

# Agency Leadership and Pedestrian Safety



**Billy Hattaway**

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San Francisco Municipal Transportation Agency

**May 5, 2015**



# Today's Presentation

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- ⇒ **Introduction and housekeeping**
- ⇒ **Audio issues?**  
Dial into the phone line instead of using “mic & speakers”
- ⇒ **PBIC Trainings and Webinars**  
[www.pedbikeinfo.org/training](http://www.pedbikeinfo.org/training)
- ⇒ **Registration and Archives at**  
[pedbikeinfo.org/webinars](http://pedbikeinfo.org/webinars)
- ⇒ **PBIC News and updates on Facebook**  
[www.facebook.com/pedbike](http://www.facebook.com/pedbike)
- ⇒ **Questions at the end**





Florida Department of  
**TRANSPORTATION**



# FDOT Bicycle/Pedestrian Focused Initiative & Complete Streets

**SAFETY DOESN'T HAPPEN BY ACCIDENT.**

**ALERT TODAY**  
FDOT  
**ALIVE TOMORROW**

**WHEN DRIVING, WALKING,  
OR BICYCLING...  
PAY ATTENTION.  
READ THE SIGNS.  
LEARN THE RULES.**

**AVOID DISTRACTIONS.**   
**STOP BEFORE TURNING RIGHT ON RED.**  
**USE THE SIDEWALK AND CROSSWALKS.**  
**BICYCLE PREDICTABLY, WITH TRAFFIC.**

Funded by the Florida Department of Transportation

AlertTodayFL [www.AlertTodayFlorida.com](http://www.AlertTodayFlorida.com) AlertTodayFlorida

