

Safety Programs

OTEA
Fall 2012

David Glabas, P.E.
ODOT

OTEA, Fall 2012 – David Glabas, P.E., ODOT



Safety Programs

- FHWA – Intersection Safety Implementation Plan (ISIP)
- Safe Routes to School (SRTS)
- Drive Aware Oklahoma
- 9 Proven Safety Counter Measures
- ODOT/OHP Motorcycle Safety and Education Program (MSEP)
- Other areas of interest



FHWA - ISIP

- 2010: OK identified as a FOCUS state (intersections)
- '10-'11: 18 months b/t ODOT & FHWA
 - Acquired 5 years of collisions (over 370,000 collisions)
 - Reformatted
 - Sent
 - Analyzed



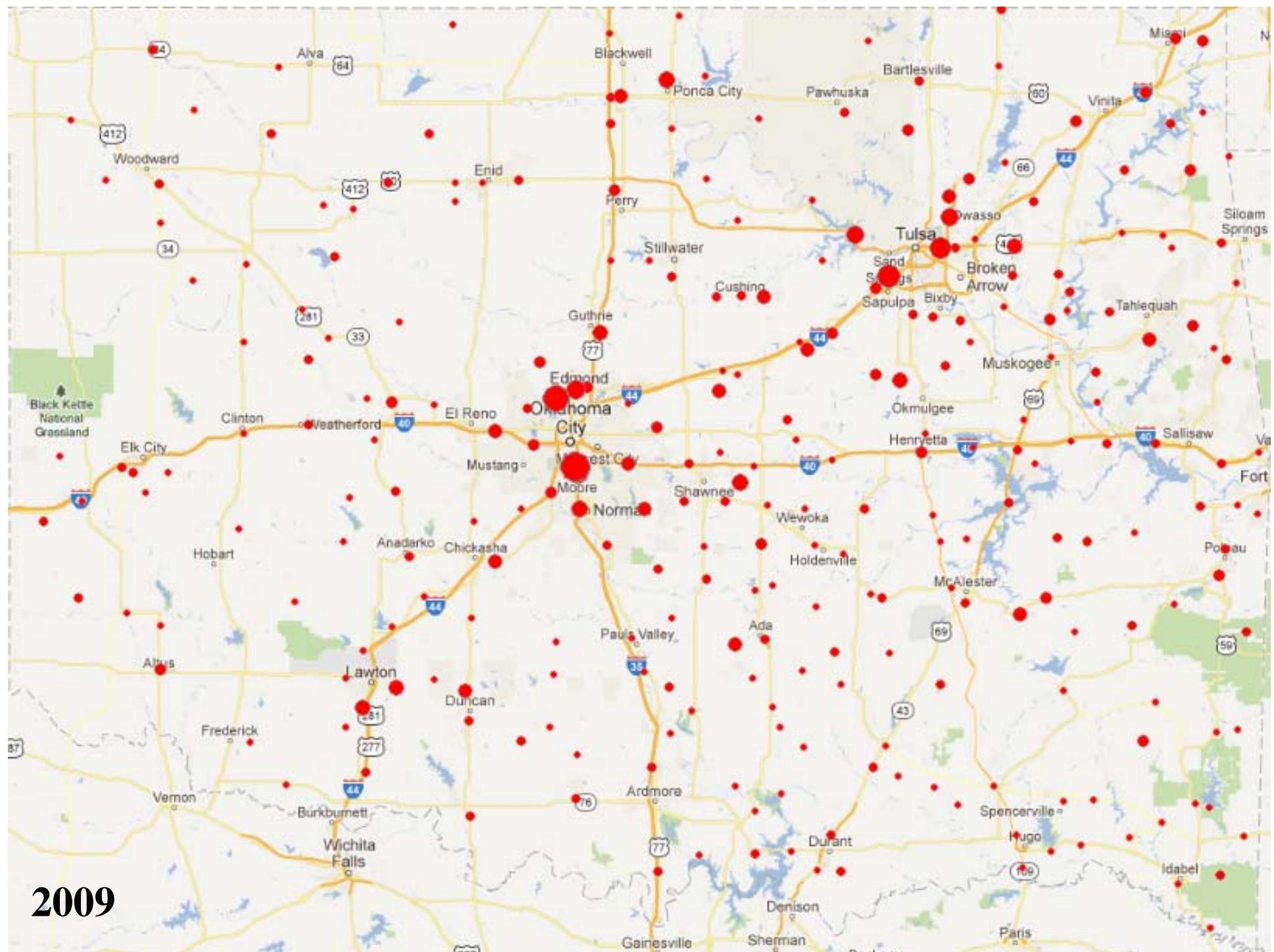
FHWA - ISIP

Fatal Crash Types

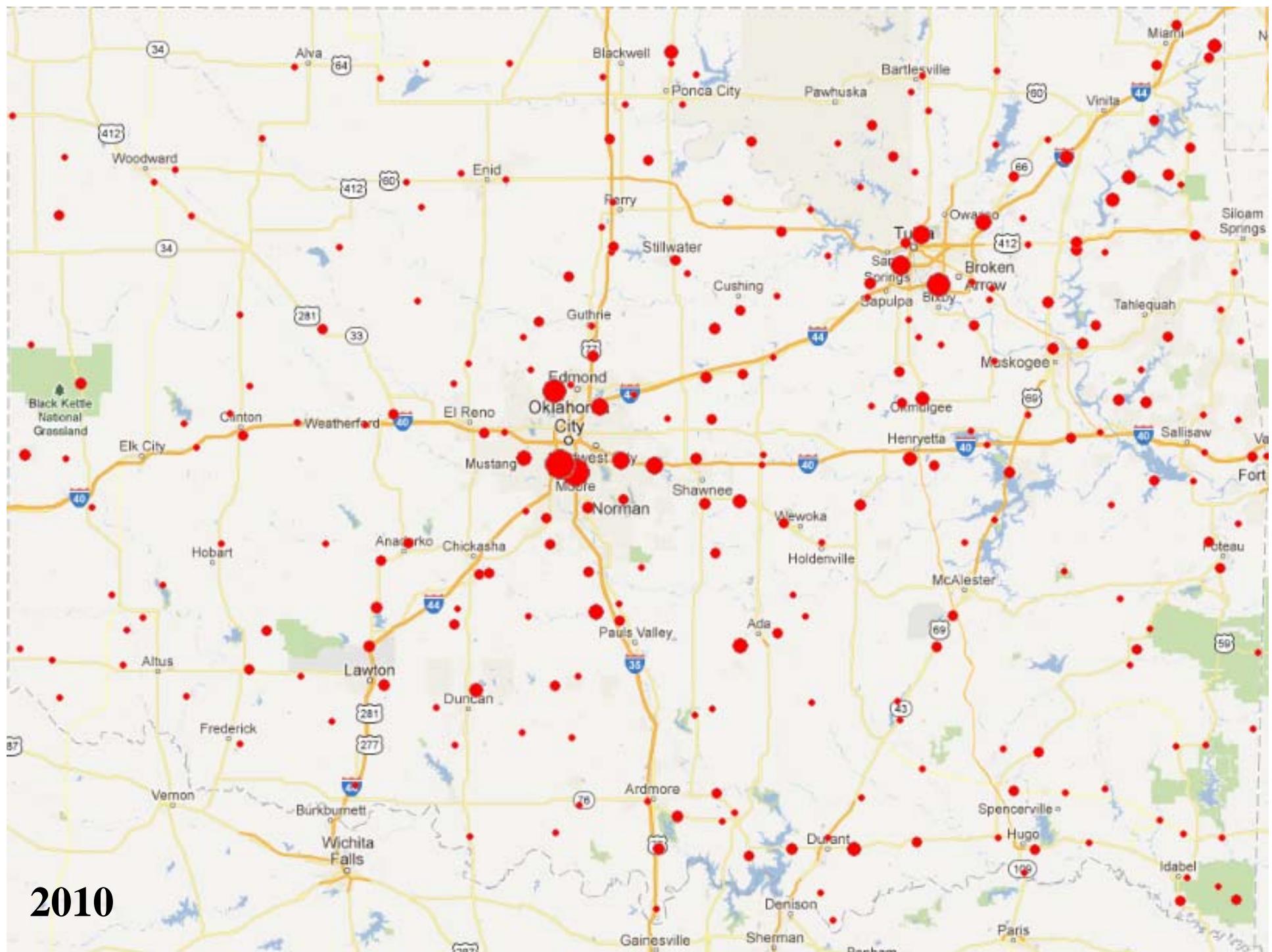
<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Unbelted	Unbelted	Unbelted	Unbelted	Unbelted
Run Off Road				
Impaired	Impaired	Impaired	Impaired	Impaired

