

BIKE AND PEDESTRIAN CRASH ANALYSIS

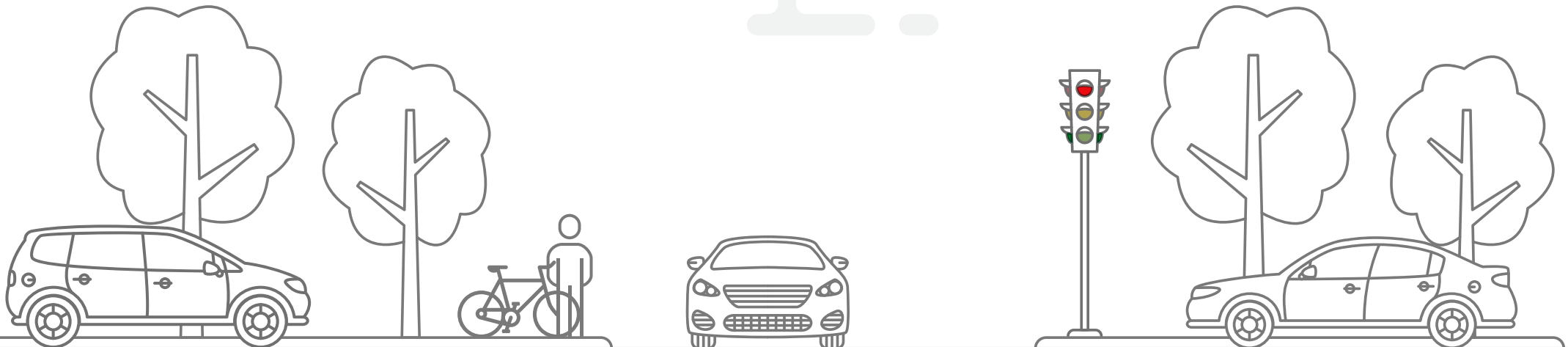
DECEMBER 2017

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OUTLINE

- Introduction of the Crash Analysis
- Step-by-Step Process
- Example Intersections
- Challenges and Next Steps





STEP 1

PROCESS OF ANALYSIS

2007-2015 DATA FROM SAFE-T,
OKLAHOMA'S CRASH ANALYSIS
DATABASE.

3,205

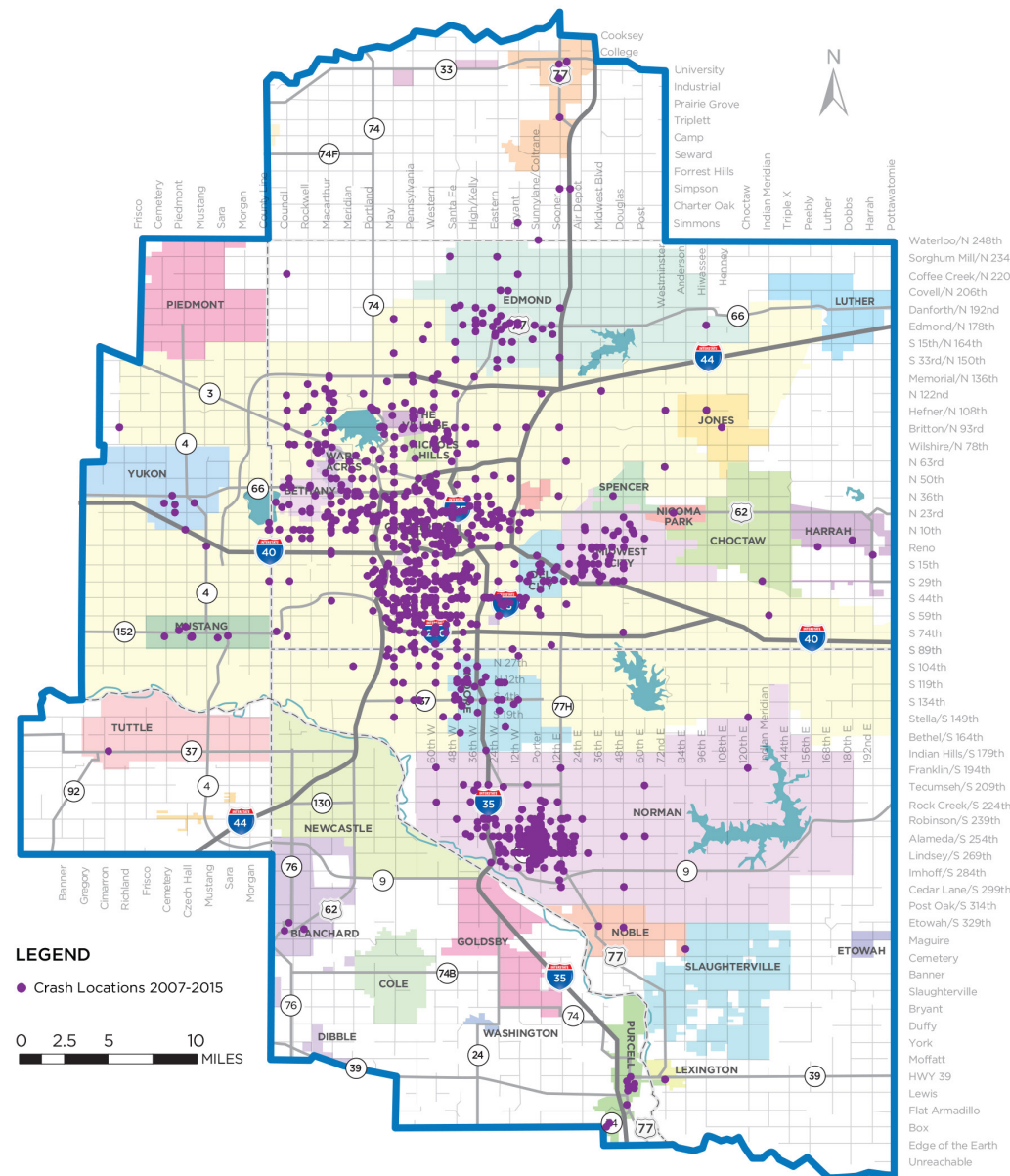
TOTAL BICYCLE AND PEDESTRIAN
RELATED CRASHES