**Billy L. Hattaway, PE**  
District One Secretary



# FDOT's Pedestrian Safety Initiative

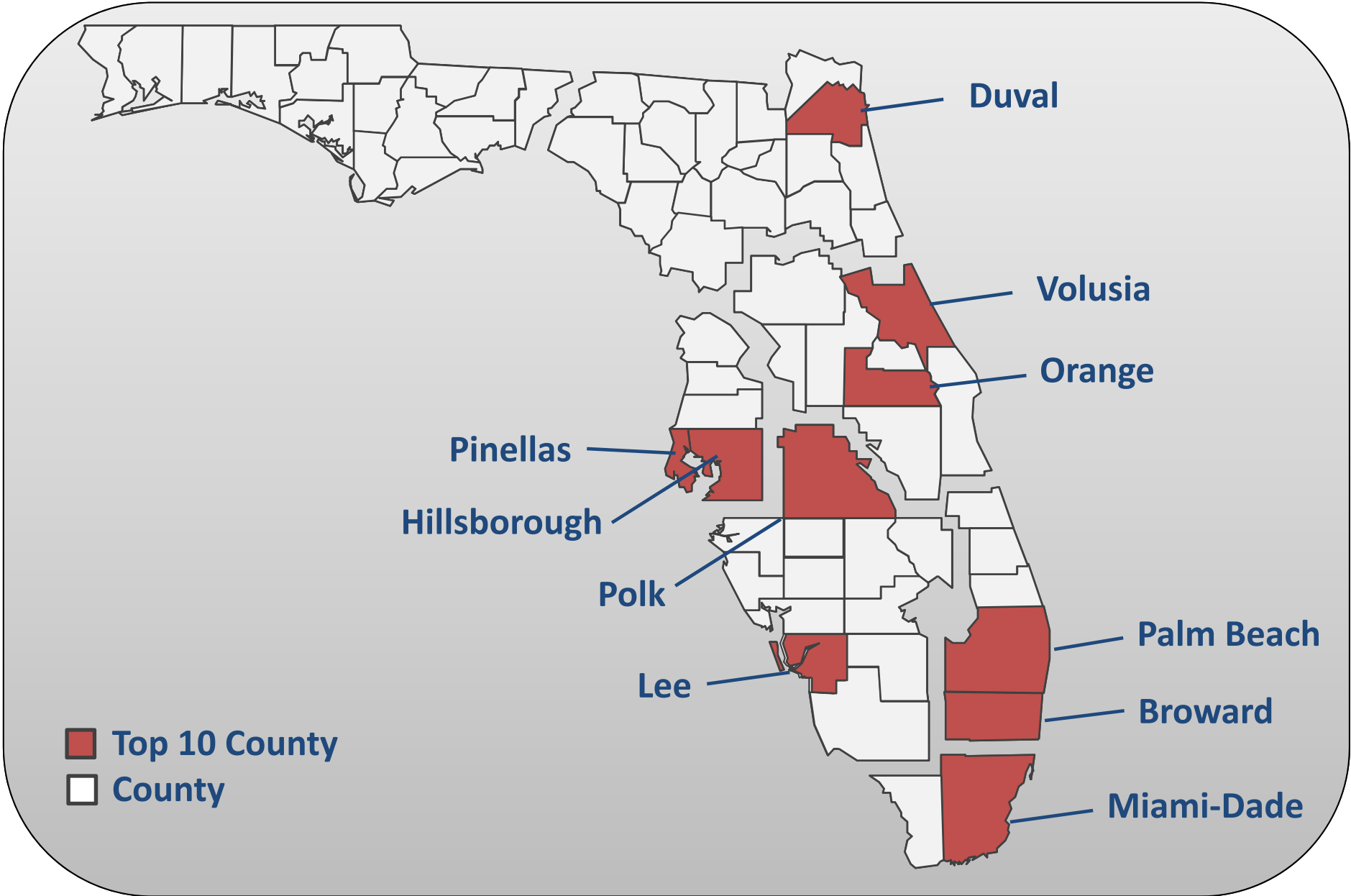


- Dangerous by Design (2011, 2014)
- Orlando, Tampa, Jacksonville, Miami-Ft. Lauderdale
- Secretary Jim Boxold... “...Florida has a significant number of bicycle and pedestrian fatalities and serious injuries. It’s unacceptable, and we will not tolerate it.”



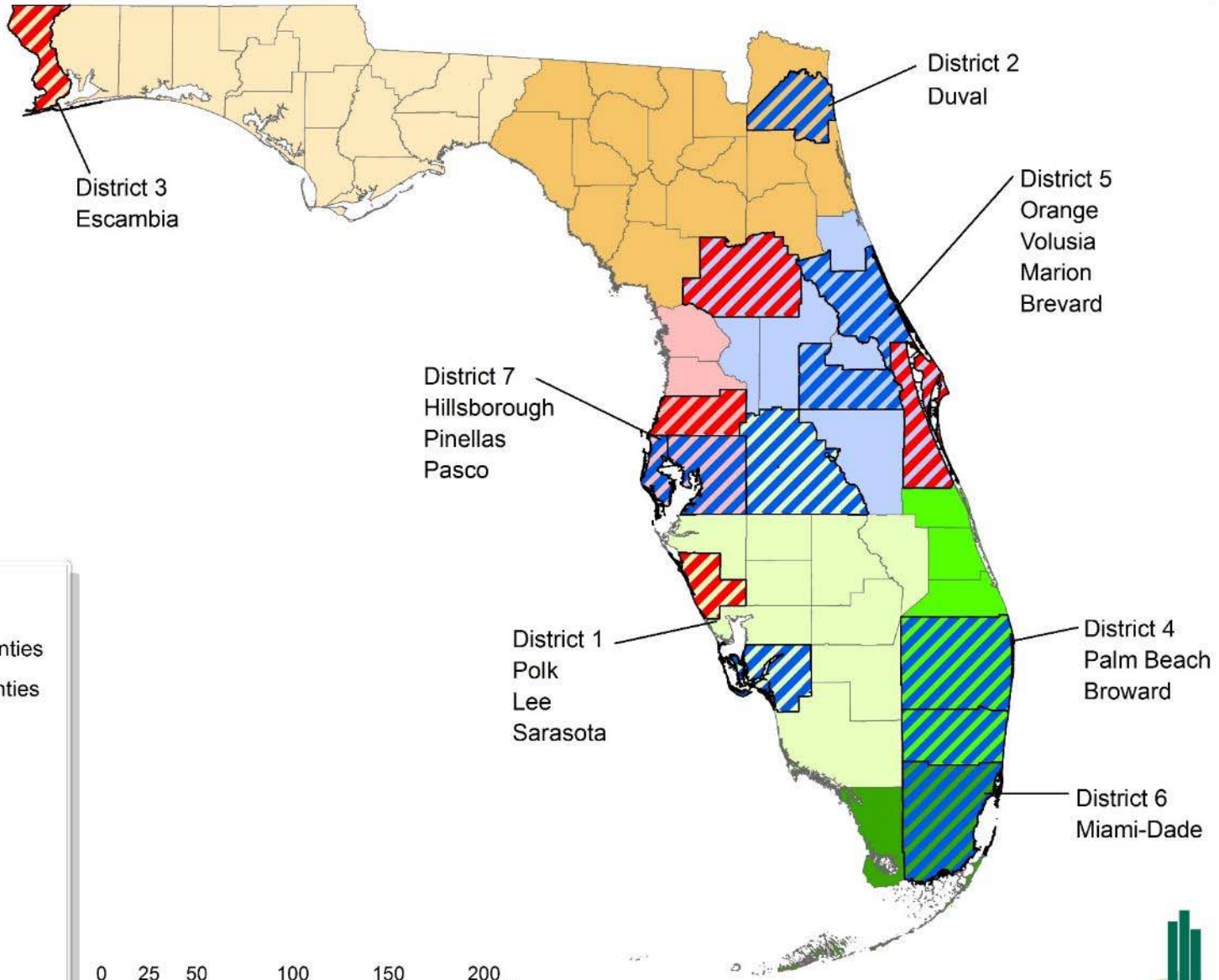


# Top Ten Focus Counties



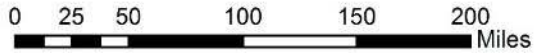


# 2015 Pedestrian and Bicycle Focused Initiative Top 15 High Priority Counties



**Legend**

- Blue diagonal stripes: Top 10 Counties
- Red diagonal stripes: New 5 Counties
- Light green: D1
- Orange: D2
- Light orange: D3
- Bright green: D4
- Light blue: D5
- Dark green: D6
- Pink: D7