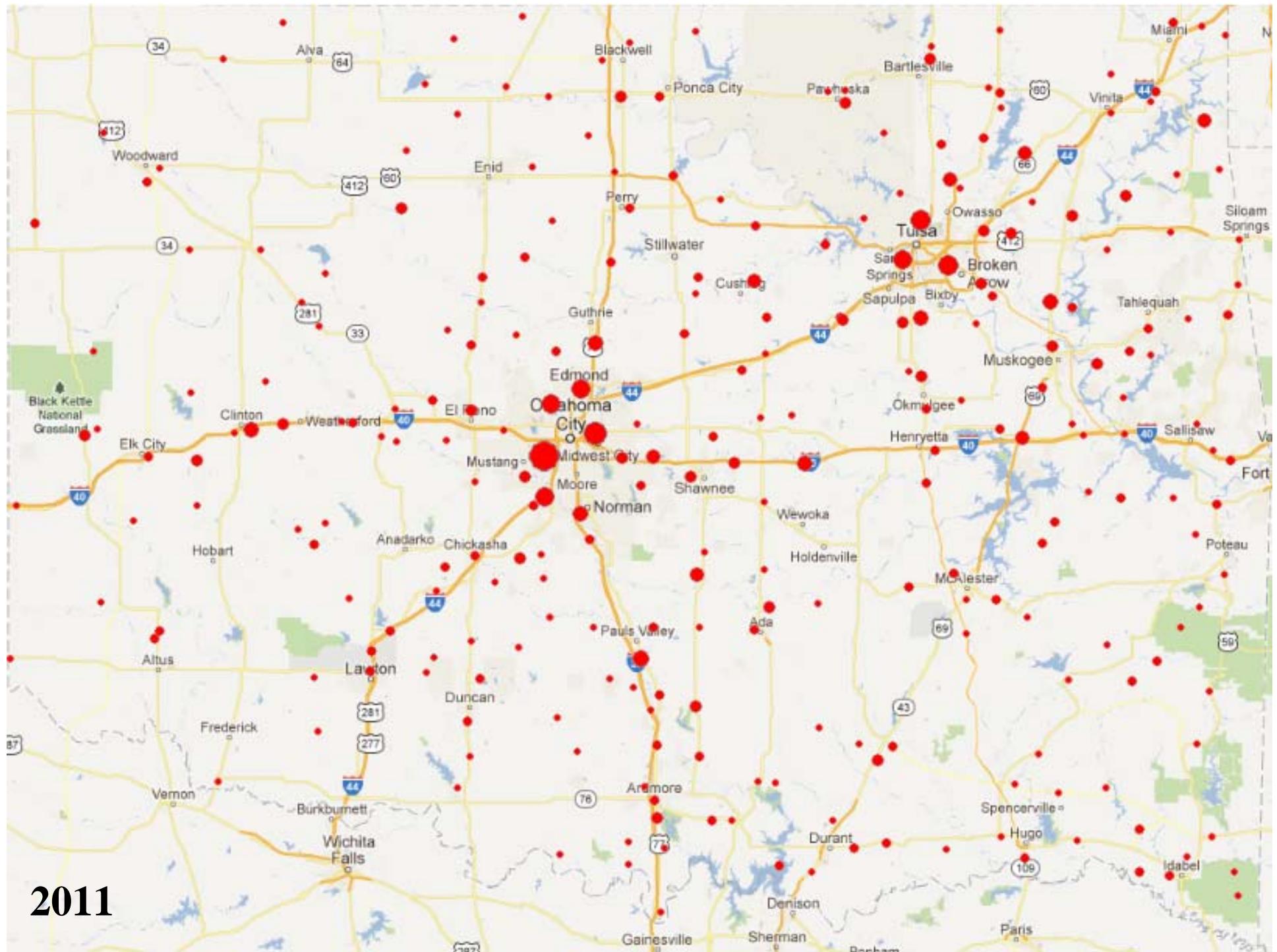
Bryan
Chandler,
SAIC
Consultant for
FHWA



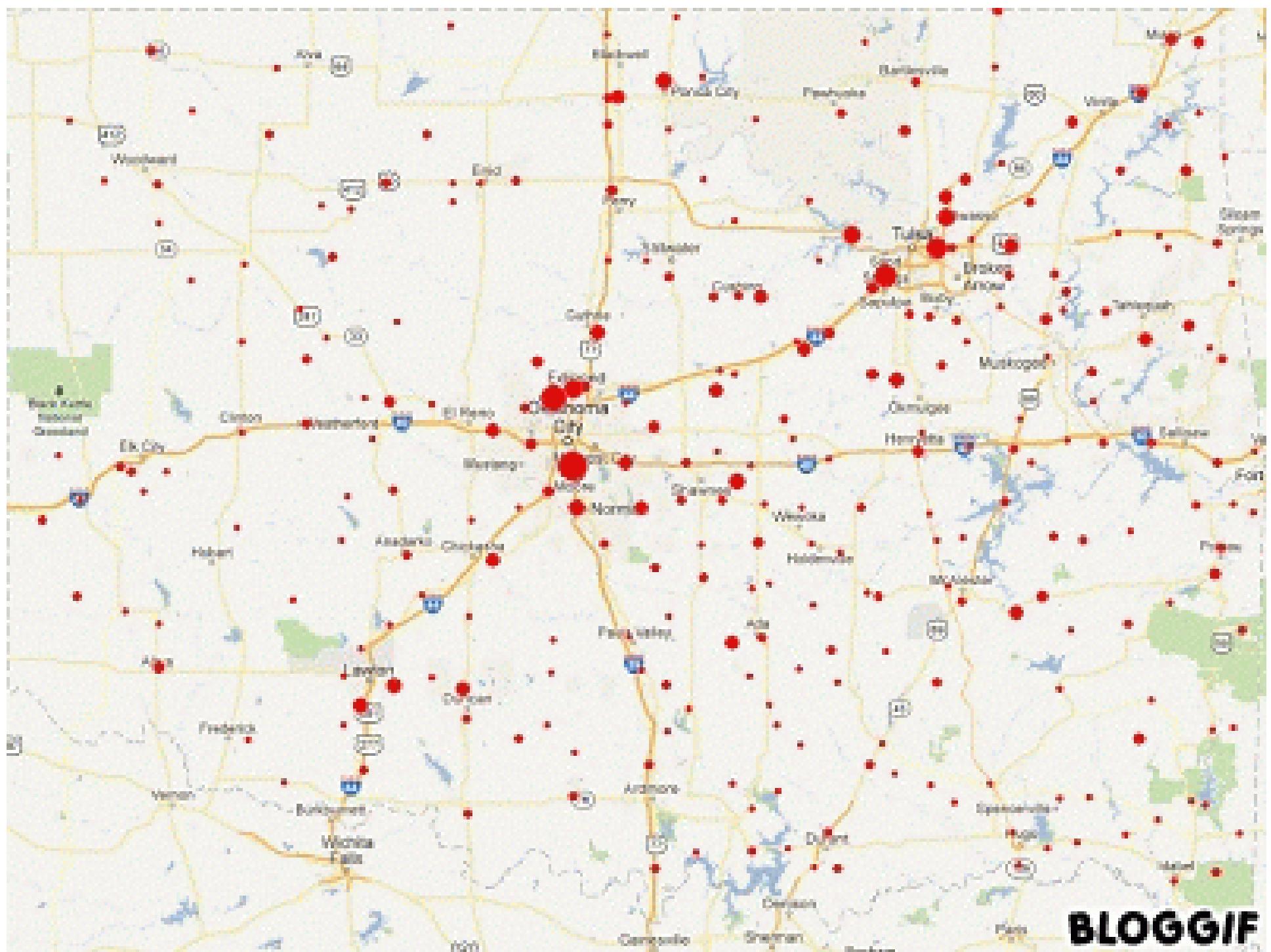


2009





2011



BLOGGIF

FHWA - ISIP

fatal crash locations

are

random



www.pimpmycareer.com



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Chandler,
SAIC
Consultant for
FHWA

FHWA - ISIP

Fatal crash locations are random. You experienced it when you watched the dots on the Missouri map. We've all experienced it when we "fix" locations with a history of fatalities but don't see our overall numbers go down. Then we blame drunk drivers and use phrases like "you can't fix stupid" to make ourselves feel better. At the same time, people keep dying on our roads.