162

FATALITIES

667

INCAPACITATING
INJURIES

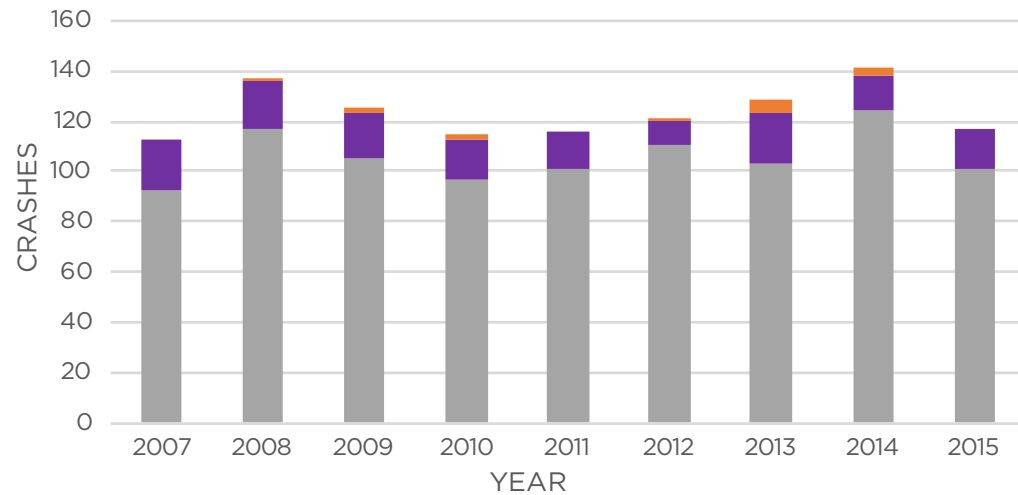


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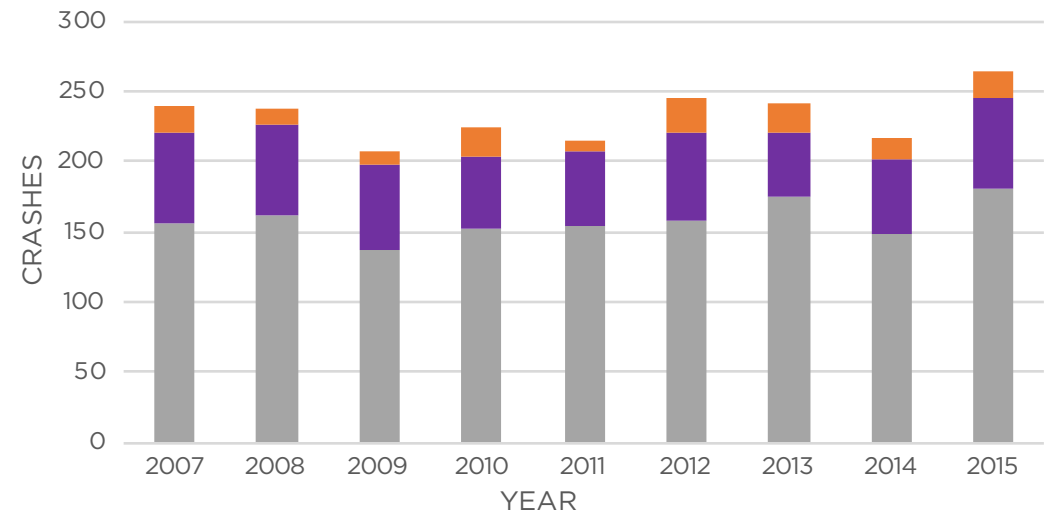
CRASH STATISTICS