# Statewide Initiatives



- Complete overhaul of our Bike/Ped Program
  - Bike/Ped Coordinators & Safety Program Managers
- Bike/Pedestrian Policy Team
- Bike/Pedestrian Coalition
- Alert Today/Alive Tomorrow <http://alerttodayflorida.com/>



**WHETHER YOU'RE DRIVING OR WALKING—  
PAY ATTENTION. READ THE SIGNS.  
LEARN THE RULES.**

**ALWAYS USE THE CROSSWALK.  
STOP BEFORE TURNING RIGHT ON RED.  
LOOK BEFORE CROSSING.  
YIELD TO PEDESTRIANS.**

Funded by the Florida Department of Transportation





# Driving the Culture Change

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- Bike/Pedestrian Element for State LRTP
- Bike and Pedestrian Statewide Plans
- Complete Streets Policy & Implementation
- Context Based Bicycle/Pedestrian Facilities
- Promotion of Modern Roundabouts
- Guidance for Road Diets on State System
  - <http://www.dot.state.fl.us/planning/statistics/tsopubs.shtm>
- Update Traffic Laws





# Supporting the Culture Change



- Training
  - Developing a Pedestrian Safety Action Plan
  - Conducting Road Safety Audits
  - Designing for Pedestrian Safety
  - Roundabout Design
- Engineering (Targeted)
- Education (Media Campaign)
- Enforcement (High Visibility)