Chasing fatalities is not an effective plan. Playing Mad Nurse does not work.

Bryan Chandler, SAIC
Consultant for FHWA



FHWA - ISIP



We decided to focus on the predictable.

Crash locations are random.

Crash types are predictable.

Focus on the predictable.

STOP PLAYING MAD NURSE.

Bryan
Chandler,
SAIC
Consultant for
FHWA



FHWA - ISIP

Why are we here?

Oklahoma SHSP Emphasis Areas

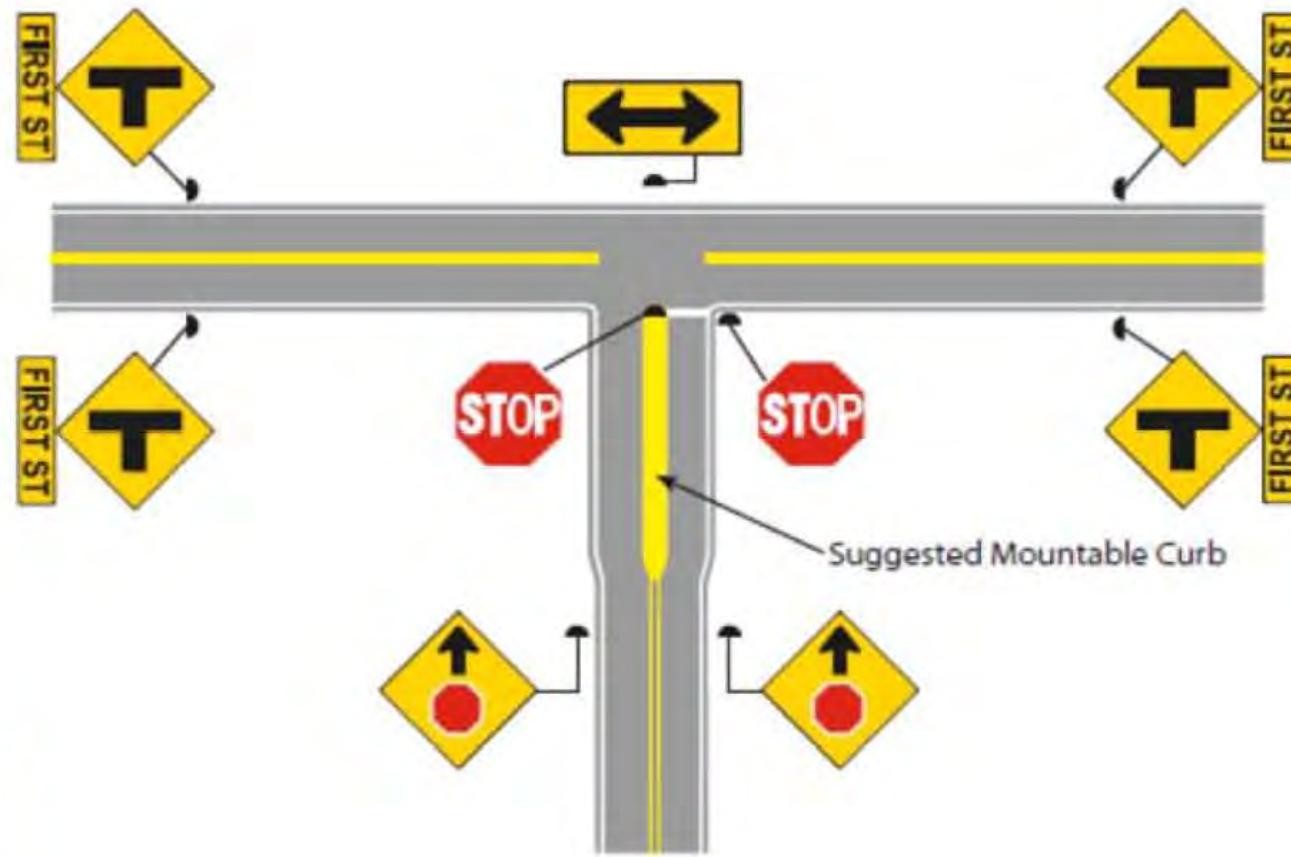
1. Unsafe Driver Behavior
2. Intersection Crashes
3. Crashes involving Young Drivers
4. Lane Departure Crashes

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FHWA - ISIP

Stop-Controlled Intersections – Basic Set of Sign and Marking Improvements



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Chandler,
SAIC
Consultant for
FHWA



FHWA - ISIP

Additional Countermeasures

- ▶ Flashing beacons
- ▶ J-turns on divided highways
- ▶ Basic signalized intersection improvements
- ▶ Signal clearance intervals
- ▶ Protected-only left turns/Flashing Yellow Arrow
- ▶ Pedestrian treatments
- ▶ Lighting
- ▶ 3-E intersection corridor initiative

Bryan
Chandler,
SAIC
Consultant for
FHWA



FHWA - ISIP

Reducing Intersection Fatalities

Traditional

- Minimal Statewide Impact

Systematic

- Low Cost Countermeasures
- Find Over-representation

Comprehensive

- Incorporate Enforcement, Education

Policy

- Long-term gains
- Standards-based

9

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Chandler,
SAIC
Consultant for
FHWA



Table 6. Intersection Safety Countermeasures by Approach Type

Number	Countermeasure	Approach
1	Sign and Marking Improvements – State Stop-Controlled Intersections <ul style="list-style-type: none">➤ Basic Set of Sign and Marking Improvements➤ Flashing LED Beacons on Advance Intersection Warning Signs and STOP Signs or Flashing Overhead Intersection Beacons➤ Optional Signing and Marking Improvements Based on the Characteristics of the Intersection	Systematic
2	J-Turn Modifications on High-Speed Divided Arterials – State Stop-Controlled Intersections	Systematic
3	Basic Set of Sign and Marking Improvements – Local Stop-Controlled Intersections	Systematic
4	Signal and Sign Improvements – State and Local Signalized Intersections <ul style="list-style-type: none">➤ Basic Set of Signal and Sign Improvements➤ Optional Signal and Sign Improvements Based on the Characteristics of the Intersection➤ Change of Permitted and Protected Left-Turn Phase to Protected Only	Systematic
5	New or Upgraded Lighting – State and Local Rural Intersections	Systematic
6	Pedestrian Safety Enhancements	Systematic
7	Corridor 3E Improvements on High-Speed Arterials with Very High Frequencies of Severe Intersection Crashes	Comprehensive
8	City-wide Pilot Improvements (Flashing Yellow Arrow, Clearance Intervals, Enforcement-Assisted Lights)	Systematic / Comprehensive
8	Spot Location Improvements / Roundabouts	Traditional

