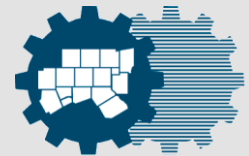


# Pedestrian Safety in North Texas

Dallas - Fort Worth Metropolitan Area

Kevin Kokes, AICP, LEED AP  
Principal Transportation Planner



North Central Texas  
Council of Governments

Statewide Pedestrian Safety Forum

July 12, 2018

# Presentation Overview

## **Overview of North Texas Region**

- Planning Area
- Regional Crash Data

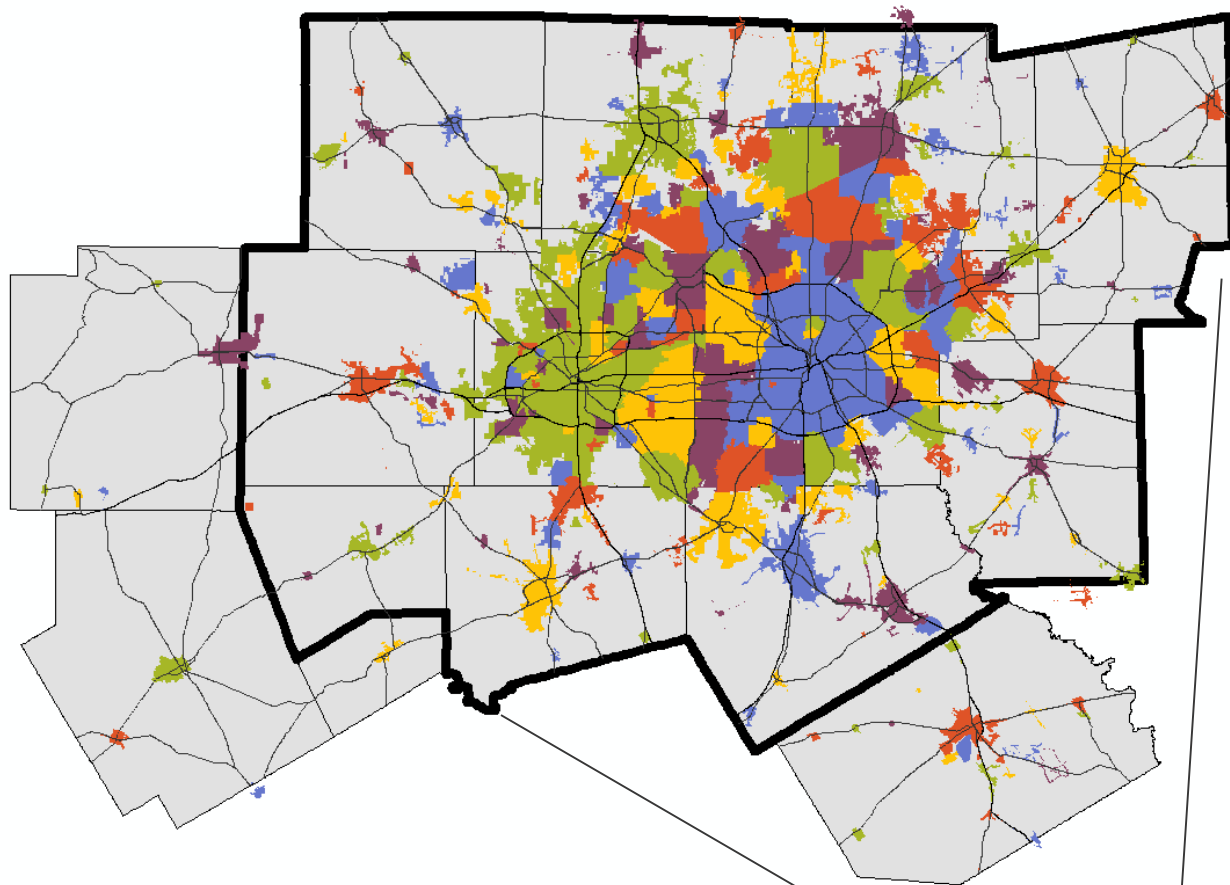
## **Regional Programs and Projects**

- Education Training and Campaign
- Technical Research and Planning/Studies
- Routes to Rail Stations
- Mobility 2045 Funding Priorities



# North Central Texas Council of Governments

## MPO for the Dallas-Fort Worth Region



### Metropolitan Planning Area (MPA)

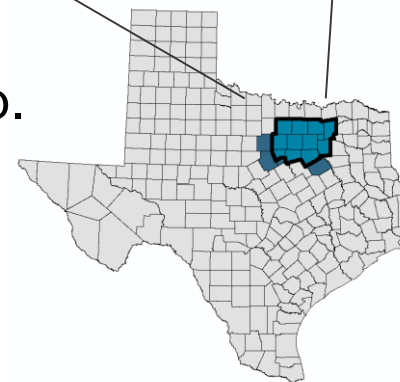
209 cities

13 cities larger than 100,000 pop.