TOTAL CRASHES IN OCARTS AREA INVOLVING A BICYCLIST OR PEDESTRIAN PER YEAR

BICYCLE-RELATED CRASHES



PEDESTRIAN-RELATED CRASHES



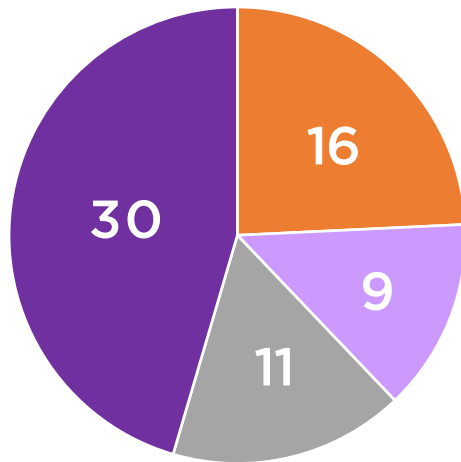
■ Other ■ Incapacitating ■ Fatal



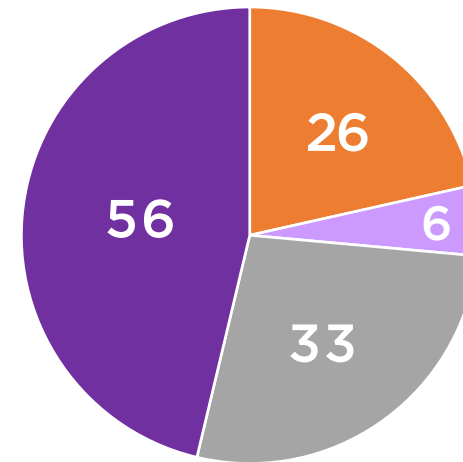
CRASH STATISTICS

DISTRACTED DRIVING

DISTRACTIONS IN BIKE
RELATED CRASHES



DISTRACTIONS IN PEDESTRIAN
RELATED CRASHES



- Electronic Communication Devices
- Other Inside Vehicle
- Other Electronic Devices
- Other Outside Vehicle

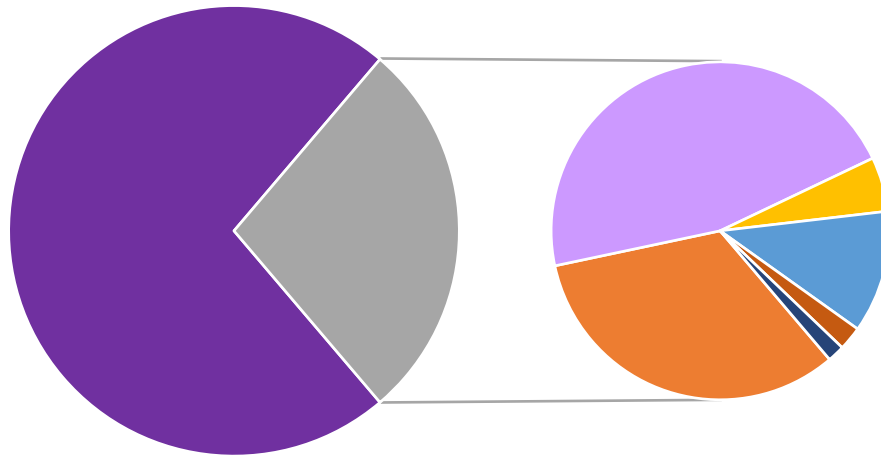
Driving while distracted by a cellphone has killed 3 pedestrians and incapacitated 8 others and 2 bicyclists



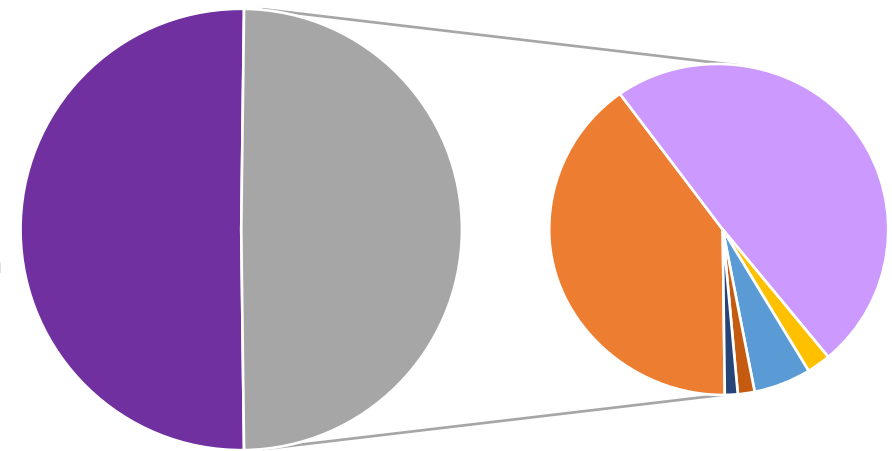
CRASH STATISTICS

LIGHTING CONDITIONS

LIGHTING CONDITIONS
IN BIKE-RELATED CRASHES



LIGHTING CONDITIONS
IN PEDESTRIAN-RELATED CRASHES



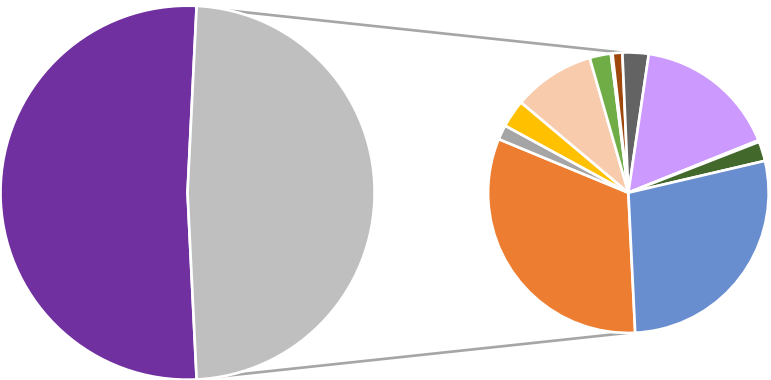
Most crashes involving a pedestrian or bicyclist occur during the day.