Table 5. Summary of Intersection Countermeasures, Costs, and Benefits

Countermeasure	Intersection Type	TCD	Crash Type	Approach	Threshold Number of Crashes per Intersection	Estimated Number of Improvements (Intersections)	Construction Costs (\$ Million)	Educ / Enf Costs (Annual \$ Million)	Estimated Annual Crashes Prevented	Estimated Annual Disabling Injuries Prevented	Estimated Annual Fatalities Prevented	\$ Million Per Annual Life Saved
State Roads												
Basic Set of Sign and Marking Improvements	State Rural - No Left and Right Terminal Intersections	Stop-Controlled	Total	Systematic	4	323	1.94	0.00	127.63	12.40	3.30	0.59
Basic Set of Sign and Marking Improvements	State Rural - Left and Right Terminal Intersections	Stop-Controlled	Total	Systematic	4	110	0.66	0.00	69.70	6.77	1.80	0.37
Basic Set of Sign and Marking Improvements	State Urban - No Left and Right Terminal Intersections	Stop-Controlled	Total	Systematic	10	292	1.75	0.00	287.76	13.10	2.25	0.78
Basic Set of Sign and Marking Improvements	State Urban - Left and Right Terminal Intersections	Stop-Controlled	Total	Systematic	10	14	0.08	0.00	13.87	0.63	0.11	0.75
Flashing Beacons	State Rural - No Left and Right Terminal Intersections	Stop-Controlled	Total	Systematic	15	16	0.24	0.00	5.49	0.53	0.14	1.70

Strawman: The Bottom Line

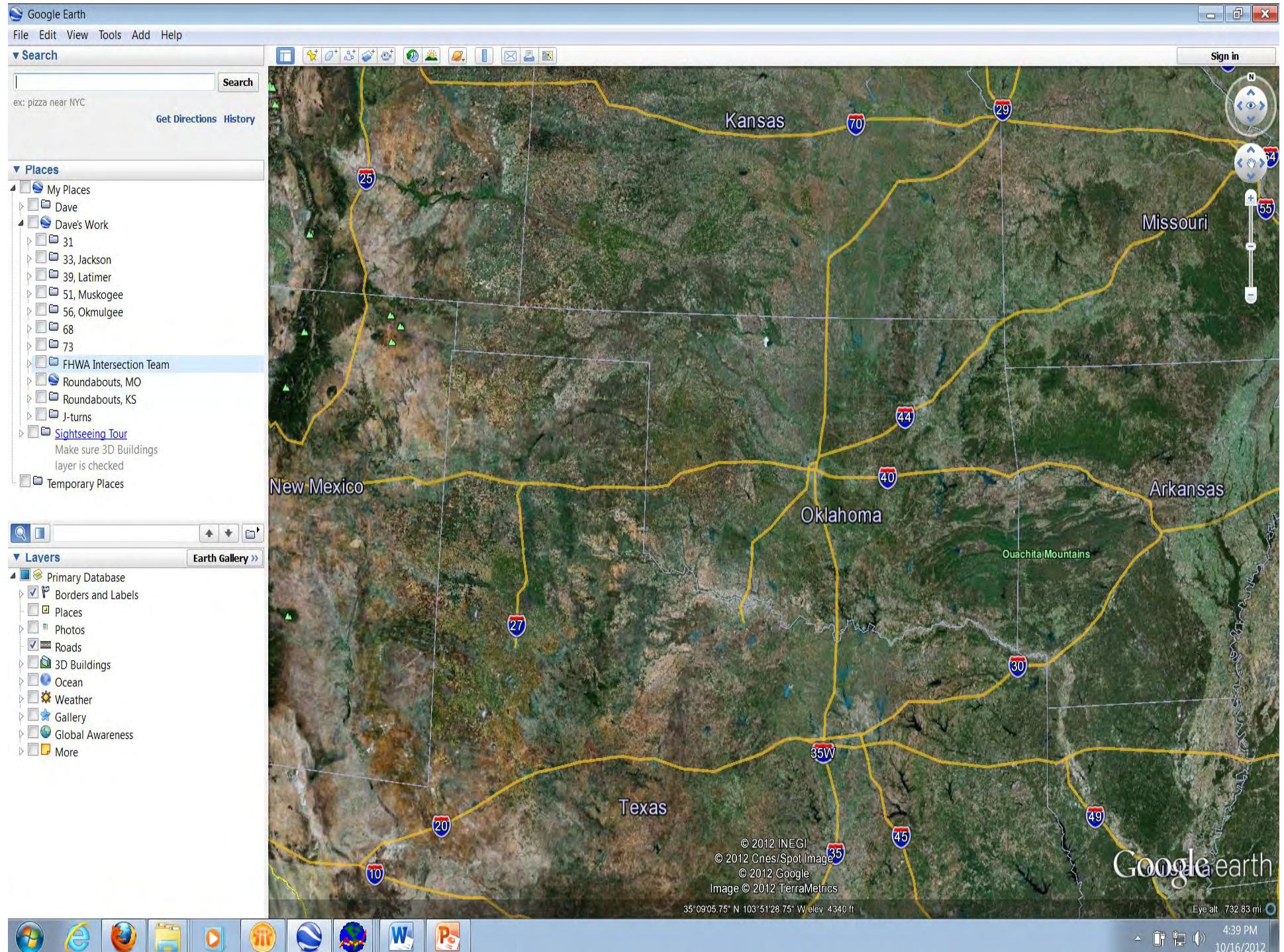
Countermeasure	Intersection Type	TCD	Crash Type	Approach	Threshold Number of Crashes per Intersection	Estimated Number of Improvements (Intersections)	Construction Costs (\$ Million)	Educ / Enf Costs (Annual \$ Million)	Estimated Annual Crashes Prevented	Estimated Annual Disabling Injuries Prevented	Estimated Annual Fatalities Prevented	\$ Million Expended Per Annual Life Saved
Totals												
State Roads						1,083	16.25	0.00	1,157	59.91	11.33	1.43
Local Roads						233	2.46	0.00	477	19.85	1.39	1.77
Corridors and Cities						0	5.42	0.30	1,070	49.93	3.27	1.06
Grand Total						1,315	24.13	0.30	2,703	129.70	15.99	1.35

- ▶ \$24 Million to implement
- ▶ 2,700 annual intersection crashes prevented
- ▶ 130 annual disabling injuries prevented
- ▶ 16 annual lives saved

FHWA - ISIP

- Pool Fund Study – LCSI
 - SC presented their results
 - 106 intersections
 - Avg. cost of \$6200/intersection
 - Overall (aggregate) 19.2% CRF
 - Will be submitting to the CMF Clearinghouse