### MPA Population

2017 Estimate = 7.2 million

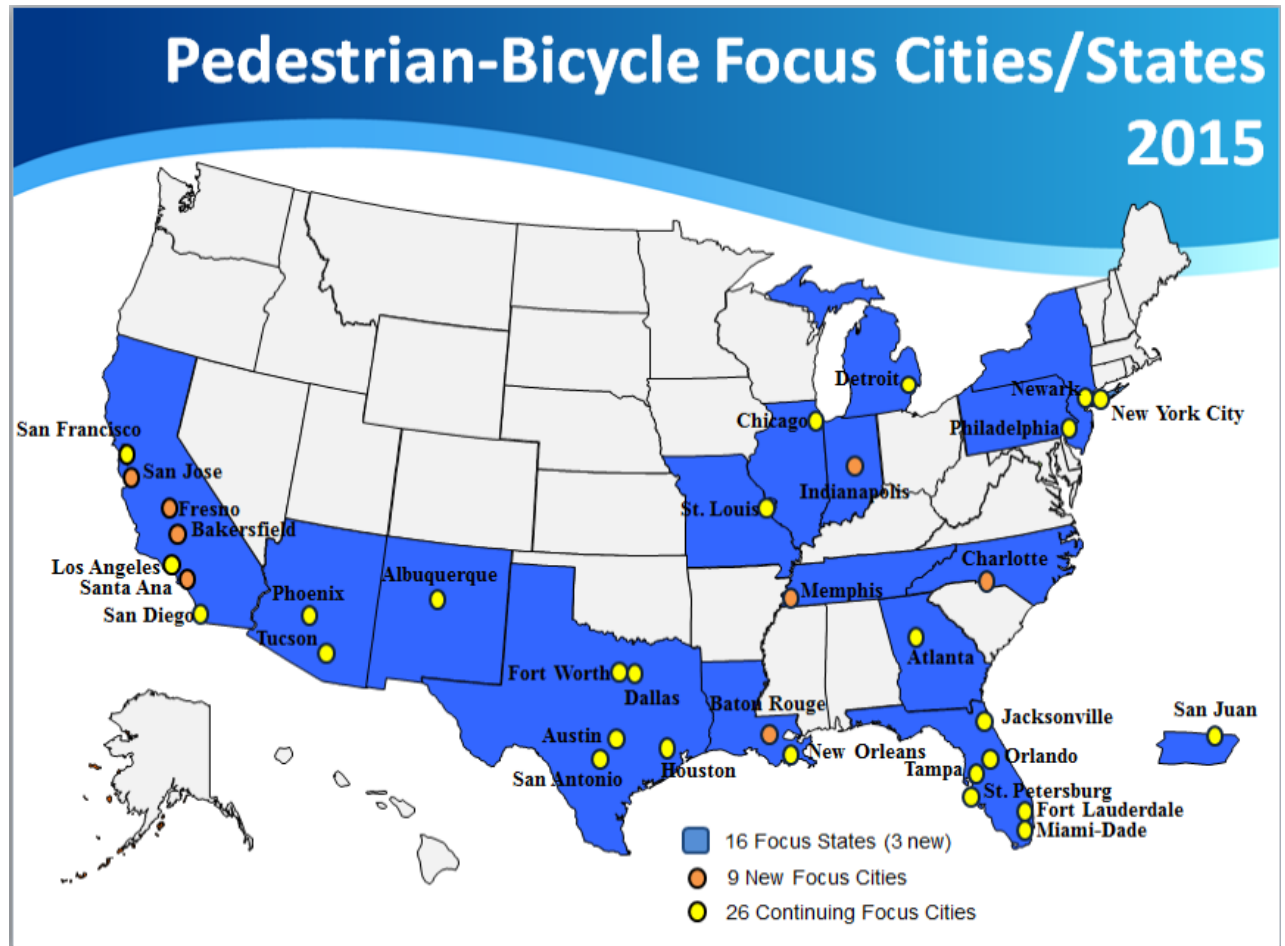
**2045 Forecast = 11.2 million**



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# FHWA Pedestrian- Bicycle Safety Focus States and Cities

States and cities  
with the highest  
pedestrian  
fatalities and/or  
fatality rates



## Pedestrian Fatality Rates\* (Per 10k walking commuters)

**#41: Texas**

## Top 50 Cities\*

**#26: Austin**  
**#37: Houston**  
**#44: San Antonio**  
**#47: Dallas**  
**#50: Fort Worth**

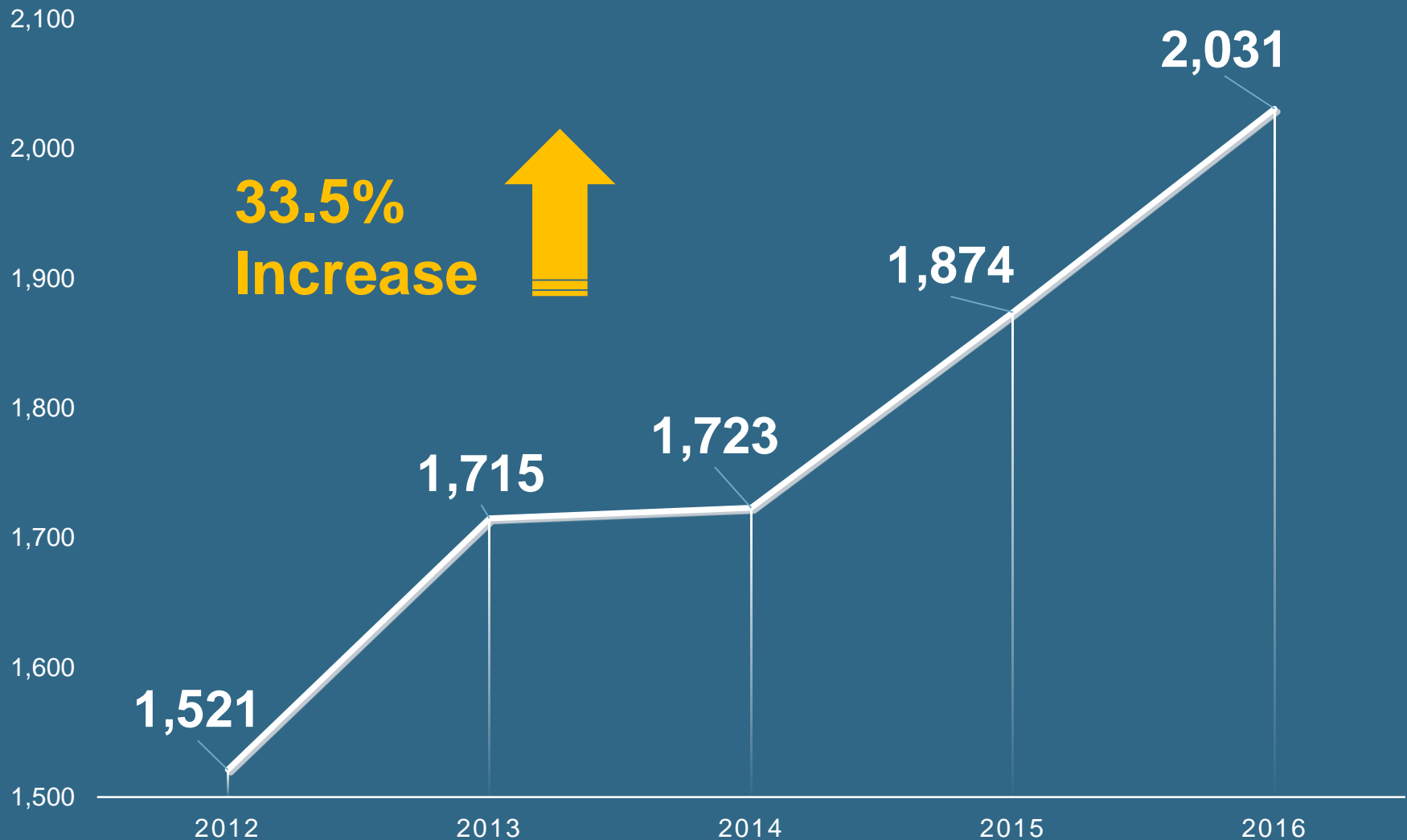


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\*Source: Bicycling and Walking in the  
United States: 2014 Benchmarking Report