CRASH STATISTICS

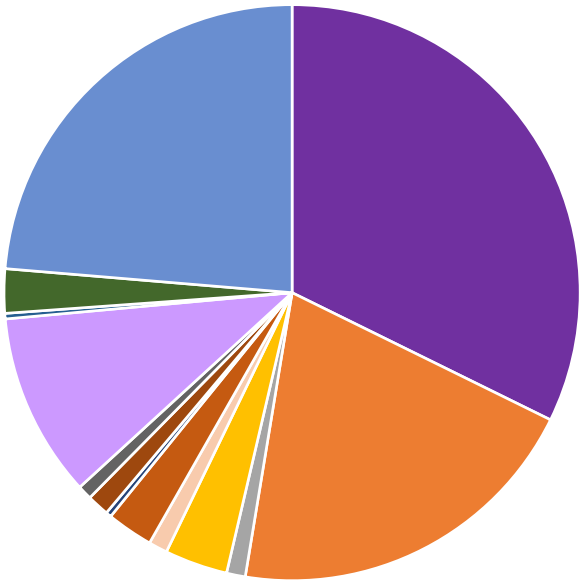
WHAT WENT WRONG

CAUSE OF BIKE
RELATED CRASHES



*Listed as improper bicyclist or pedestrian action or no improper action by driver