▼ Places

My Places

Dave

Dave's Work

31

33, Jackson

39, Latimer

51, Muskogee

56, Okmulgee

68

73

FHWA Intersection Team

Roundabouts, MO

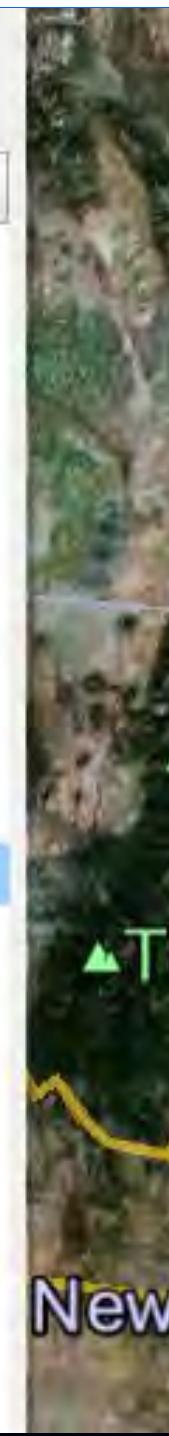
Roundabouts, KS

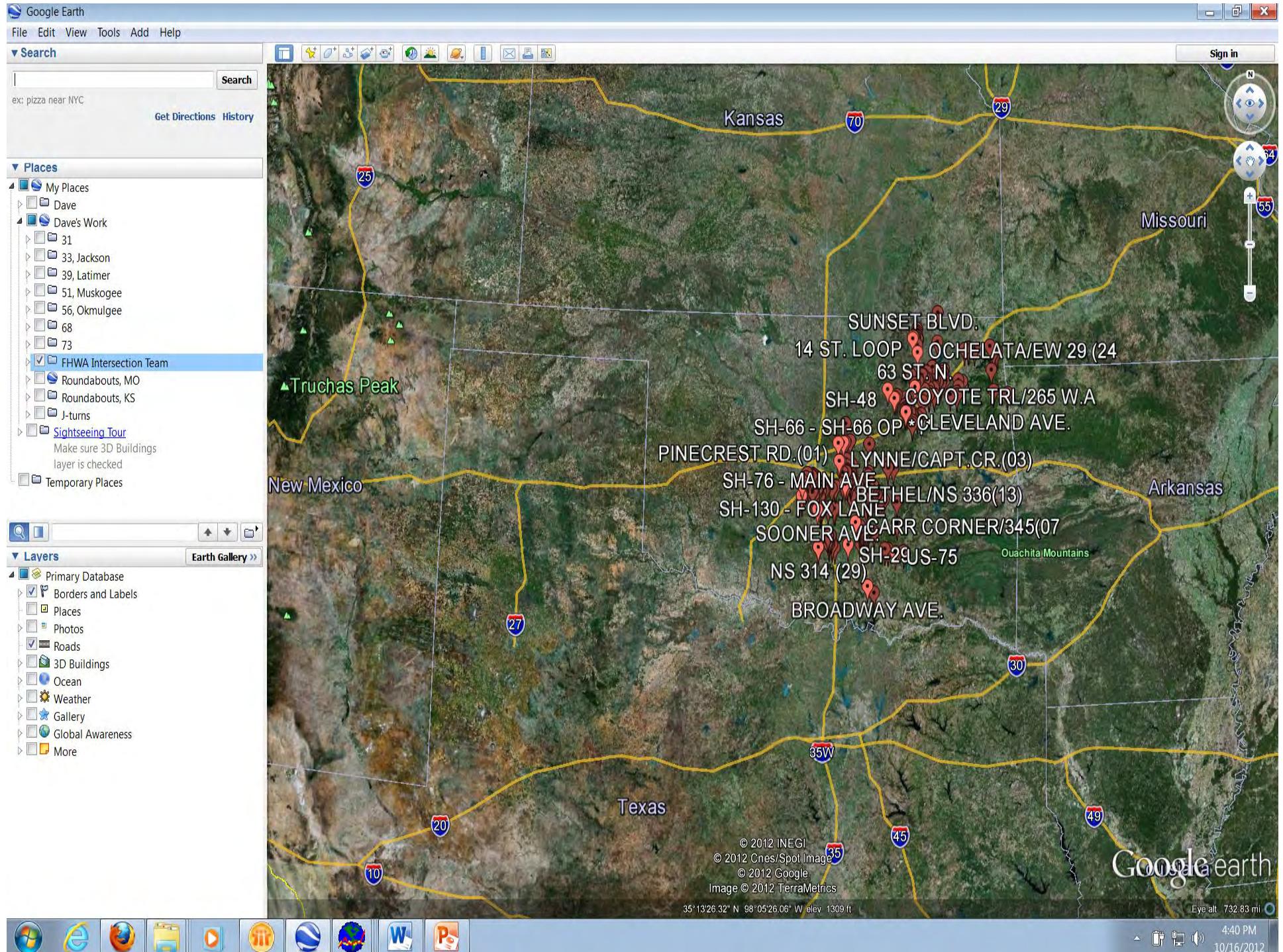
J-turns

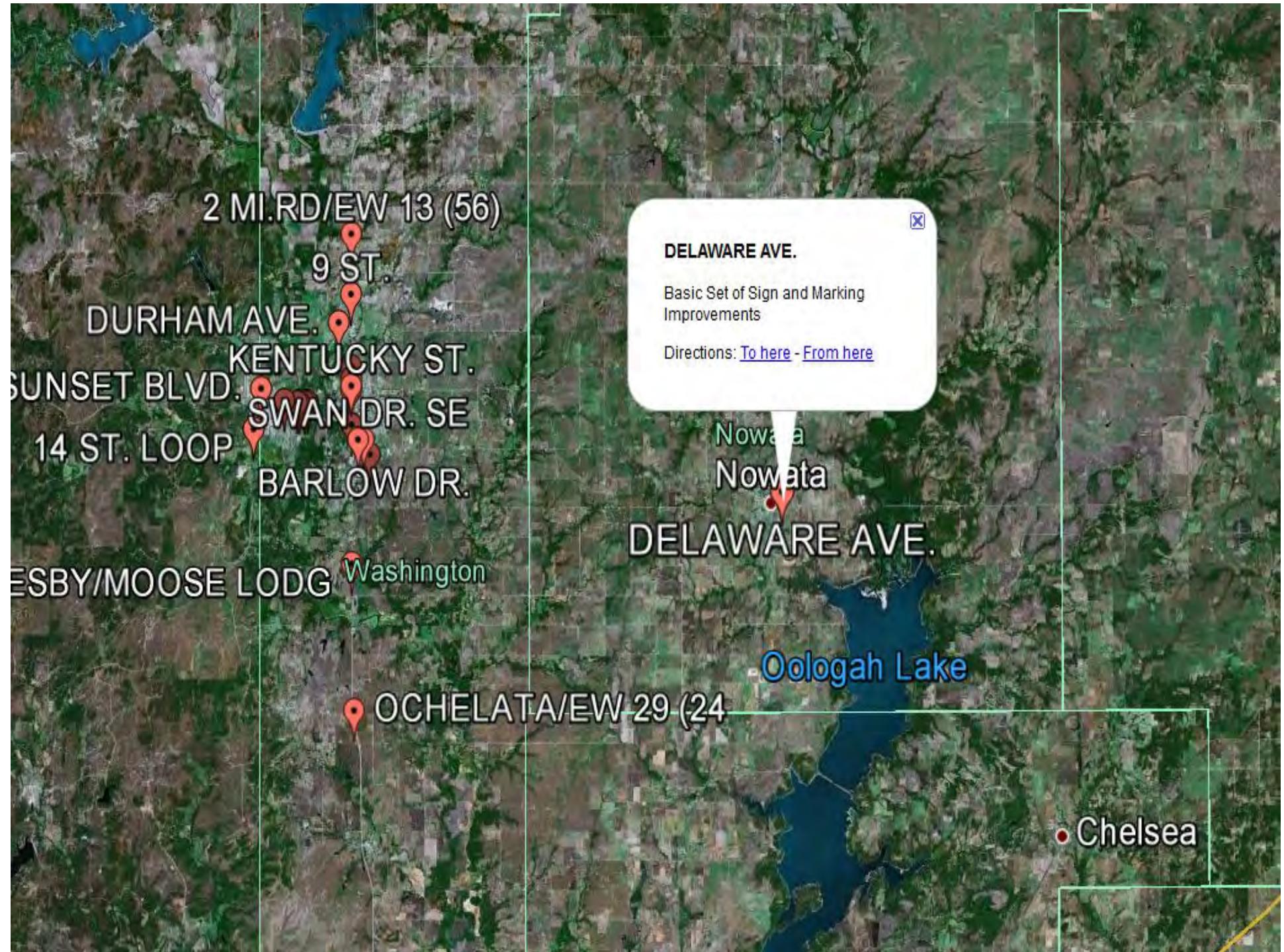
Sightseeing Tour

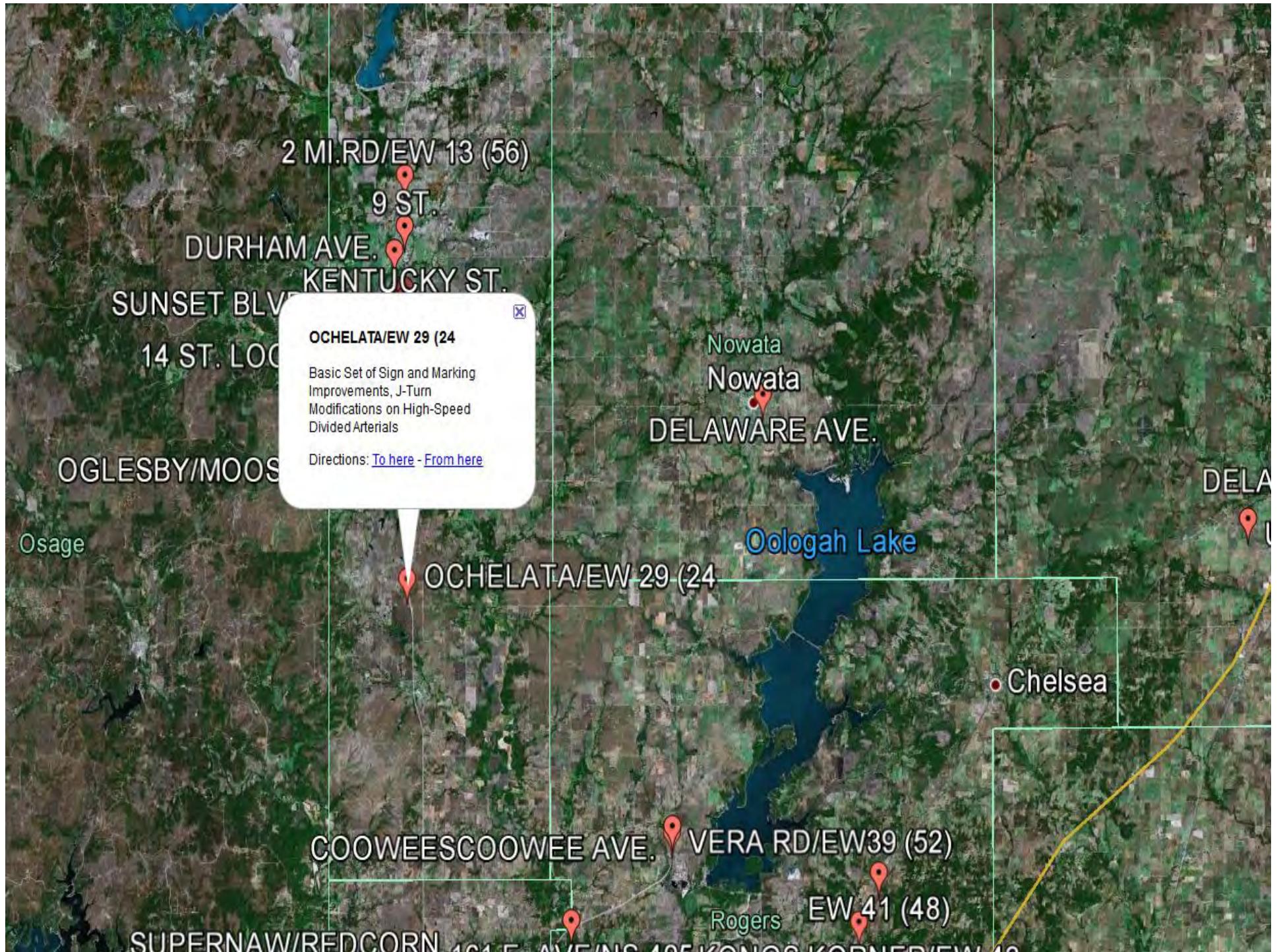
Make sure 3D Buildings
layer is checked

Temporary Places







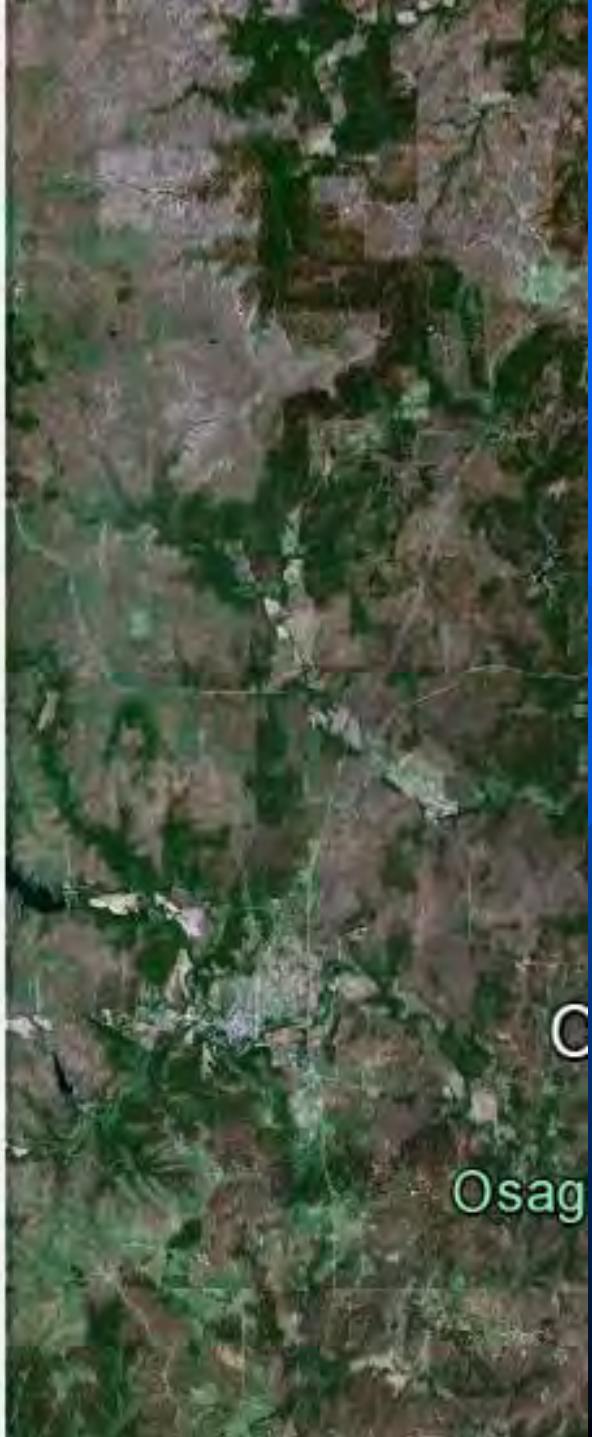


Places

- ▶ 68
- ▶ 73
- ◀ FHWA Intersection Team
- ▶ Div 3
- ◀ Div 8, rev. 2
 -  [SH-51 - SH-51 OP *69*](#)
Basic Set of Sign and Marking
Improvements, Flashing Beacons, Traffic
 -  [TIMBERCREST CIR.S](#)
Basic Set of Sign and Marking
Improvements, Flashing Beacons, Hot
 -  [116 ST. N.](#)
Basic Set of Sign and Marking
Improvements, Flashing Beacons, J-Turn
 -  [SH-88 - MOORE/WILL ROGERS](#)
Basic Set of Sign and Marking
Improvements
 -  [OWALLA AVE.](#)
Basic Set of Sign and Marking
Improvements, Flashing Beacons
 -  [1405 AVE](#)

Layers

Earth Gallery >







DELAWARE AVE.

169



221 North Ash Street



Exit Street View



North Ash Street

© 2012 Google
© 2012 Google

Google earth