# 2012 - 2016

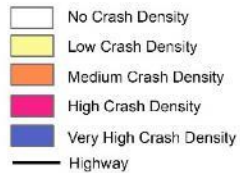
## Bicycle And Pedestrian Crashes And Fatalities (North Central Texas – 12 Counties)



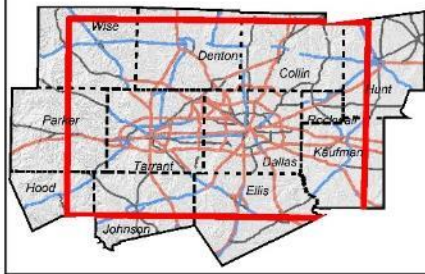


# Urbanized Area Bicycle and Pedestrian Crash Density (2012 - 2016)

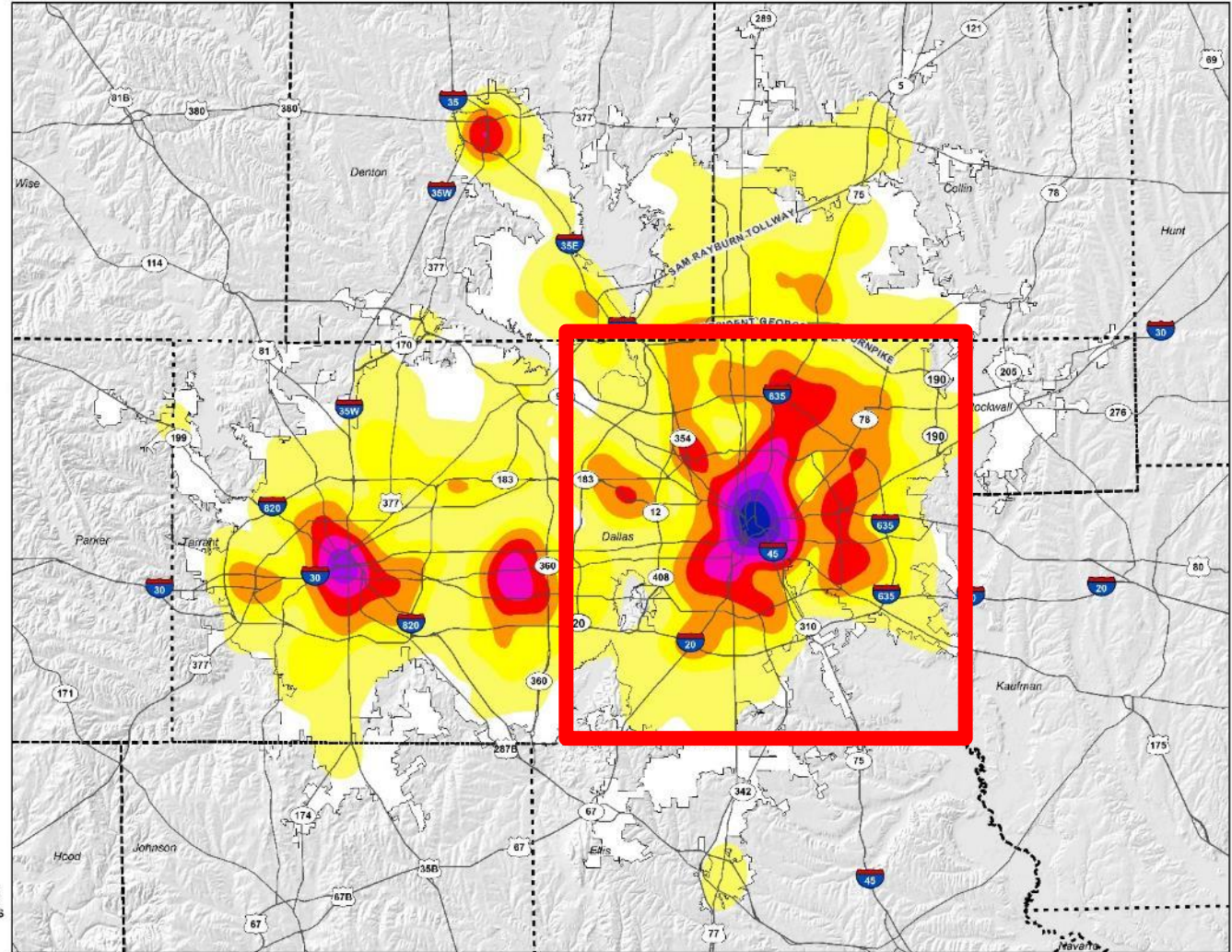
## Legend



## NCTCOG 12 County Metropolitan Planning Area



Note: Density concentration is calculated as a magnitude per unit area from crash point features and is based on the geography of the census designated urbanized area. Blue symbolizes higher concentration of crashes and yellow displays lower concentrations.



- 1.) Source: TxDOT's Crash Records Information System - 2016 data is current as of February 2017. All TxDOT disclaimers apply.
- 2.) Data displayed contains reportable crashes with latitude and longitude information. Additional crashes may have occurred.
- 3.) This data is composed of TxDOT "Reportable Crashes" that occurs or originates on a traffic way, results in injury to or death of any person, or damage to the property of any person to the apparent extent of \$1,000.



