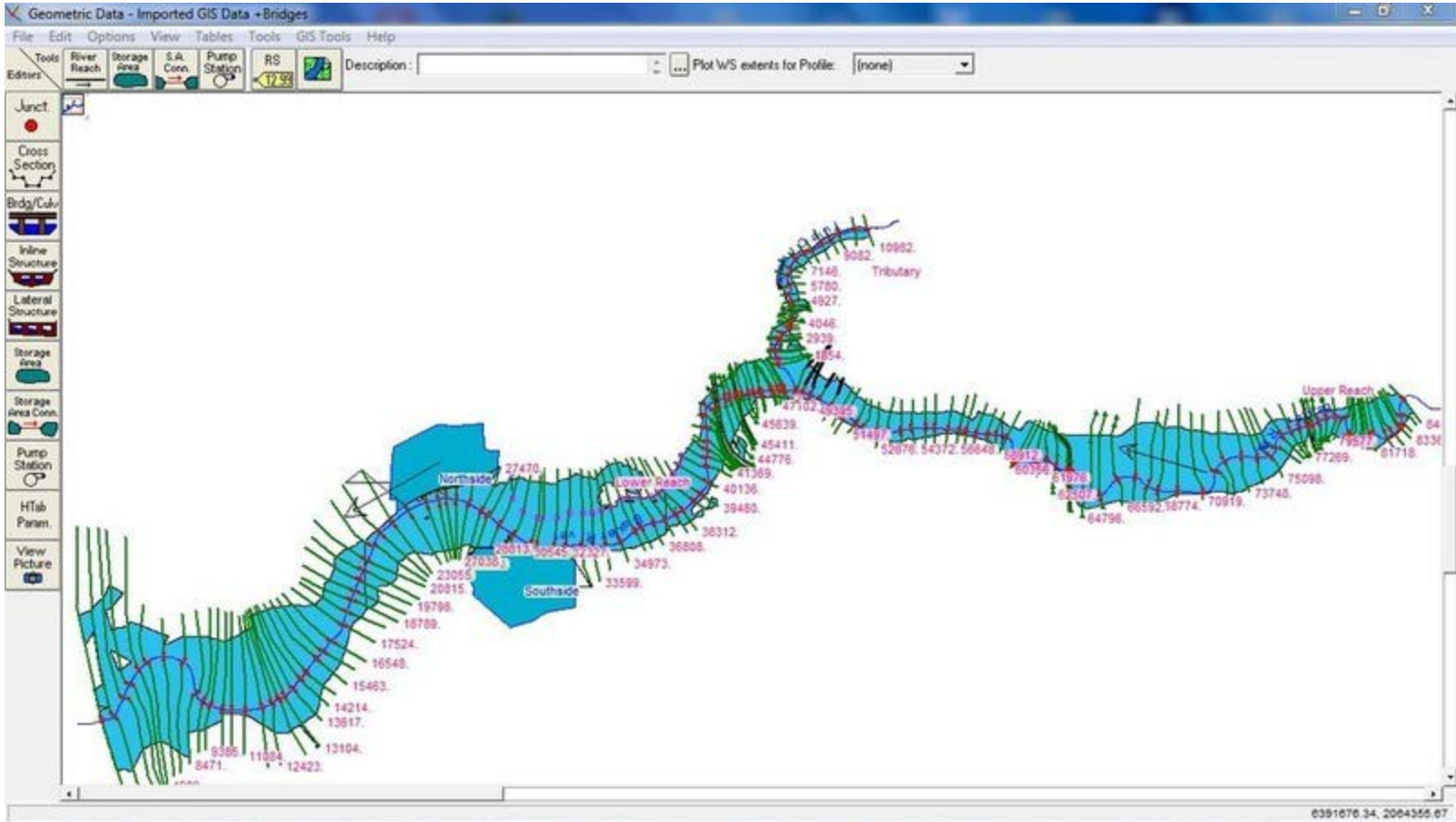


















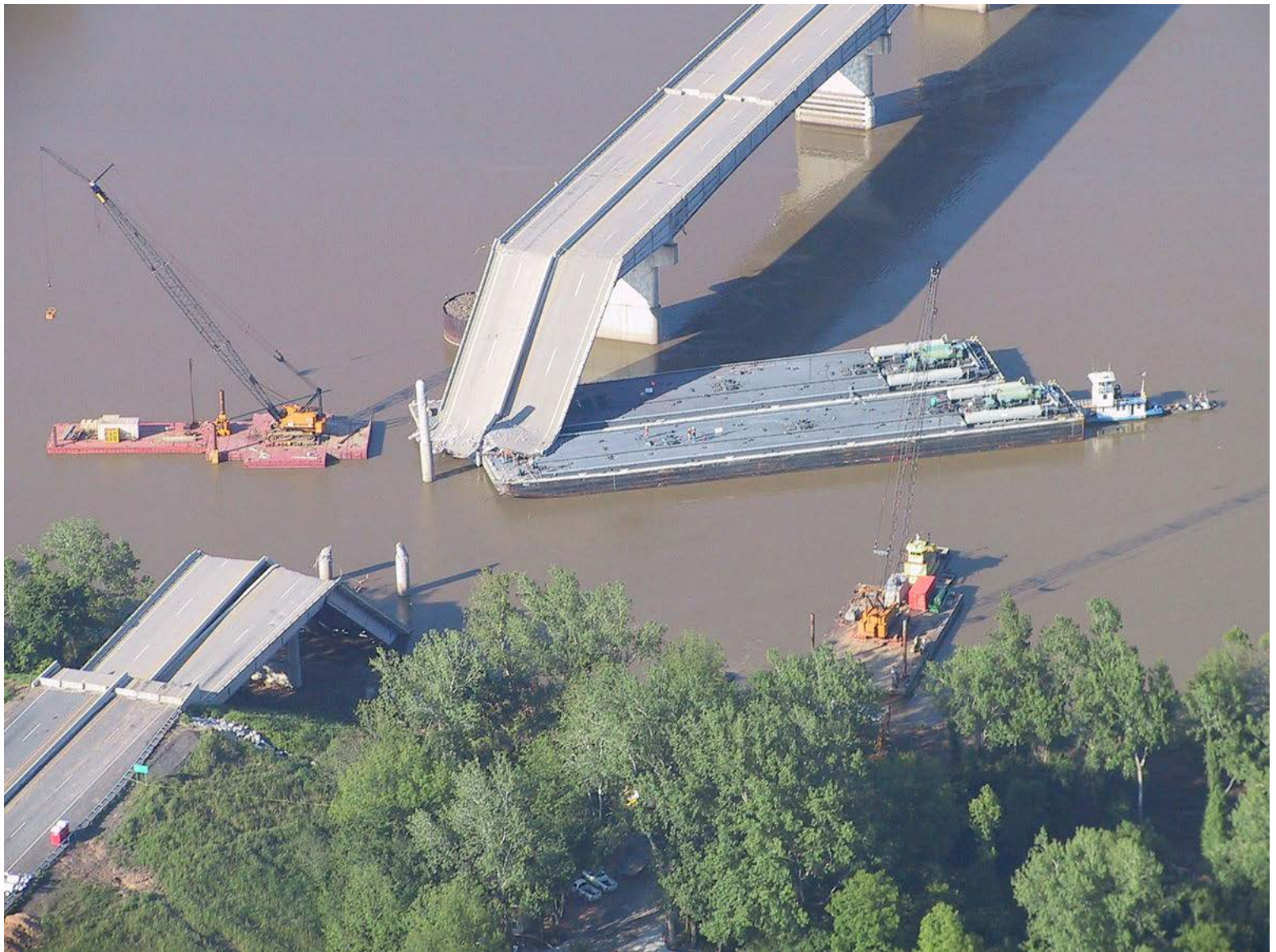
14 FT 7 IN







MAY 9, 2017





ShakeCast 2.0 :: Google Maps for ShakeMap 2007hear - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost/eq_map.php?event=2007hear&version=7

USGS science for a changing world

ShakeCast 2

Home Earthquakes Search FAQ Profile Administration Panel Log out [scadmin]

Latest Earthquake Earthquake Archive Scenarios

Table View

Google Maps for ShakeMap 2007hear

Facility Type: All CITY

Map Satellite Hybrid

Bengkulu, Indonesia (pop. 265K) CITY
Sungailuar, Indonesia (pop. 39K) CITY
Cirep, Indonesia (pop. 26K) CITY
Lubuk Linggau, Indonesia (pop. 69K) CITY
Lahat, Indonesia (pop. 97K) CITY
Tanjung Agung, Indonesia (pop. 54K) CITY
Padang, Indonesia (pop. 641K) CITY
Baturaja, Indonesia (pop. 67K) CITY
Sijunjung, Indonesia (pop. 32K) CITY

Done





What's New?

Construction Photos



Construction Photos





- Ongoing Research
- **UHPC**
- **Deck Curing**
- **Shrinkage Reducing Admixtures**
- **Reinforcement**
- **Expansion Joints**
- **GRS Abutments**
- **Thermal Integrity Profiling**
- **UAVs**