[Report a problem](#)

Imagery Date: 5/2009

36° 42' 05.58" N 95° 37' 47.22" W elev 687 ft

Eye alt 693 ft

FHWA - ISIP

- 1/18/12: ODOT/FHWA held workshop
 - OKC Maintenance Facility
 - Approx. 8 hours

- 1/19/12: Executive Staff Meeting
 - Scheduled for 1 hour
 - Went for 2 hours



FHWA - ISIP

- 1/19/12: Executive Staff Meeting
 - General acceptance of the theory
 - Felt this would be a good program
 - Probably no additional funds
 - Please visit with the Field Division Engineers



FHWA - ISIP

- 4/5/12: Field Div. Engineers Meeting
 - Jeff Shaw (FHWA) & David Glabas (ODOT)
 - Presented the program
 - Asked if we could somehow incorporate into their 8 year construction plan



FHWA - ISIP

- 4/5/12: Field Div. Engineers Meeting
 - Group responded positively
 - We don't have full commitments, yet
 - However, we are starting in Div. 8 with full implementation (80% or so)
 - \$1E6 for 2013, 2014, 2015



FHWA - ISIP

■ Local Governments:

- City and County
- Both are processed
- One week turn around time (final cleaning)
- Provide a list of your intersections **with mitigations**
- Google Earth capability????
- Email: dglabas@odot.org
- mwarren@odot.org