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Transportation Department

0 5 10 20 Miles



Date: 11/6/2017



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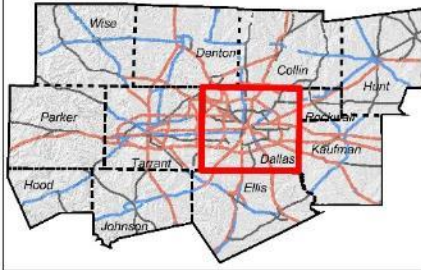


# Dallas County Bicycle and Pedestrian Crash Locations and Density (2012 - 2016)

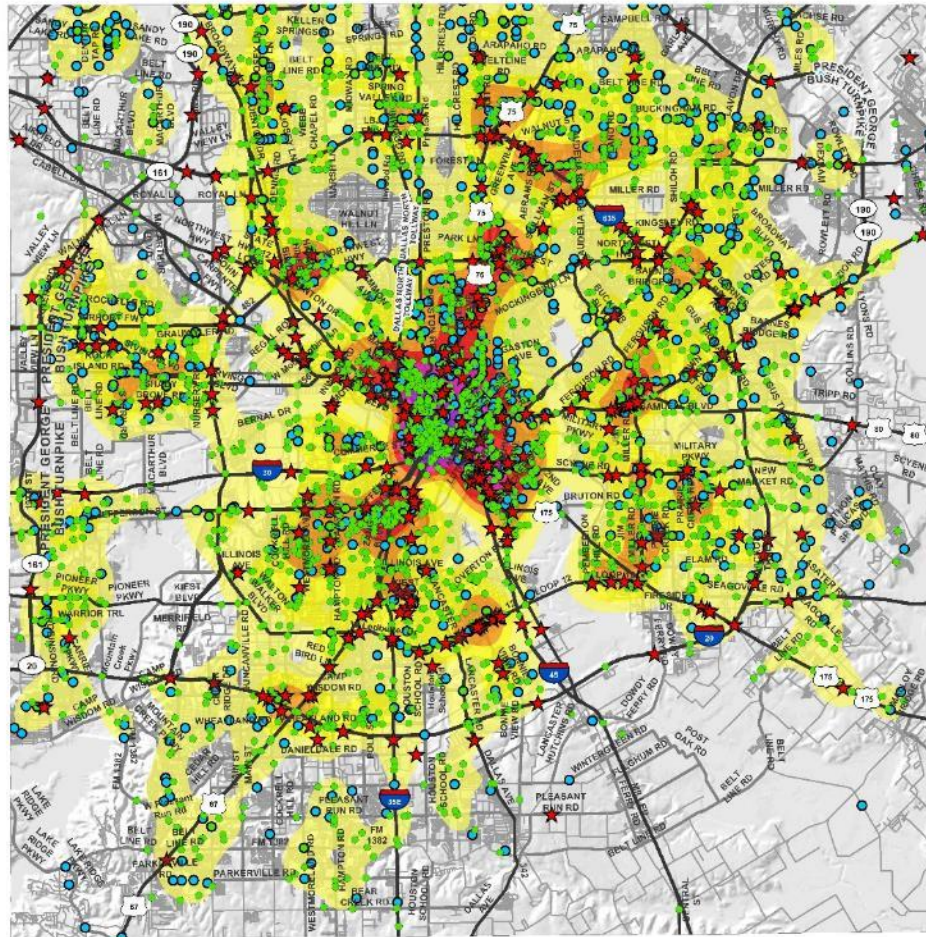
## Legend

- ★ Fatal Bicycle or Pedestrian Crash Location - (328)
- Non-Fatal Pedestrian Crash Location - (3,225)
- Non-Fatal Bicycle Crash Location - (981)
- No Crash Density
- Low Crash Density
- Medium Crash Density
- High Crash Density
- Very High Crash Density
- Highway
- Major Arterial
- Minor Arterial
- + Passenger Rail

## NCTCOG 12 County Metropolitan Planning Area



Note: Density concentration is calculated as a magnitude per unit area from crash point features and is based on each county's geography. Blue symbolizes higher concentration of crashes and yellow displays lower concentrations.



- 1.) Source: TxDOT's Crash Records Information System - 2016 data is current as of February 2017. All TxDOT disclaimers apply.
- 2.) Data displayed contains reportable crashes with latitude and longitude information. Additional crashes may have occurred.
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Transportation Department