CAUSE OF PEDESTRIAN
RELATED CRASH





STEP 2

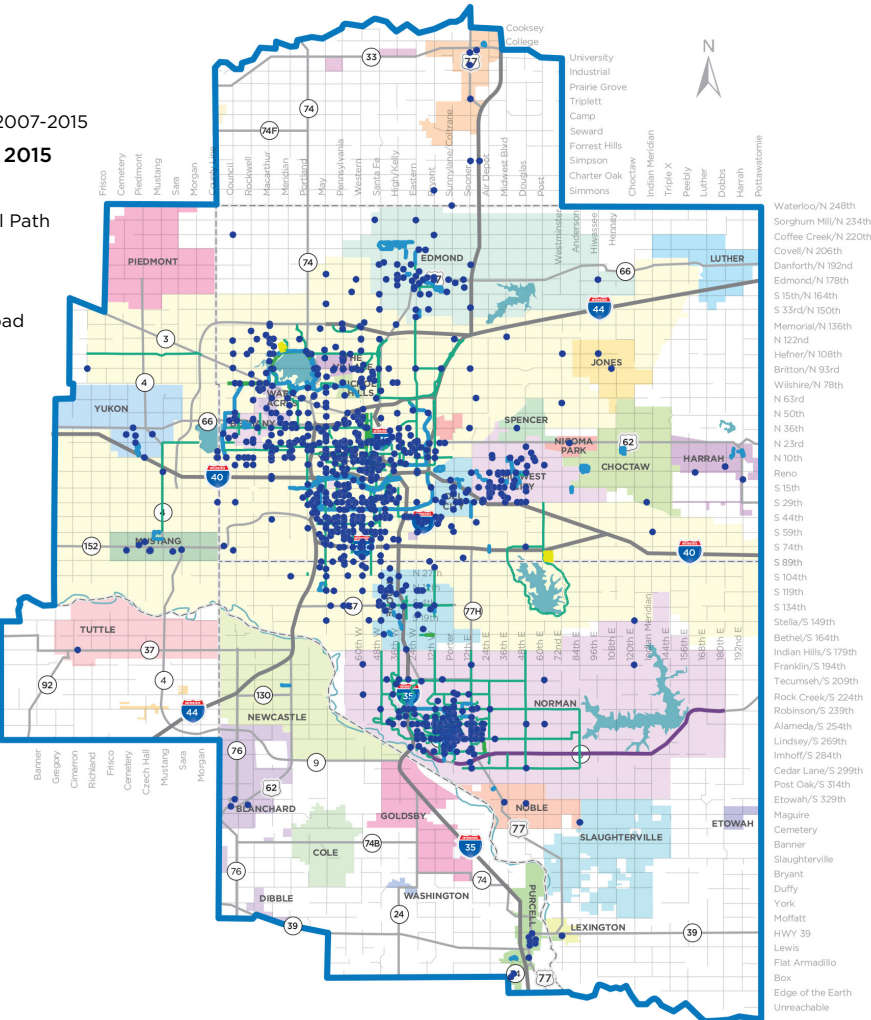
PROCESS OF ANALYSIS

LEGEND

• Bike Crashes 2007-2015

Bicycle Routes 2015

- Bike Lane
- Multimodal Path
- Mountain
- Shoulder
- Sign on Road



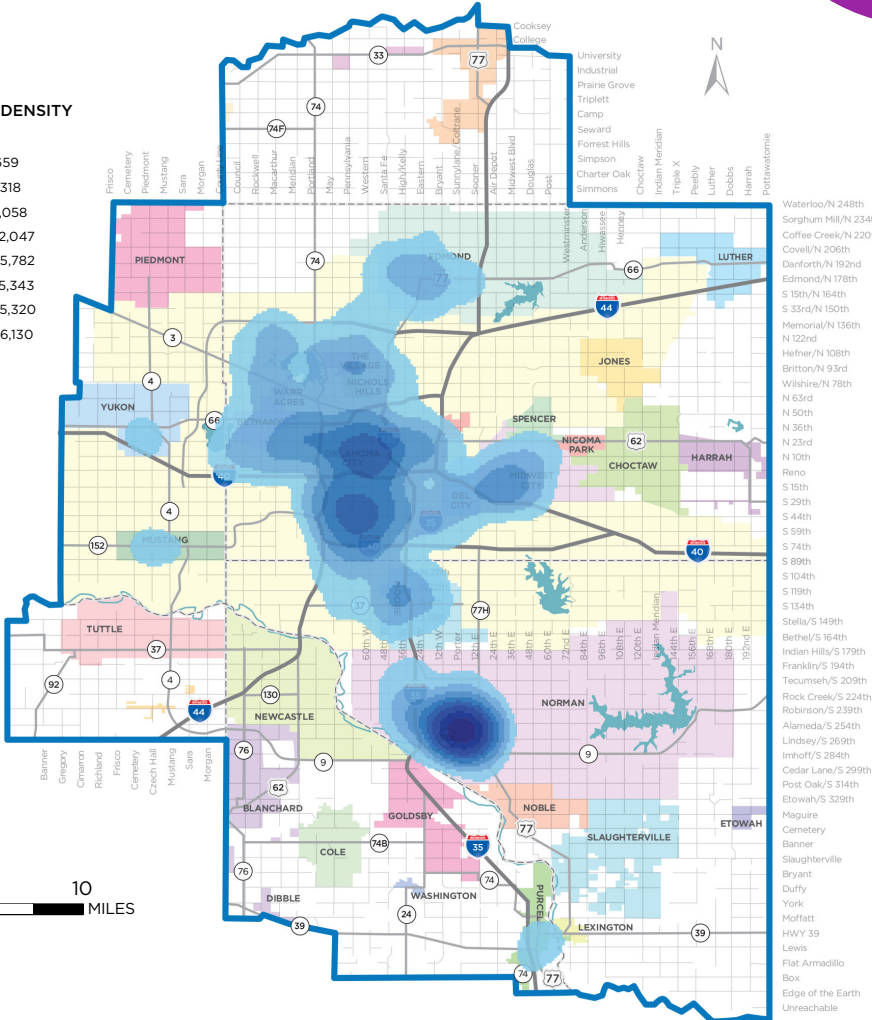
LOCATIONS OF BICYCLE-RELATED CRASHES

LEGEND

BIKE KERNEL DENSITY

- 0 - 2,081
- 2,082 - 6,659
- 6,660 - 13,318
- 13,319 - 22,058
- 22,059 - 32,047
- 32,048 - 45,782
- 45,783 - 65,343
- 65,344 - 85,320
- 85,321 - 106,130

0 2.5 5 10 MILES



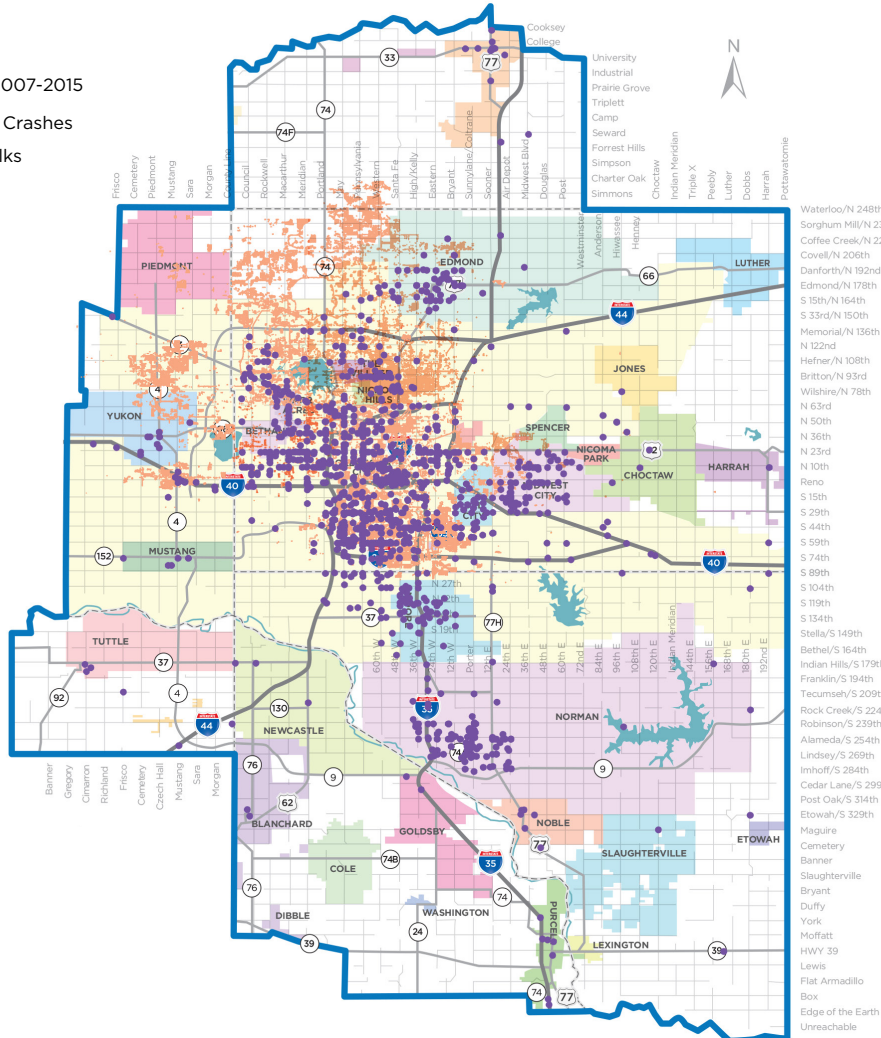
AREAS OF HIGH RATES OF BICYCLE-RELATED CRASHES