Oklahoma Safe Routes to School Program



OTEA, Fall 2012 – David Glabas, P.E., ODOT



Oklahoma Safe Routes to School Program

- Part of the 2005 SAFTEA-LU Re-authorization Bill
 - 13 million dollars available to Oklahoma (2005-2012)
 - Awarded project are 100% federally funded, distributed by a competitive application process
-
- **Program Purpose:**
 - Enable and encourage children to walk and bicycle to school;
 - Make walking and bicycling a safer and more appealing (teaching a healthy and active lifestyle at an early age)
 - Improve safety and reduce traffic fuel consumption, and air pollution in the vicinity of schools
 - **Eligible Applicants:**
 - Schools and School Districts
 - Local and State Governments
 - Tribal and Regional Agencies
 - Nonprofit Organization (must partner with an approved Sponsor)
 - **Primary Beneficiaries:**
 - Kindergarten thru 8th grade



Oklahoma Safe Routes to School Program

■ Eligible Projects:

- **Infrastructure** – Safety engineering projects located near a school
 - » \$200,000 max.
- **Non-Infrastructure** - Educational programs and activities that will improve safety for walking and biking
 - » \$5,000 to \$20,000

■ October 1, 2007 – Beginning of Oklahoma's SRTS Program & Application Cycle

- Approximately \$6.2 million awarded, with an additional \$3.2 million pending approval
- 53 total projects statewide with an estimated 41 more pending approval
- 40% of the projects have been completed



Drive Aware Oklahoma

■ STOP THE TEXTS.

STOP THE WRECKS.

- www.StopTextsStopWrecks.org
- www.facebook.com/pages/Drive-Aware-Oklahoma

■ Mission Statement:

- To decrease injuries and fatalities caused by inattentive driving in Oklahoma through public education.



Drive Aware Oklahoma

■ Partners are:

- Oklahoma Safety Council
- AAA Oklahoma
- OK Highway Safety Office
- OK Dept. of Public Safety
- OK Highway Patrol
- Crime Commission/Gen tXt
- OU Medicine Trauma ONE, Injury Prevention
- OK Dept. of Transportation
- OK Dept. of Labor
- OKC Police Department
- Caddo Nation Motor Vehicle, Injury Prevention Program
- Tulsa Police Department
- OK State Department of Health
- Norman Police Department
- FCCLA, Edmond Memorial HS



Drive Aware Oklahoma

■ Drive Aware Week

- October 21-27
- proclaimed by Governor Mary Fallin
- Oklahoma City Press Conference
 - » 10:30 a.m. Monday, October 22, 2012
 - » Edmond Memorial High School (Entrance #16)
- Tulsa Press Conference
 - » 10:30 a.m. Monday, October 22, 2012
 - » Tulsa City Hall (Council Room)



9 PROVEN SAFETY COUNTERMEASURES THAT WORK!

- 1) Corridor Access Management
 - 25% reduction in fatal & injury crashes
- 2) Median and Pedestrian Crossing Islands in Urban and Suburban Areas
 - 46% reduction in pedestrian crashes
 - 39% reduction in total crashes
- 3) Enhanced Delineation and Friction for Horizontal Curves
 - 43% reduction in fatal crashes
 - **Nov. 14, 9:30-2:00 Central, FHWA Office of Safety**
 - **Nov. 15, 12:00-1:30 Central, FHWA Office of Safety**
 - **More info: huy.nguyen@dot.gov**
- 4) Pedestrian Hybrid Beacon
 - 69% reduction pedestrian crashes
 - 29% reduction in total crashes
 - 3 Installations in Oklahoma (Stillwater, Div. 2 & 3)
- 5) Road Diet
 - 29% reduction in all crashes

9 PROVEN SAFETY COUNTERMEASURES THAT WORK!

6) Roundabouts

- Can reduce fatal & injury crashes nearly 80%

7) Longitudinal Rumble Strips and Rumble StripEs on 2-Lane Roads

- Reduction of Severe Crashes:
 - 36% ROR in Rural
 - 44% Head-ons in Rural
 - 64% Head-ons in Urban

8) Safety Edge

- Oklahoma SP 411-14

9) Backplates with Retro-reflective Borders.

- 15% reduction in Crashes

<http://safety.fhwa.dot.gov/provencountermeasures/>

ODOT/OHP - MSEP

- Motorcycle Safety and Education Program
 - Partnership between ODOT and OHP (FHWA likes and supports)
 - Modeled after the OHSO and Edmond Police Department's Program
 - Took a few steps further



ODOT/OHP - MSEP

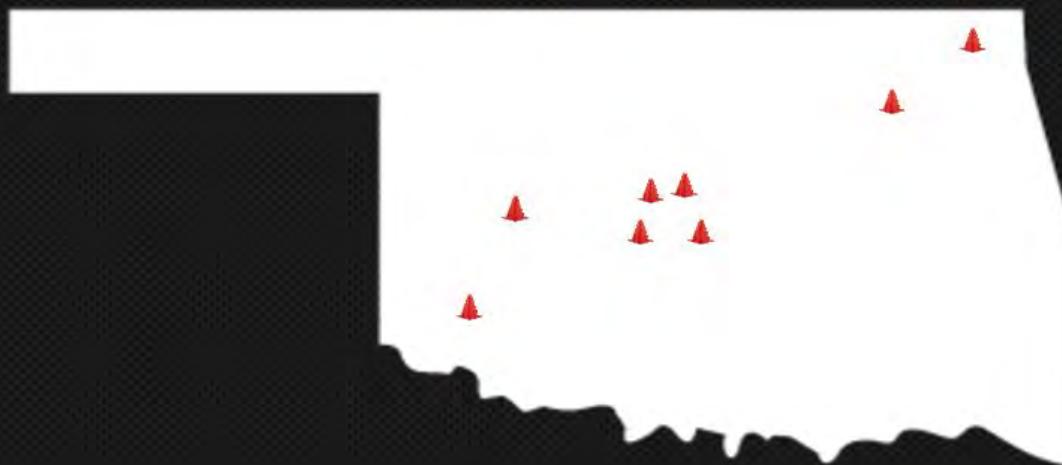
- Motorcycle Safety and Education Program
 - “All” types of crashes have a downward trend, except motorcycles
 - Use the educational component (4Es)
 - Goals: Reduce injuries and fatalities
 - » Attending events, promoting, demonstrations (10 per year)
 - » Holding FREE advanced classes around the state (10 per year)



[Click Here To Visit Our YouTube Channel](#)



Course Locations



Safety Tips

Hand controls on a motorcycle such as the brake and clutch levers seem to be an area where many riders can develop some bad habits. These levers are designed specifically to accommodate four fingers to allow for maximum control and efficiency. The front brake is one of the most important pieces of equipment installed on your motorcycle and it accounts for 85 to 90% of the bikes total braking efficiency. BE SAFE!!

Top Reasons To Be Trained

- Proven Safety Advantage
- Enhanced Riding Skills
- Insurance Discounts

Training isn't just smart, it's also a great way to have fun and meet other riders.

[JOIN US ON Facebook](#)

ATTENTION ODOTERS!

**FREE MOTORCYCLE
SAFETY CLASS!**

The Oklahoma Highway Patrol and the Oklahoma Department of Transportation have partnered up and are now offering free motorcycle safety courses on advanced collision avoidance.

SATURDAY MAY 5TH
FROM 8AM - 4PM
FIRST SOUTHERN BAPTIST CHURCH
6400 S. SOONER RD. 73135

Only 30 spots available. Sign up today online at www.ohpsaferiders.com
Required items are your own bike, long pants, gloves, eye protection, boots above ankle, long sleeve shirt and a helmet. No passenger riders, but spectators are welcome. Bring a sack lunch.