0 2.5 5 10 Miles



Date: 11/7/2017



# Fatalities on TxDOT Roadways

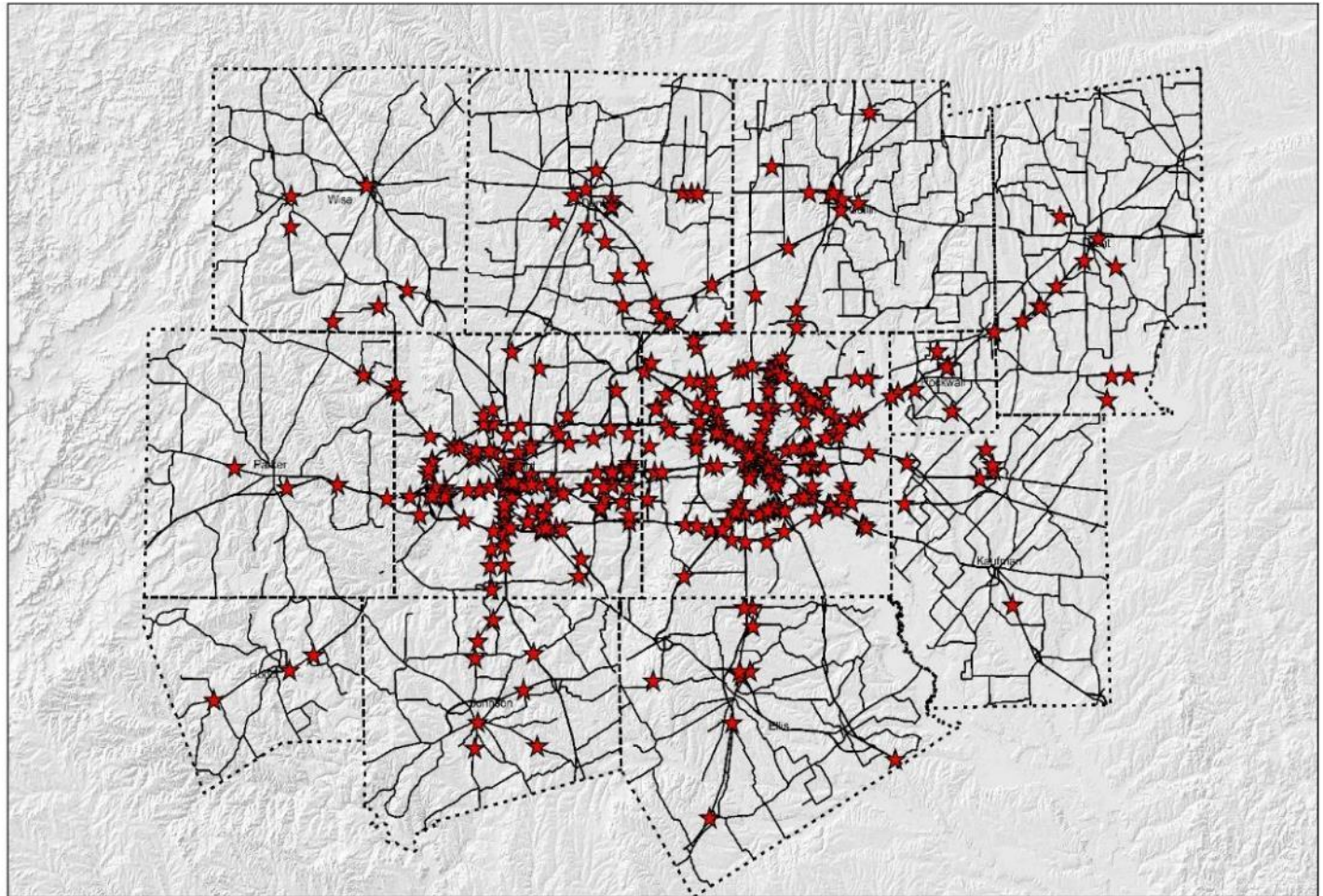
## North Central Texas MPA

(Pedestrian and Bicycle)

**67% of Fatalities  
Occur on TxDOT  
Roadways**

### Legend

- ★ Bicycle and Pedestrian Fatalities (413)
- TxDOT On-System Roadways



Document Path: I:\Sustainable\_Development\ArcGIS\Bike\_Ped\CrashData\Density Maps\2016\OnSystem OffSystem Fatalities.mxd

- 1.) Source: TxDOT's Crash Records Information System - 2016 data is current as of February 2017. All TxDOT disclaimers apply.
- 2.) Data displayed contains reportable crashes with latitude and longitude information. Additional crashes may have occurred.
- 3.) This data is composed of TxDOT "Reportable Crashes" that occurs or originates on a traffic way, results in injury to or death of any person, or damage to the property of any person to the apparent extent of \$1,000.



North Central Texas  
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Transportation Department

0 5 10 20 Miles

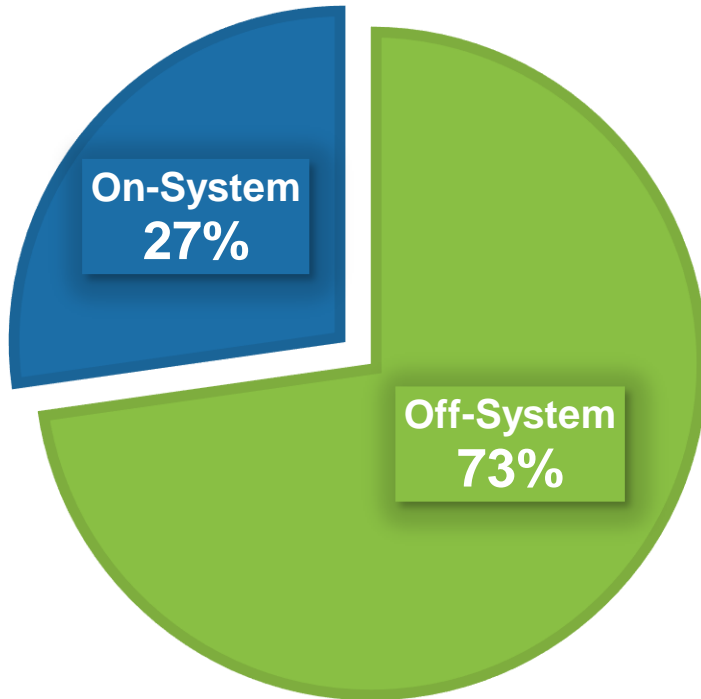


Date: 11/8/2017

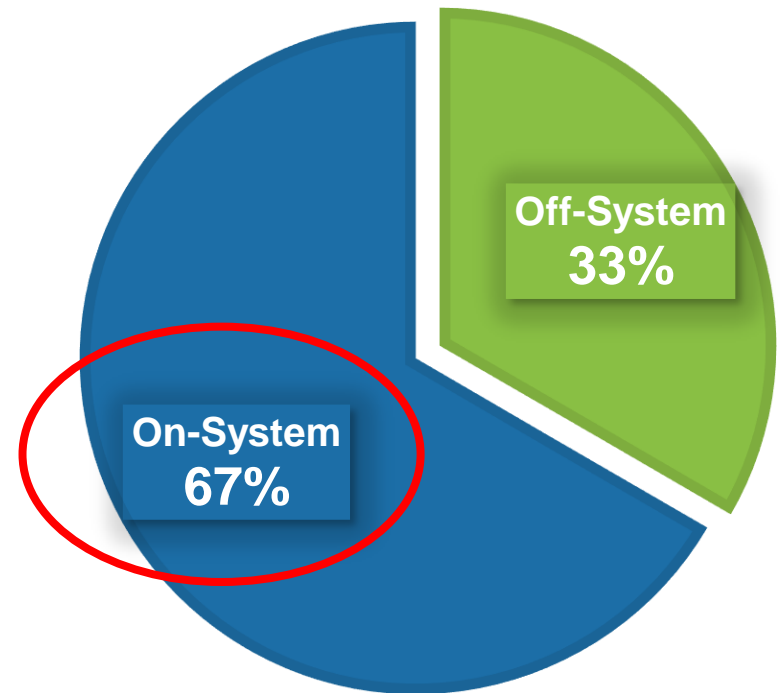


# Crashes and Fatalities in 12-County North Central Texas MPA

Pedestrian And Bicycle Crashes (All)  
(2012-2016)



Pedestrian And Bicycle **Fatal** Crashes  
(2012-2016)



On-system roadway crashes account for 27% of pedestrian and bicycle crashes in the region and 67% of all pedestrian and bicycle fatalities.