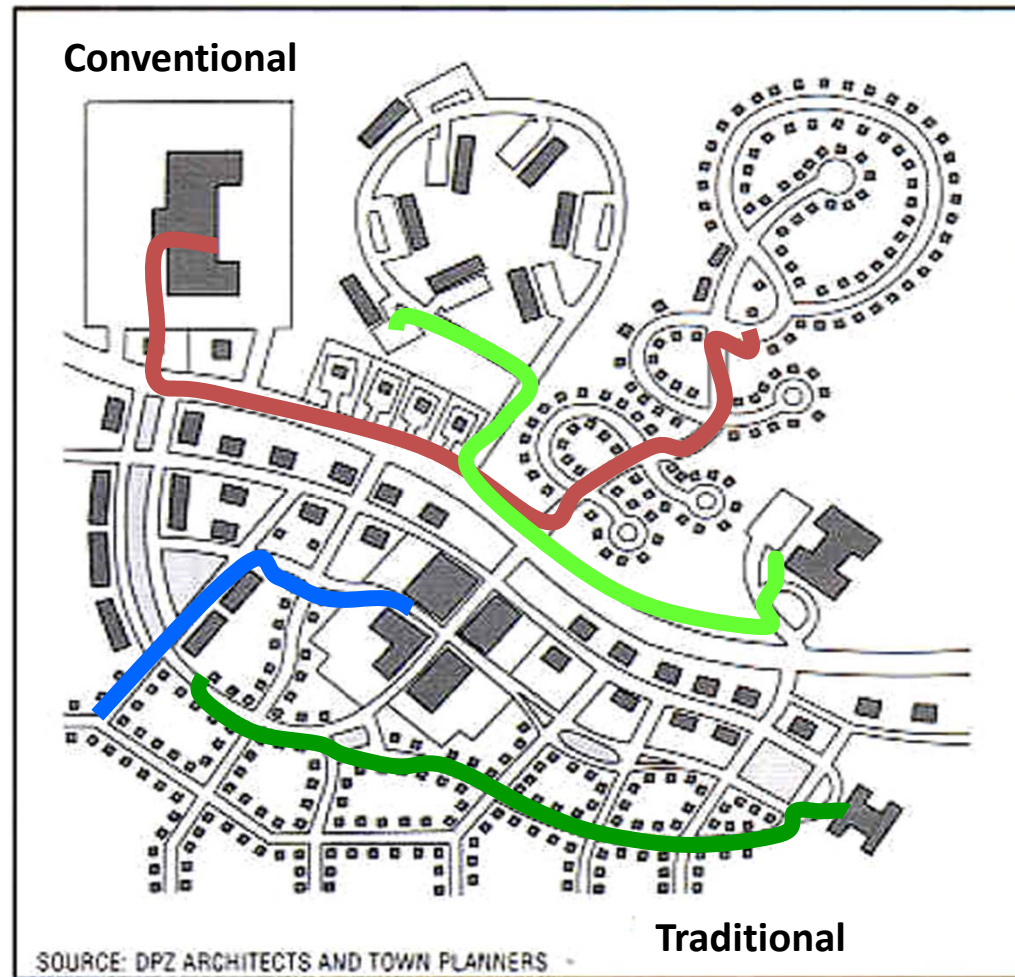


# How We Got Here



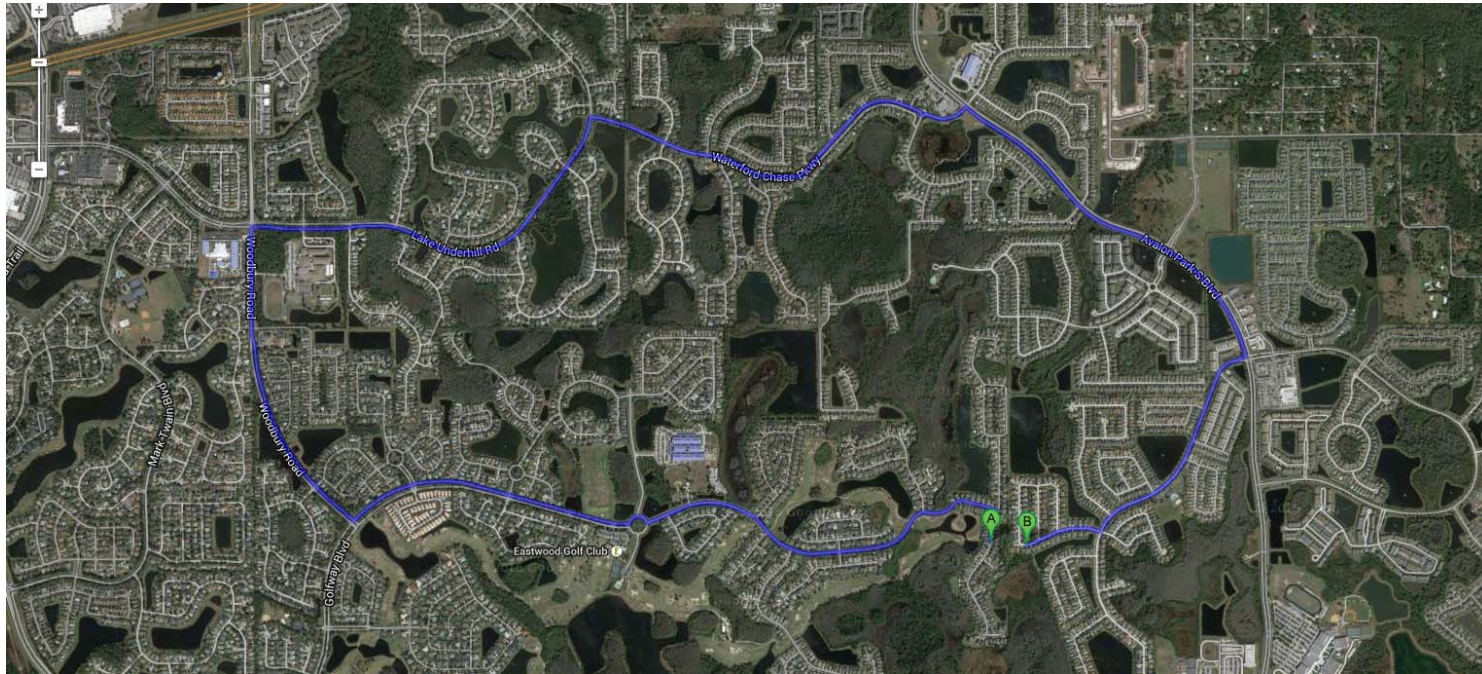
**Fowler Ave, Tampa**

# Land Development Patterns





# Land Development Patterns



**A** near 1635 Anna Catherine Dr, Eastwood Park, Orlando, FL 32828

**B** near 13487 Summer Rain Dr, Avalon Park, Orlando, FL 32828

Route: 7.0 mi drive, yet only 50' apart

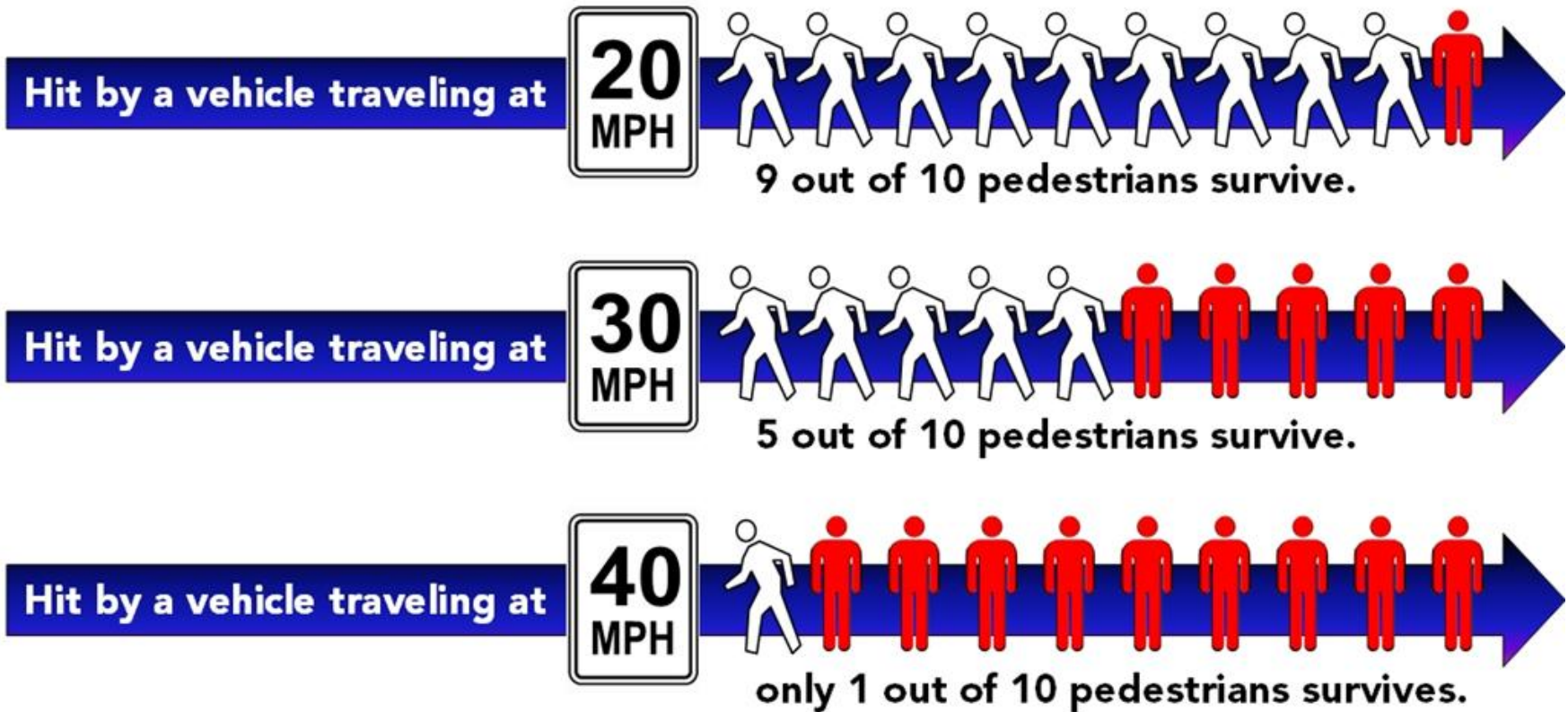




# Land Development Regulations



# Speed and Pedestrian Fatalities





# FHWA Proven Countermeasures



Roundabouts