STEP 2 PROCESS OF ANALYSIS



LEGEND 2007-2015

- Pedestrian Crashes
- Sidewalks

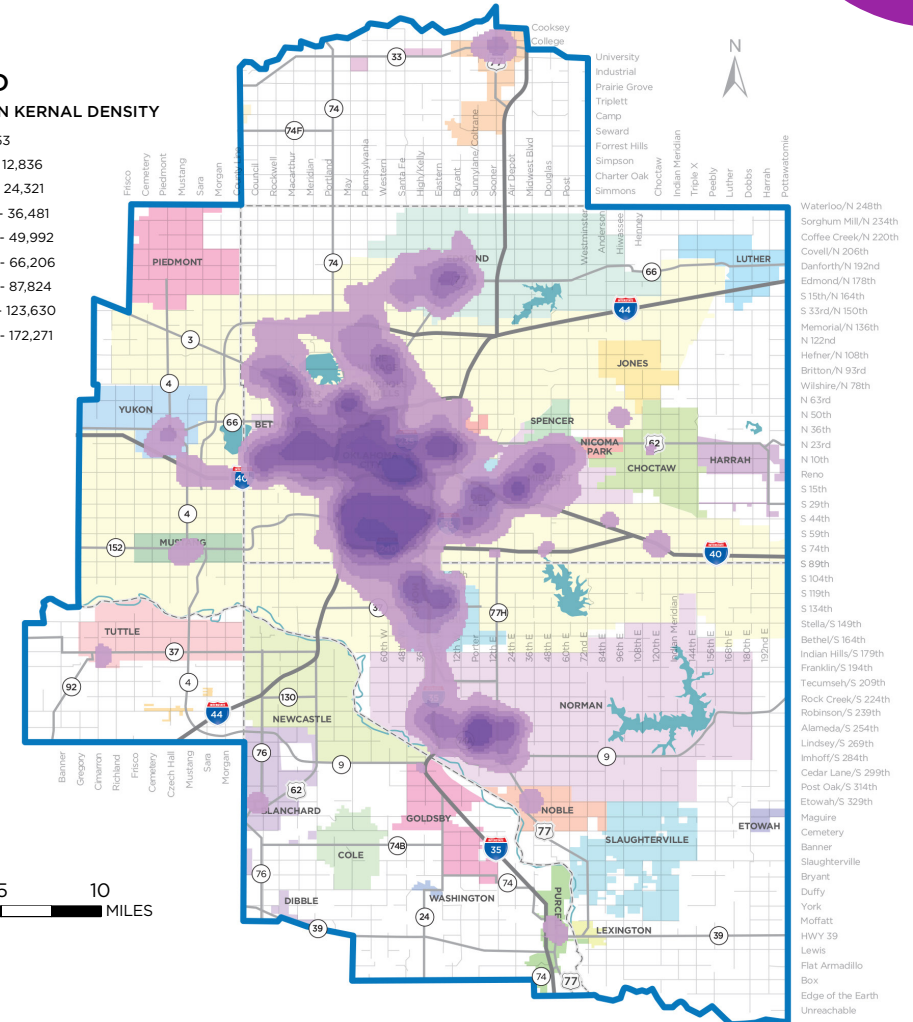


LEGEND

PEDESTRIAN KERNAL DENSITY

- 0 - 4,053
- 4,054 - 12,836
- 12,837 - 24,321
- 24,322 - 36,481
- 36,482 - 49,992
- 49,993 - 66,206
- 66,207 - 87,824
- 87,825 - 123,630
- 123,631 - 172,271

0 2.5 5 10
MILES



STEP 3

PROCESS OF ANALYSIS

IDENTIFIED AREAS OF HIGH CRASH RATES

LOCATION	TOTAL BICYCLE CRASHES	FATALITIES	INCAPACITATING INJURIES	NON INCAPACITATING INJURIES	POSSIBLE INJURY	PROPERTY DAMAGE
12th Ave NE & Alameda St (Norman)	9	0	0	3	5	1
Air Depot Blvd: Eddie Dr to Fairchild Dr (Midwest City)	8	0	0	1	4	3
Classen Blvd & Lindsey St (Norman)	7	0	1	5	1	0
University Blvd & Boyd St (Norman)	6	0	1	4	1	0
Asp Ave & Lindsey St (Norman)	5	0	0	2	3	0
NW 23rd St: Harvey Ave to Broadway St (OKC)	5	1	0	2	3	0
Santa Fe & Danforth (Edmond)	4	0	0	4	0	0
N 12: Eastern to Old Mill Rd (Moore)	4	0	1	2	0	1
Biloxi Dr & Lindsey St (Norman)	4	0	0	3	0	1
Classen Blvd & Boyd St (Norman)	4	0	0	3	1	0
Jenkins Ave & Boyd St (Norman)	4	0	2	1	1	0
Jenkins Ave & Lindsey St (Norman)	4	0	0	4	0	0
MacArthur Blvd & NW 10th St (OKC)	4	1	0	2	1	0
Hudson Ave & NW 6th St (OKC)	4	0	0	3	1	0
Classen Blvd: NW 23rd St to NW 21st St (OKC)	4	0	0	1	2	1
Shartel Ave: Main St to Reno Ave (OKC)	4	0	2	0	2	0
N 12th & Janeway Dr (Moore)	3	0	1	0	1	1
Kentucky Ave & SW 59th (OKC)	3	0	0	1	1	1
May Ave & SW 29th (OKC)	3	0	0	0	2	1
Pennsylvania Ave & NW 7th St (OKC)	3	0	0	2	1	0

NORMAN

12TH AVE NE & ALAMEDA ST.