A photograph of a family of four walking on a paved sidewalk. On the left is a man in a light blue button-down shirt and jeans. Next to him is a woman in a blue t-shirt and patterned pants. In the center is a young child in a striped shirt and white shorts. On the right is another woman in a yellow t-shirt and white pants. They are all smiling and holding hands. In the background, there is a street sign for 'Young St' and a pedestrian crossing signal showing a red hand. Trees and a clear sky are also visible.

# Programs and Projects



# Education and Training

## Designing for Pedestrian Safety Workshops

- NCTCOG hosts workshops for engineers and transportation planners
- TxDOT, City Staff, Transportation Agencies
- Case study site visit exercises





## Education and Training

### Road Safety Audit for Pedestrian Safety

- Collaboration between City of Dallas, Dallas County, Dallas Area Rapid Transit (DART), NCTCOG and FHWA
- Area with large transit dependent population
- Agencies now collaborating on a Complete Streets project



# TxDOT Research Program (19-72)

Research and  
Technology  
Implementation  
Division

## North Texas Pedestrian Crash Analysis

### Technical Objectives

1. **Code five years of bicycle and pedestrian crash reports** for the 12-county North Central Texas Metropolitan Planning Area using the methodology developed by the National Highway Traffic Safety Administration for the Pedestrian and Bicycle Crash Analysis Tool (PBCAT).
2. Conduct an analysis to **identify corridors with highly concentrated bicycle and pedestrian crashes** and the unsafe actions that are contributing to the crashes.
3. Provide **safety countermeasures and recommendations** for further study for these corridors.
4. **Review the crash narrative/diagram** as part of the coding process to understand the true nature concerning the cause of the crash.



# Regional Pedestrian Safety Action Plan

## 12 County Regional Plan

- Demand analysis and mapping areas with a high propensity to walk,
- Identify corridors and districts of high density of pedestrian crashes,
- Conduct safety assessments in “hot spot” areas of crashes,
- Prepare a guide for best practices and safety countermeasures for the region, and
- Recommended programs and projects.





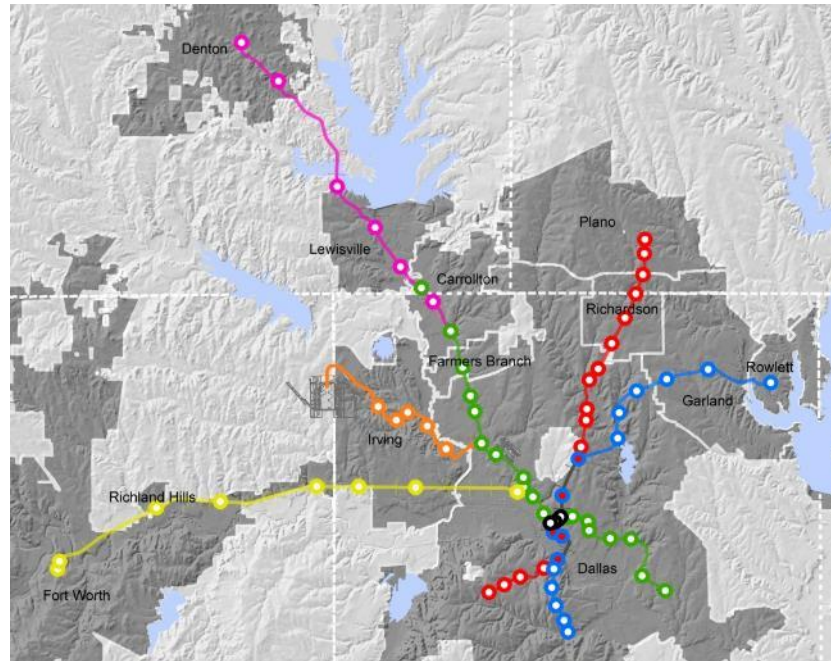
# Pedestrian and Bicycle Routes to Rail Stations

Distance and gaps in the actual “Routes” to stations (walksheds)

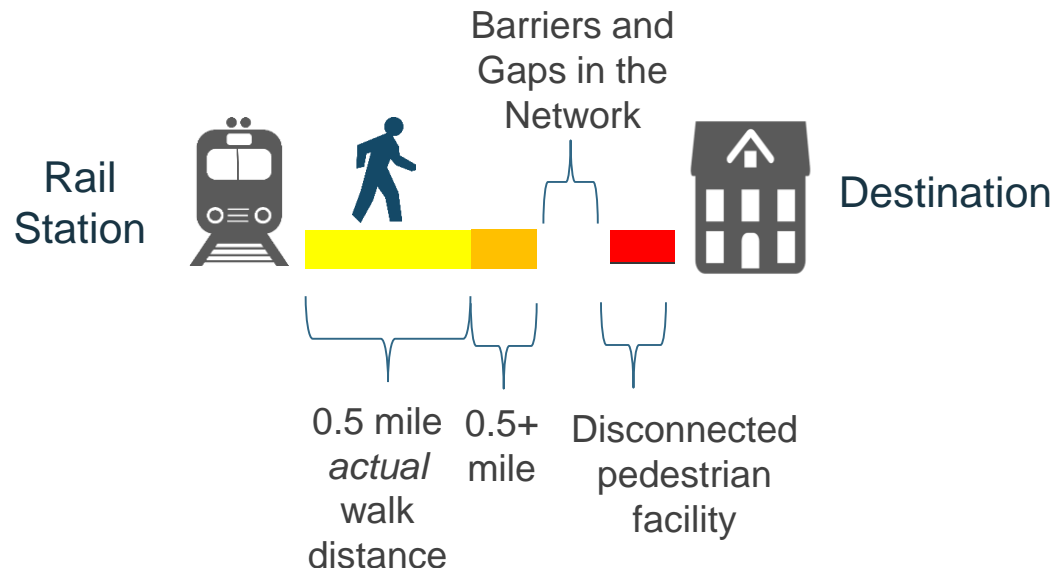
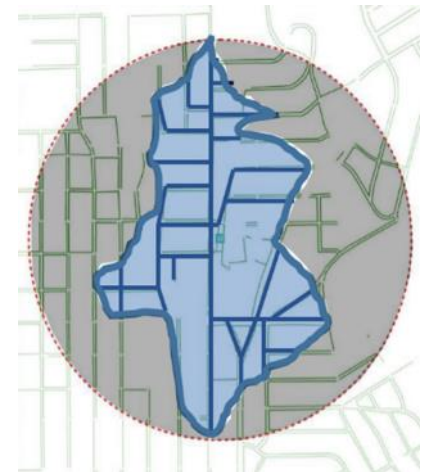
[nctcog.org/RoutesToRail](http://nctcog.org/RoutesToRail)