Corridor Access Management



Backplates with Retroreflective Borders



Longitudinal Rumble Strips and Stripes on Two-Lane Roads



Enhanced Delineation and Friction for Horizontal Curves



Safety Edges<sup>SM</sup>



Medians and Pedestrian Crossing Islands in Urban and Suburban Areas



Pedestrian Hybrid Beacon



Road Diet



# Modern Roundabouts/Road Diets



**College St., Asheville, NC**



Florida Department of Transportation



# Modern Roundabouts/Road Diets



**College St., Asheville, NC**



# Mid-Block Crossings



California



Florida Department of Transportation

# Rectangular Rapid Flashing Beacon (RRFB)



**St. Petersburg, FL**



# Pedestrian Hybrid Beacon (HAWK)

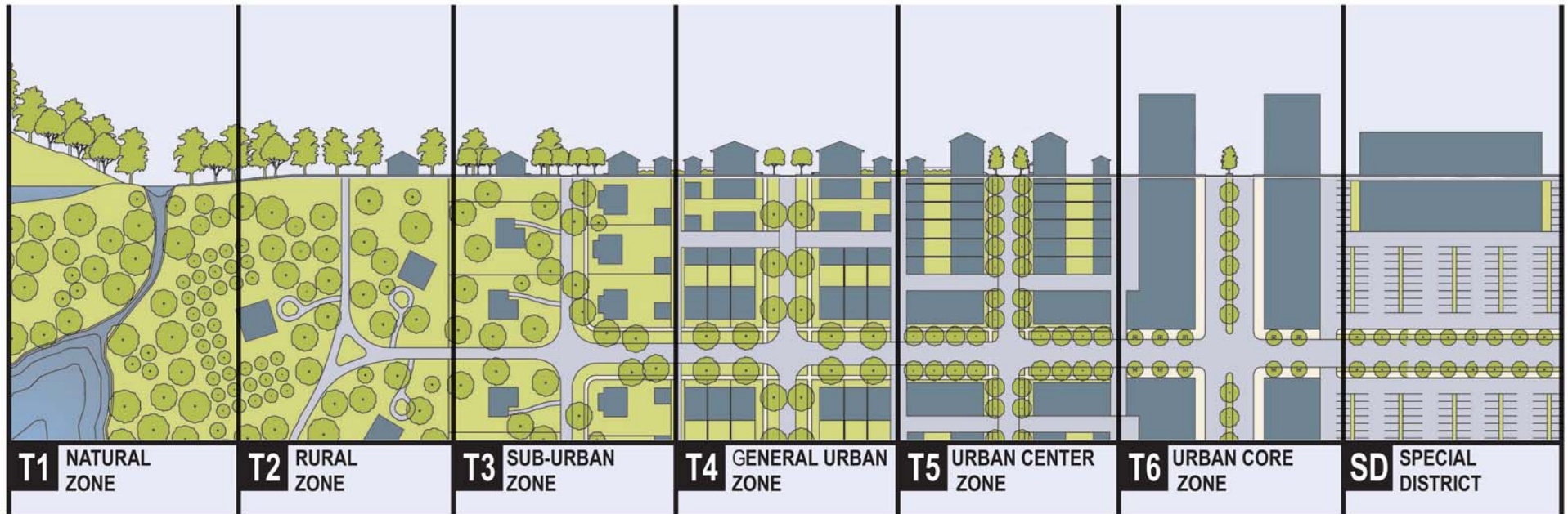


**St. Petersburg, FL**





# Define the Context



## Transect Zones, Smart Code



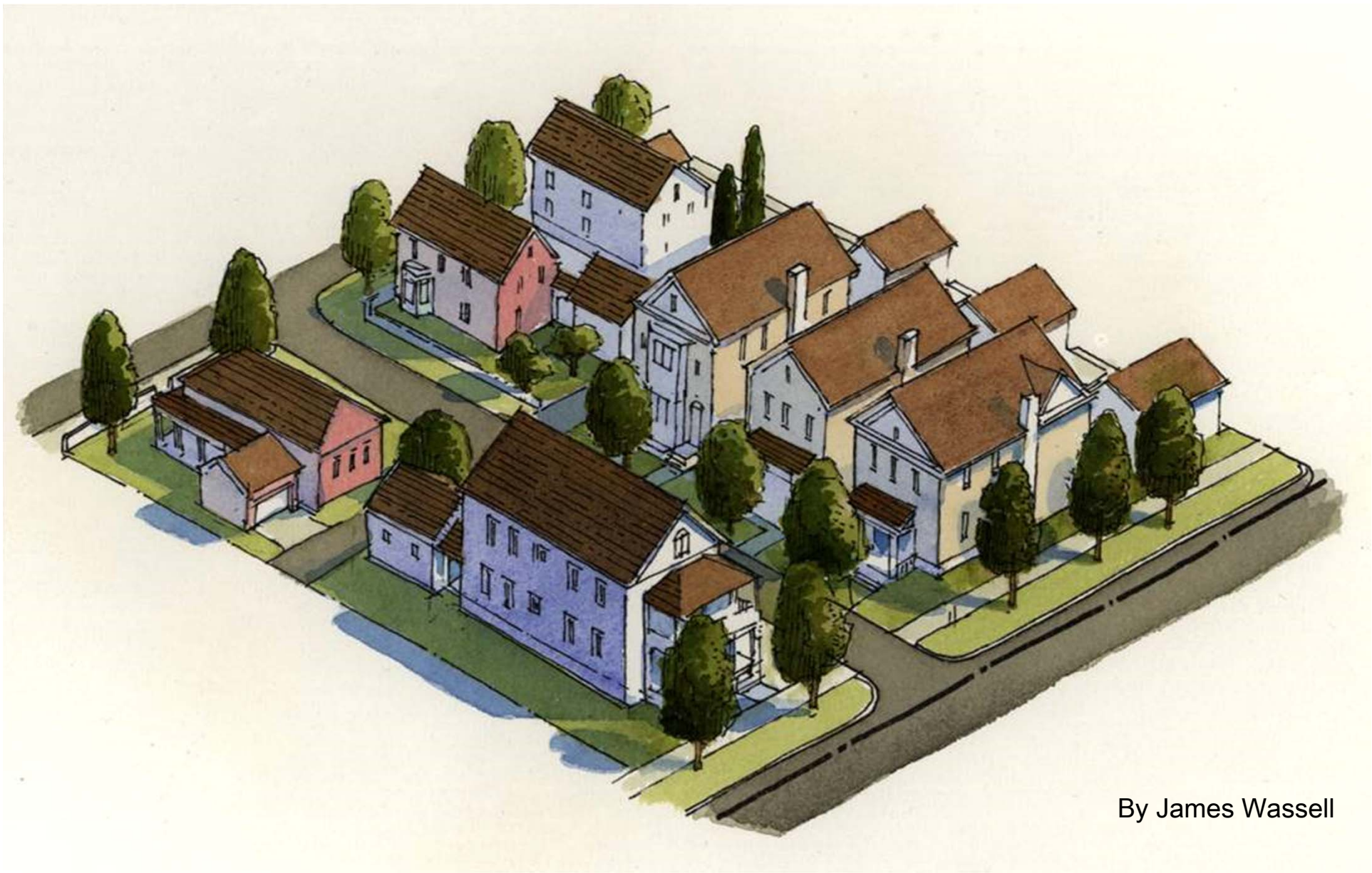
# T-3 Suburban



By James Wassell



# T-4 General Urban



By James Wassell

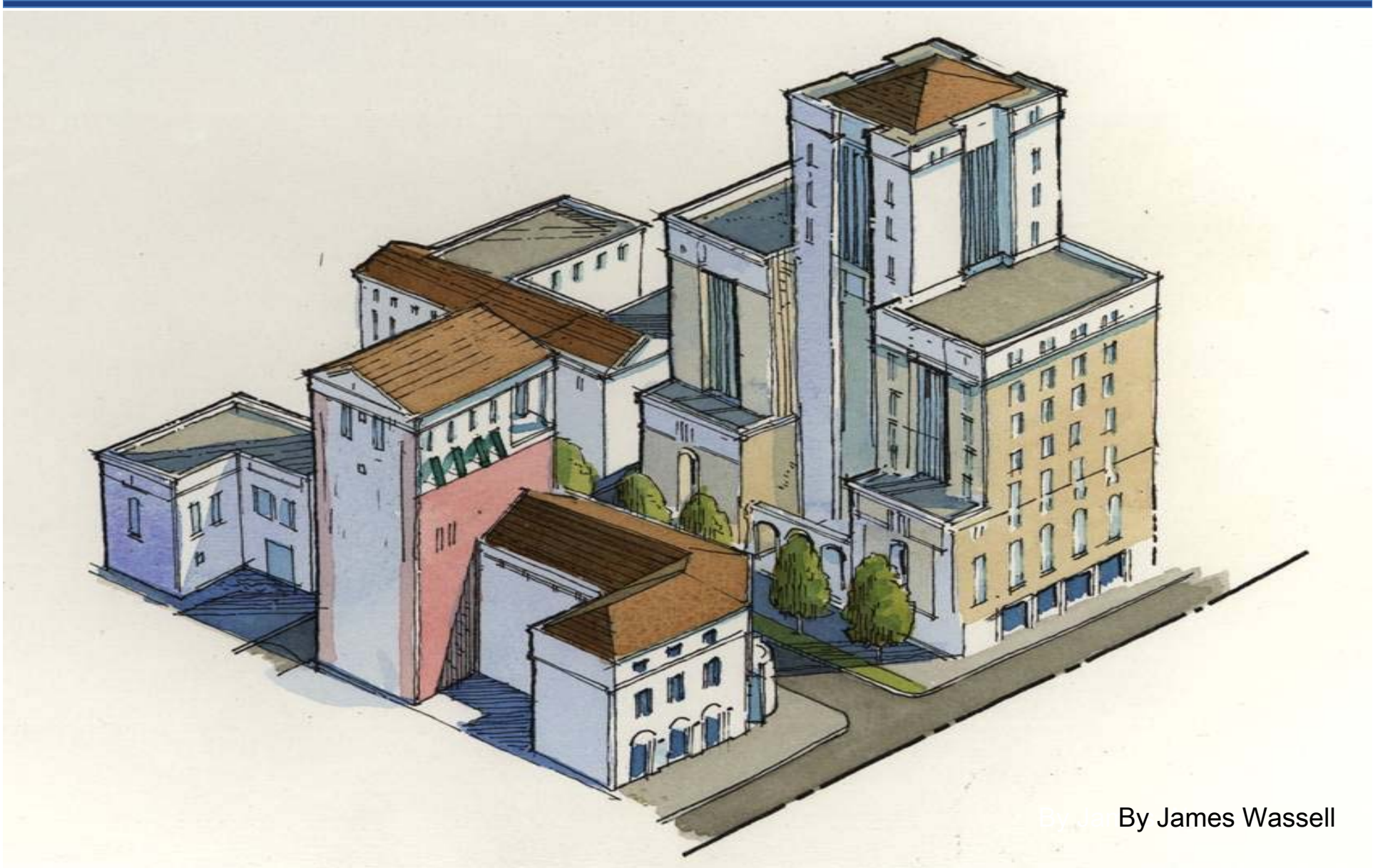
# T-5 Urban Center



By James Wassell



# T-6 Urban Core

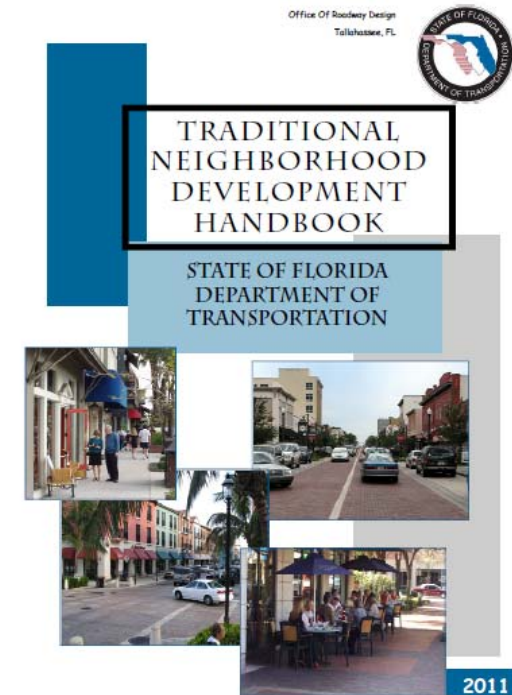


By James Wassell

# TND Chapter, Florida Greenbook



- Established through Florida rulemaking process
- For local streets
- Includes a TND Handbook
  - Best Practices
  - Educational



<http://www.dot.state.fl.us/rddesign/FloridaGreenbook/FloridaGreenbook.pdf>

<http://www.dot.state.fl.us/rddesign/FloridaGreenbook/TND-Handbook.pdf>





# Design Speed

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Picking a desired speed based on the built environment (compact urban, suburban, rural)

VS.