- WALGREENS
- MR SHORTSTOP GAS
- HOMELAND
- CLEVELAND COUNTY HEALTH DEPT
- JUST TO THE NORTH
- ALAMEDA SQUARE
- SEVERAL RESTAURANTS

SPEED LIMIT: 40

TOTAL LANES: 20

TOTAL DRIVEWAYS: 20

DAILY TRAFFIC: 22,482



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MIDWEST CITY

AIR DEPOT BLVD FROM EDDIE DR TO FAIRCHILD DR

- CVS & WALGREENS
- ONCUE GAS
- HOMELAND
- MIDWEST CITY
DEPOT APARTMENTS
- AGATEWAY PLAZA
- SEVERAL BUSINESSES

SPEED LIMIT: 40

TOTAL LANES: 20

DAILY TRAFFIC: 21,569



STEP 3

PROCESS OF ANALYSIS

IDENTIFIED AREAS OF HIGH CRASH RATES

LOCATION	TOTAL PEDESTRIAN CRASHES	FATALITIES	INCAPACITATING INJURIES	NON INCAPACITATING INJURIES	POSSIBLE INJURY	PROPERTY DAMAGE
SW 59th: Blackwelder Ave to Walker Ave (OKC)	27	2	9	6	8	2
NW 23rd St: MacArthur Blvd to Meridian Ave (OKC)	24	0	8	7	7	2
Northwest Expressway: Rockwell Ave to MacArthur Blvd (OKC)	12	2	2	6	2	0
May Ave: NW 63rd St to Northwest Expressway (OKC)	12	1	6	2	3	0
Air Depot Blvd: Eddie Dr to Reed Pl (Midwest City)	10	0	5	3	1	1
Pennsylvania Ave & SW 59th St (OKC)	9	0	3	4	2	0
Bryant Ave & SE 44th St (OKC)	8	1	2	2	3	0
Western Ave & I-240 (OKC)	8	1	1	5	1	0
Eastern Ave & Main St (Moore)	8	0	1	5	2	0
May Ave & SW 59th St (OKC)	8	0	2	5	1	0
Shields Blvd from SE 57th St to SE 59th St (OKC)	7	3	2	0	1	1
Council Rd & NW 10th (OKC)	7	1	3	1	2	0
Martin Luther King Ave & NE 23rd St (OKC)	7	1	1	1	4	0
Pennsylvania Ave & NW 23rd St (OKC)	7	0	0	3	3	1
Reno Ave from Woodside Dr to Woodman Dr (Midwest City)	6	1	1	0	4	0
University Dr from Ayers St to Hurd St (Edmond)	6	0	2	4	0	0
May Ave & SW 29th St (OKC)	6	0	2	2	2	0
Meridian Ave & NW 23rd St (OKC)	6	0	1	2	2	1
Mickey Mantle Dr & Reno Ave (OKC)	6	0	4	1	1	0
Western Ave & Hefner Rd (OKC)	6	0	3	3	0	0
Western Ave & Sheridan Ave (OKC)	6	0	5	0	1	0
2nd St & Bryant Ave (Edmond)	5	0	1	4	0	0
Asp Ave & Boyd St (Norman)	5	0	2	3	0	0

OKC

SW 59TH ST: BLACKWELDER TO WALKER

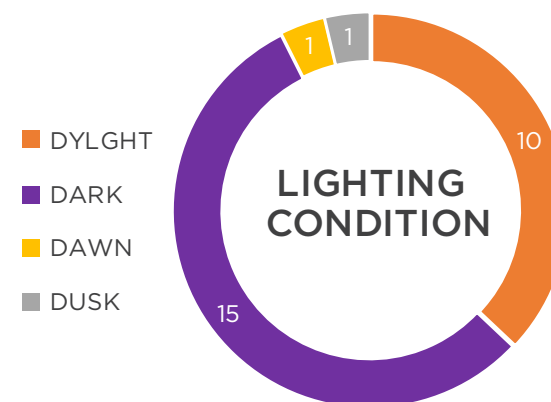
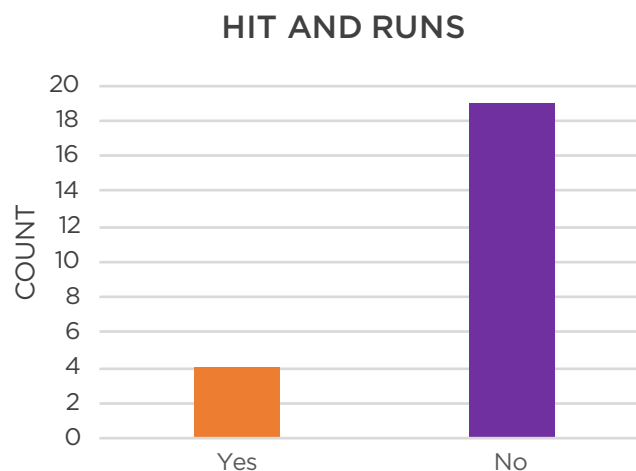
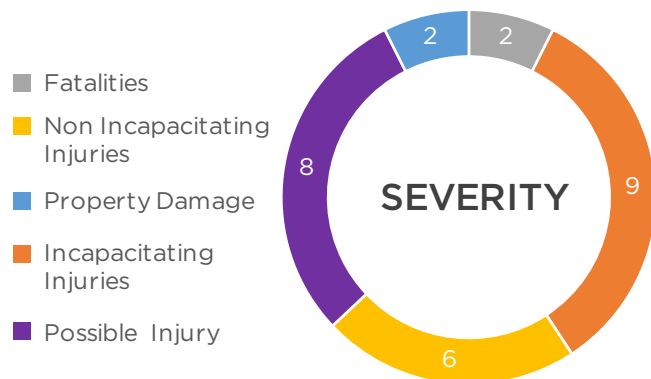
- SPORADIC SIDEWALKS
- RESIDENCES OFF 59TH ST
- SEVERAL BUSINESSES
- MANY BUSINESSES
RELATING TO AUTOS
(AUTO REPAIR, CAR DEALERSHIPS, ETC)
- 3 GAS STATIONS