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*“A true walkable radius does not typically exist.”*



Facility  
Disconnected  
From Network





# Poor Design for Access to Transit



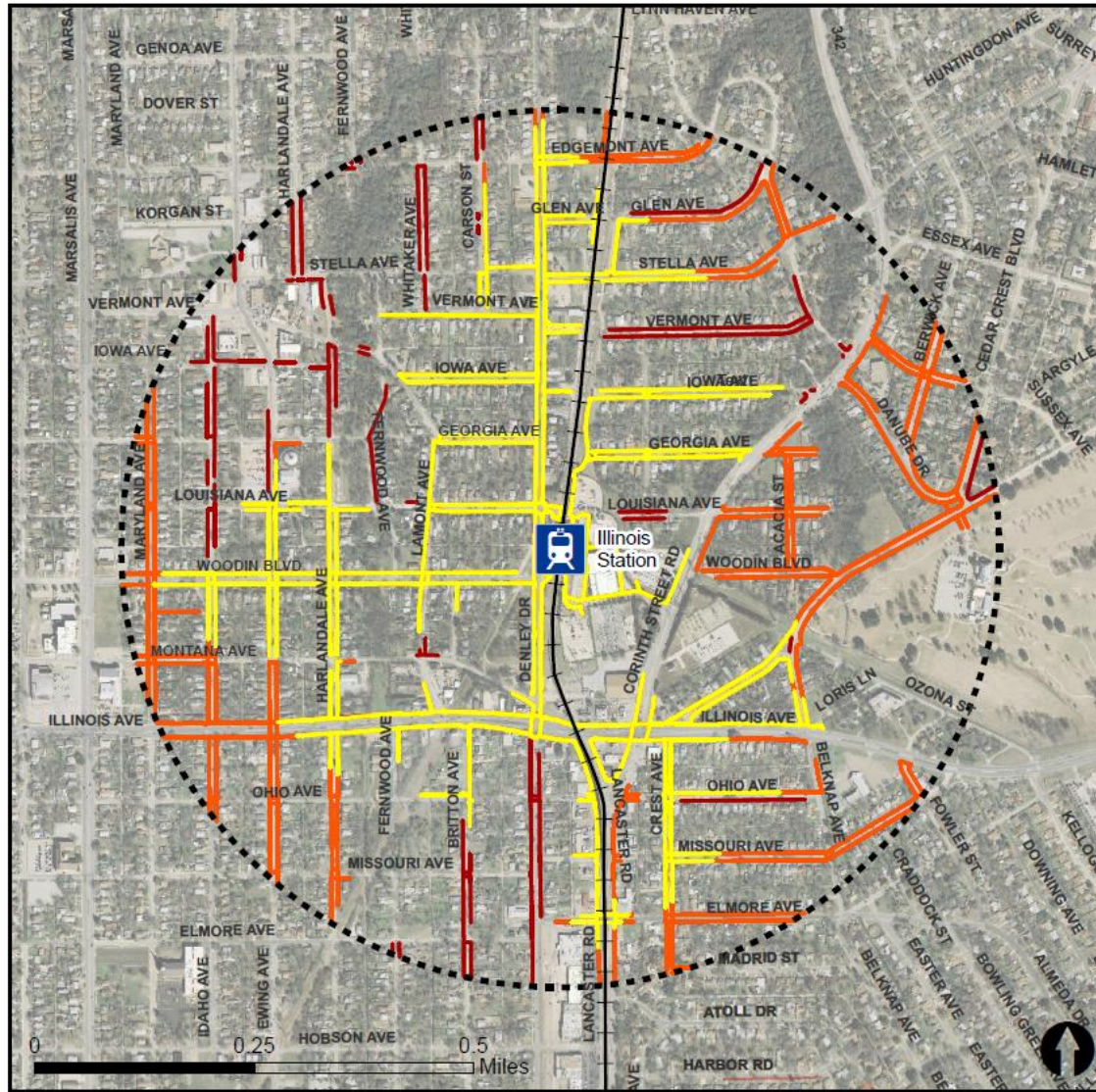


# Pedestrian Routes to Rail - Illinois Station

Last Updated: February 2015



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## Legend



Rail Stations



0.5 Mile  
Station Buffer

—+—+—+— Railroads

Existing sidewalk facilities within a  
0.5 mile walk distance

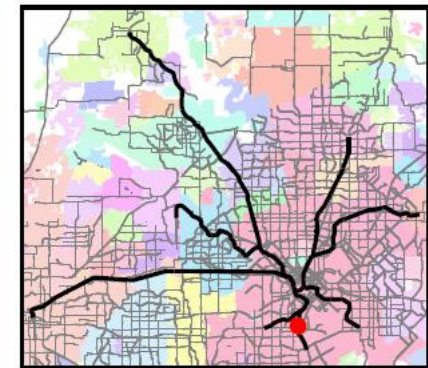
Existing sidewalk facilities greater than a  
0.5 mile walk distance

Existing sidewalk facilities that are disconnected  
due to a gap in the network

## Project Overview

The Pedestrian Routes to Rail study identifies all existing pedestrian facilities within a half-mile radius of existing light rail and commuter rail stations in the Dallas-Fort Worth region based on 2014 data. ArcGIS Network Analyst tool was used to identify continuous facilities that are less than or greater than a half-mile actual walking distance to a station. The maps also reflect existing facilities that are disconnected due to gaps or other barriers not allowing a continuous pedestrian route to a station. The maps do not reflect the condition or ADA compliance of the existing infrastructure. More information on the Routes to Rail study and methodology can be found at:

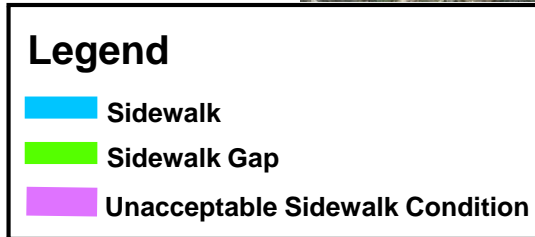
[nctcog.org/RoutesToRail](http://nctcog.org/RoutesToRail)





# Data Collection

## – Sidewalk Gaps & Verification



# LookOutTexans.org

# ★ LOOK OUT TEXANS ★

BIKE WALK DRIVE SAFELY

- [HOME](#)
- [ABOUT](#)
- [SAFETY TIPS](#)
- [NORTH TEXAS' STORIES](#)
- [VIDEO](#)

## LOOK OUT FOR JOHN

### LITTLE BROTHER NORTH TEXAN BIKES TO SCHOOL

About Us

Safety Tips

School Resources

### Look Out Texans

Bike, Walk, Drive Safely

Look Out Texans is an education campaign aimed at increasing safety for all road users in North Texas.

Learn your rights and responsibilities when walking, biking, or driving and encourage your neighbors, friends, and family to do so as well. Together, we can make our streets safer for everyone!

Look Out Texans is a program of the North Central Texas Council of Governments (NCTCOG) Transportation Department and Regional Transportation Council, together serving as the metropolitan planning organization for the 12-county Dallas-Fort Worth area since 1974. The MPO works in cooperation with the region's transportation providers to address the complex transportation needs of the rapidly growing metropolitan area. The campaign is funded by a Texas Department of Transportation transportation enhancement grant awarded through a competitive call for projects.

North Central Texas  
Council of Governments

817.695.9240  
[info@lookouttexans.org](mailto:info@lookouttexans.org)

Look Out Texans safety education campaign is brought to you by the North Central Texas Council of Governments with funding from the Texas Department of Transportation

#LookOutTexans

# LOOK UP TEXANS

BIKE TRAIL DRIVE SAFETY

HOME
ABOUT
SAFETY TIPS
NORTH TEXAS'S STORIES
VIDEO

## What does it mean to bike, walk and drive safely?

Belly up and near the road is more than following the speed limit and looking both ways before crossing a street. While these are two of the most important things to do, there's more to understanding how about driving, walking and driving should interact together. Following the safety tips below will help protect you, as well as your friends, families and neighbors. For additional resources and information, visit [this link](#) to discover and practice setting a safe path for both. [Texas Department of Transportation Safety and Transportation Resources](#)



**TIP #1**

### WALKING SAFELY

**TIP #1**  
**Cross in crosswalks at intersections.**  
The safest place to cross a street is a marked crosswalk. Other road users should expect pedestrians to be using this space.

**TIP #2**  
**Do not cross that marked between parked vehicles or vehicles waiting at traffic signals.**  
Parked cars create a safe barrier that makes it hard for other road users to spot crossing pedestrians. Avoid this dangerous situation by locating a safe crosswalk to cross.

**TIP #3**  
**Look both ways before crossing a street.**  
Look left, right, and again to ensure a safe crossing. Be especially aware of turning vehicles.

**TIP #4**  
**At signalized intersections, cross only when the signal indicates it is safe to do so.**





**Walk, listen, look, cross.** Be sure to walk both ways before crossing the roadway. Flushing or crossing down the middle of the street is dangerous. When setting a safe crossing, avoid the danger zone and cross only at designated crossings.

**Steady hand.** Don't cross the street for a green light. Yield to vehicles until the "red" eye appears.



**TIP #3**

**TIP #5**  
**Watch for vehicles and stay out of blind spots when around bicyclists.**  
A change of ten feet surrounding a bike is considered the safe danger zone. In this area, the driver has a blind spot. When setting a safe crossing, avoid the danger zone and cross only at designated crossings.

**TIP #6**  
**Make eye contact with drivers before crossing streets.**  
Be sure that a driver acknowledges your presence to ensure a safe crossing.

**TIP #7**  
**Be seen while walking in the dark.**  
Use reflective materials and bright colors at night to increase visibility. Avoid dark clothing when possible.

## BICYCLING SAFELY

**TIP #1**  
**Bicyclists are required to stop and yield at traffic signals and stop signs.**  
Bike use requires bicyclists to operate with the same rights and duties applicable to a car in operating a motor vehicle.

**TIP #2**  
**Use hand signals to let others know when you're turning, changing lanes, or stopping.**  
Signaling your intentions gives drivers notice of your movements. Look over your shoulder and use hand signals before signaling to ensure a safe movement.

**TIP #3**  
**Be alert.**  
Be aware of other vehicles and predict future movements of cars and pedestrians. Anticipate turning movements and changing car lanes to avoid collisions.

**TIP #4**  
**Ride as far to the right as practical.**  
Do not ride in the gutter, avoid hazardous conditions such as potholes and potholes. Be sure to leave enough room to avoid reaching the parked cars with your door. A bicyclist may ride in the middle of the lane if the lane is less than 11 feet wide or if too narrow to safely share the road.



**TIP #6**



**TIP #6**

**Left turn**



**Right turn**



**Stop**



[illegible]



# North Central Texas Regional TAP Call for Projects (2017)

Safety-related  
projects typically  
score well in  
multiple categories.

[nctcog.org/TAP](http://nctcog.org/TAP)



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Transportation Alternatives Set-Aside Program Application Evaluation Categories (2017)	Scoring (Maximum Points)
<b>Regional Network Connectivity (Completing the Gaps)</b>	25
<b>Mobility (Connections to Transit)</b>	20
<b>Safety</b> (Improves Safety, Facilities for All Ages & Abilities)	15
<b>Reducing Barriers</b> (Safe Crossings of existing travel obstacles)	10
<b>Congestion Reduction</b>	10
<b>Destination Density</b>	5
<b>Air Quality Benefits</b>	5
<b>Equity (Serving Environmental Justice Areas)</b>	5
<b>Local Network Connectivity</b>	5
<b><u>Total</u></b>	<b><u>100</u></b>

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