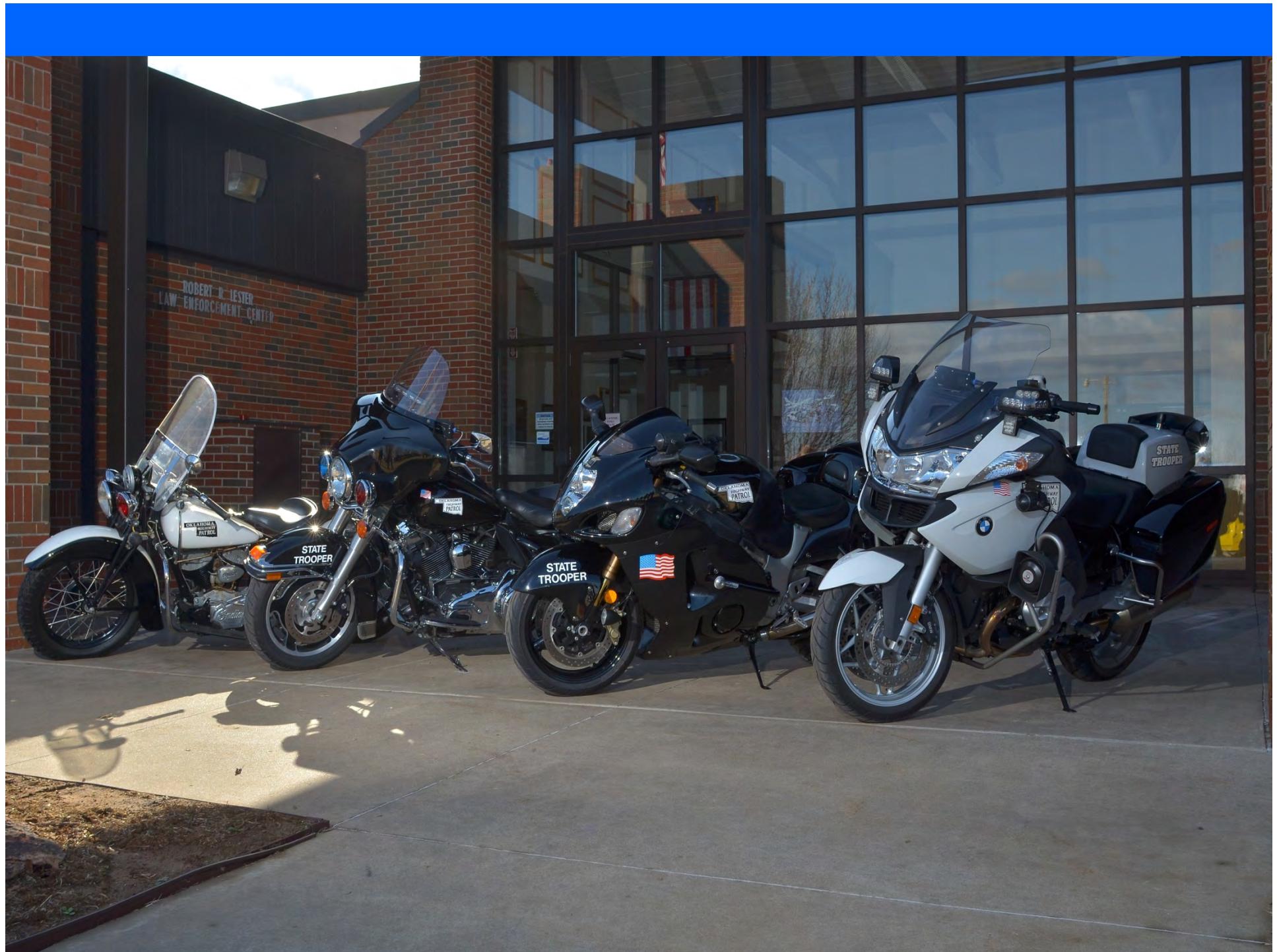


OKLAHOMA HIGHWAY PATROL
MOTORCYCLE SAFETY PROGRAM

WWW.OHPSAFERIDERS.COM





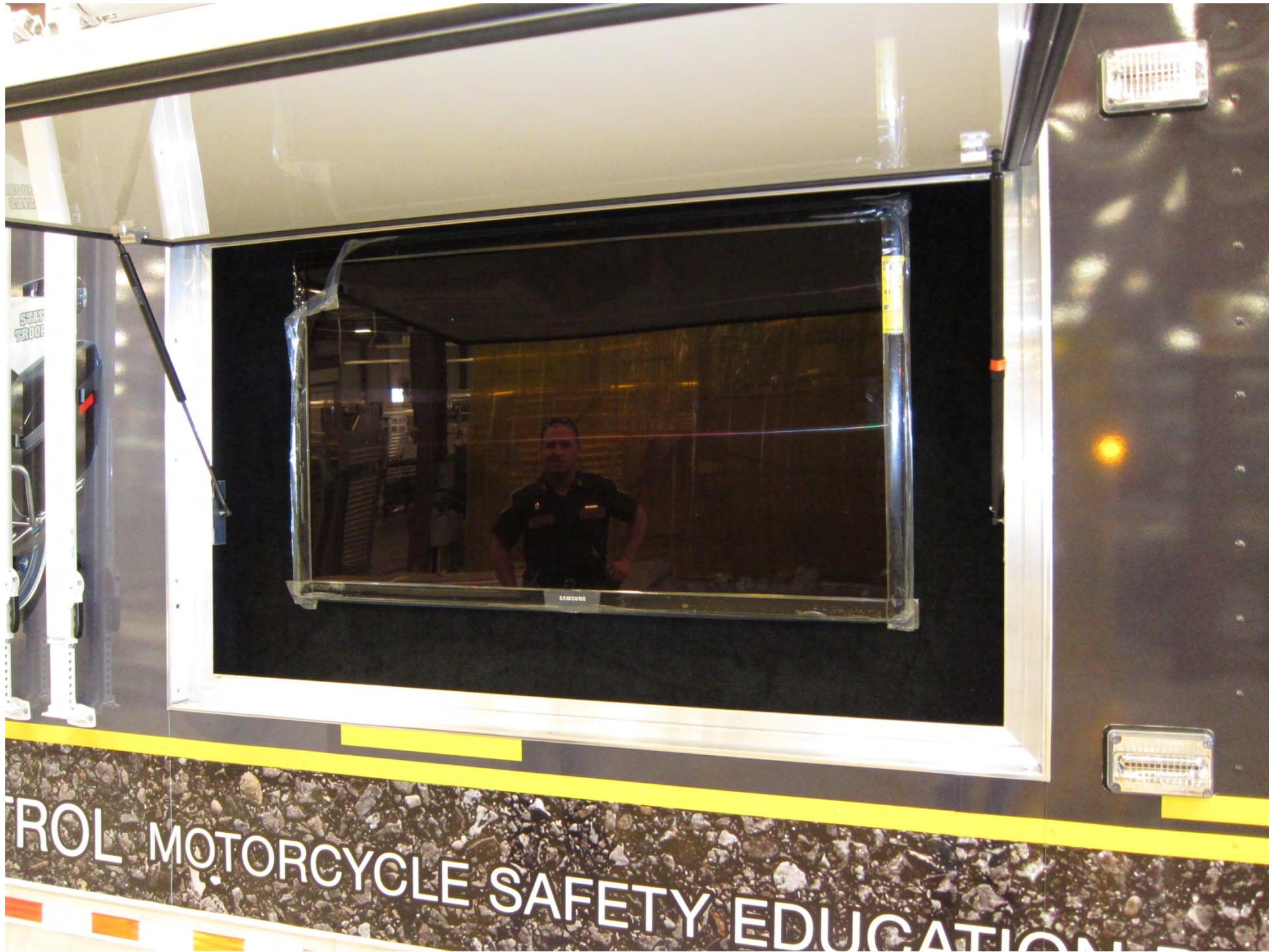














MOTORCYCLE SAFETY EDUCATION PROGRAM

OKLAHOMA
HIGHWAY
PATROL



WWW.OHPSAFERIDERS.COM



ODOT/OHP - MSEP

■ More Information:

- www.ohpSafeRiders.com
- <http://www.edmondok.com/index.aspx?NID=577>
 - OR -
 - Google “Edmond Motorcycle Civilian School”



Other items of interest ...



Other items of interest...

- CLRS committee, just starting
- 2nd Edition of SHSP, just starting
 - smaller group, shared effort, ongoing with majority of the work starting in December
 - Required to update every 2 years, but striving for every year



Questions / Comments?

- David Glabas, P.E.
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- Division 9, Traffic Engineering
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 - Oklahoma City, OK 73105-3204
 - 405-521-4157 or 405-521-2861
 - dglabas@odot.org