OKC

SW 59TH ST: BLACKWELDER TO WALKER



SPEED LIMIT: 40

TOTAL LANES: 20

DAILY TRAFFIC: 17,292

OKC PENNSYLVANIA AVE & SW 59TH ST

- CONOCO GAS STATION
- ST ANTHONY'S
- STRIP MALL
- ALDI'S
- WALMART NEIGHBORHOOD MARKET
- WALGREENS

SPEED LIMIT: 40
TOTAL LANES: 20
TOTAL DRIVEWAYS: 27
DAILY TRAFFIC: 18,303



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MOORE EASTERN AVE & MAIN ST

- MOORE HIGH SCHOOL
- PLATT COLLEGE
- VALERO GAS STATION
- CENTRAL CHURCH OF CHRIST
- LYONS ESTATES APARTMENTS
- KIWANIS PARK

SPEED LIMIT: 40 (25 SCHOOL ZONE)

TOTAL LANES: 20

TOTAL DRIVEWAYS: 13

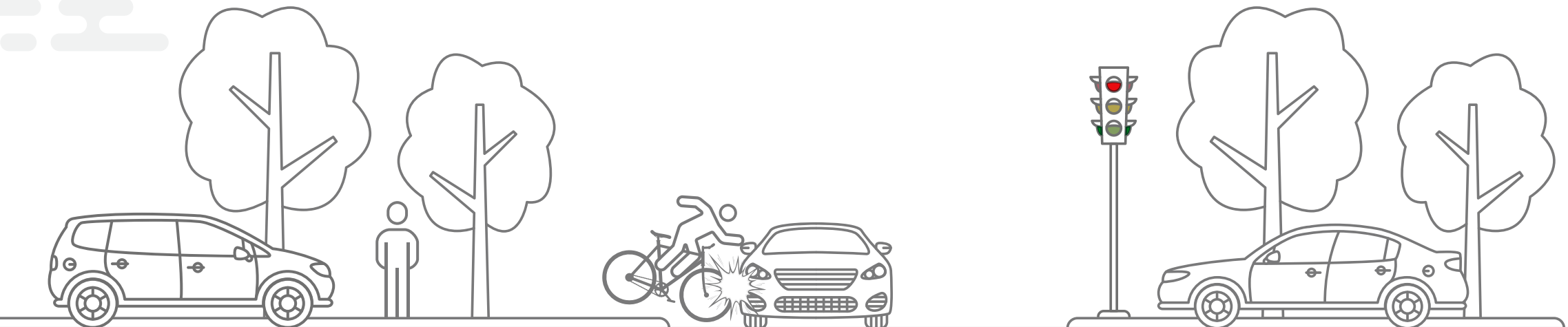
DAILY TRAFFIC: 16,690



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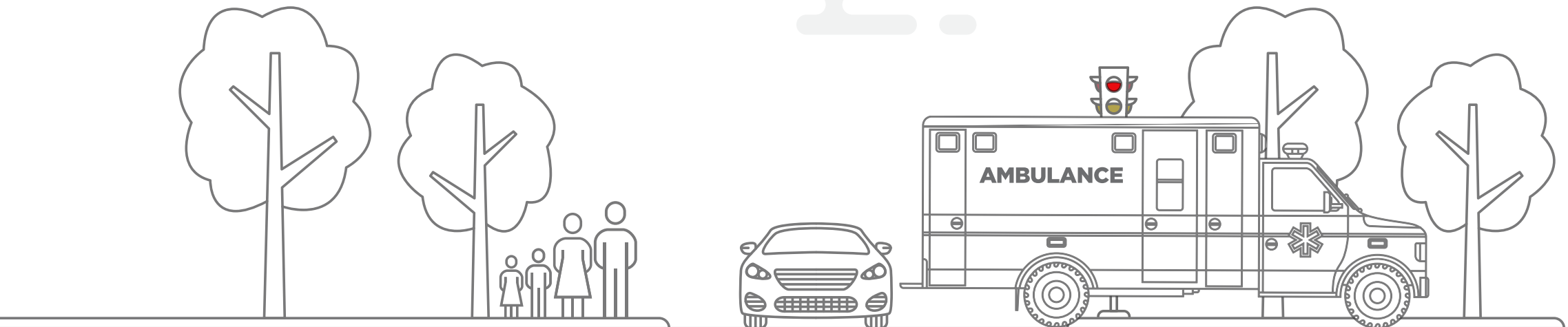
CHALLENGES

- Human error in crash reporting
- Inaccurate, incomplete, or no crash addressing
- Not enough detail in report about pedestrian or bicyclist actions



NEXT STEPS

- Work with ACOG members to identify high crash areas
- Monitor those areas over time
- Analyze other aspects – time of crash, transit stops, intersection inventory



QUESTIONS?

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