“Every effort should be made to use as high a design speed as practical to attain a desired degree of safety, mobility and efficiency.”

AASHTO





# Speed Management



**Robinson St, Orlando, FL**





# Speed Management



**Robinson St, Orlando, FL**



Florida Department of Transportation

# Speed Management



**Central Ave, Orlando, FL**



Florida Department of Transportation

# Proposed Lane Width



Movement Type	Design Speed	Travel Lane Width
Yield	Less than 20 mph	N/A*
Slow	20-25 mph	9-10 feet
Low	30-35 mph	10-11 feet

## TND Chapter, Florida Greenbook

\*Yield street width is 24' curb face to curb face.





# Context Based Bike Facilities

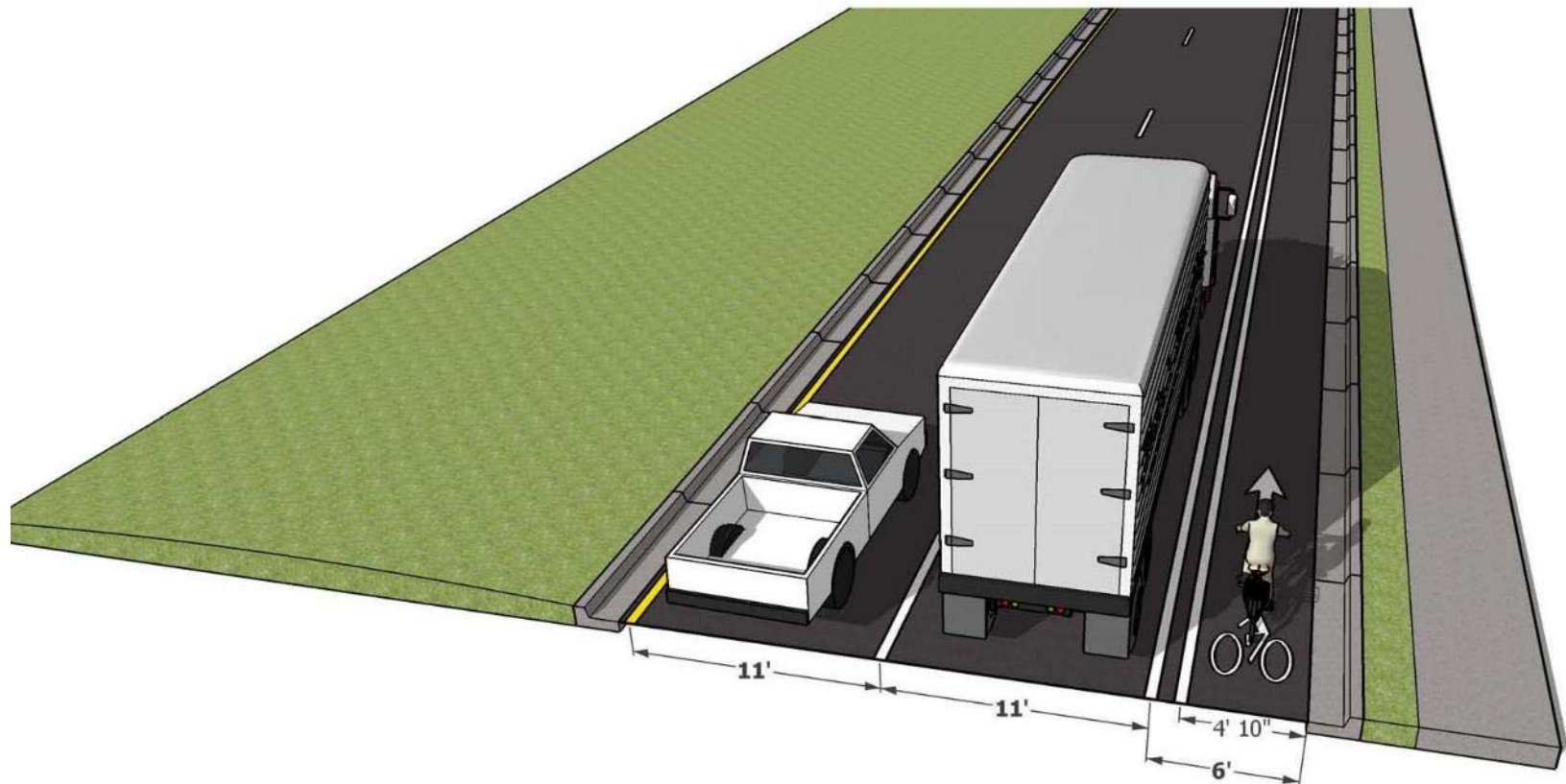
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## DRAFT Concepts:

- Context/Speed/Volume Based
- Low Speed/Volume – Shared Travel Lanes
- Moderate Speed/Volume - Bike Lanes (7' Standard)
  - New Construction
  - Retrofit Projects
- Higher Speed/Volume - Multi-use Paths (10' Standard)



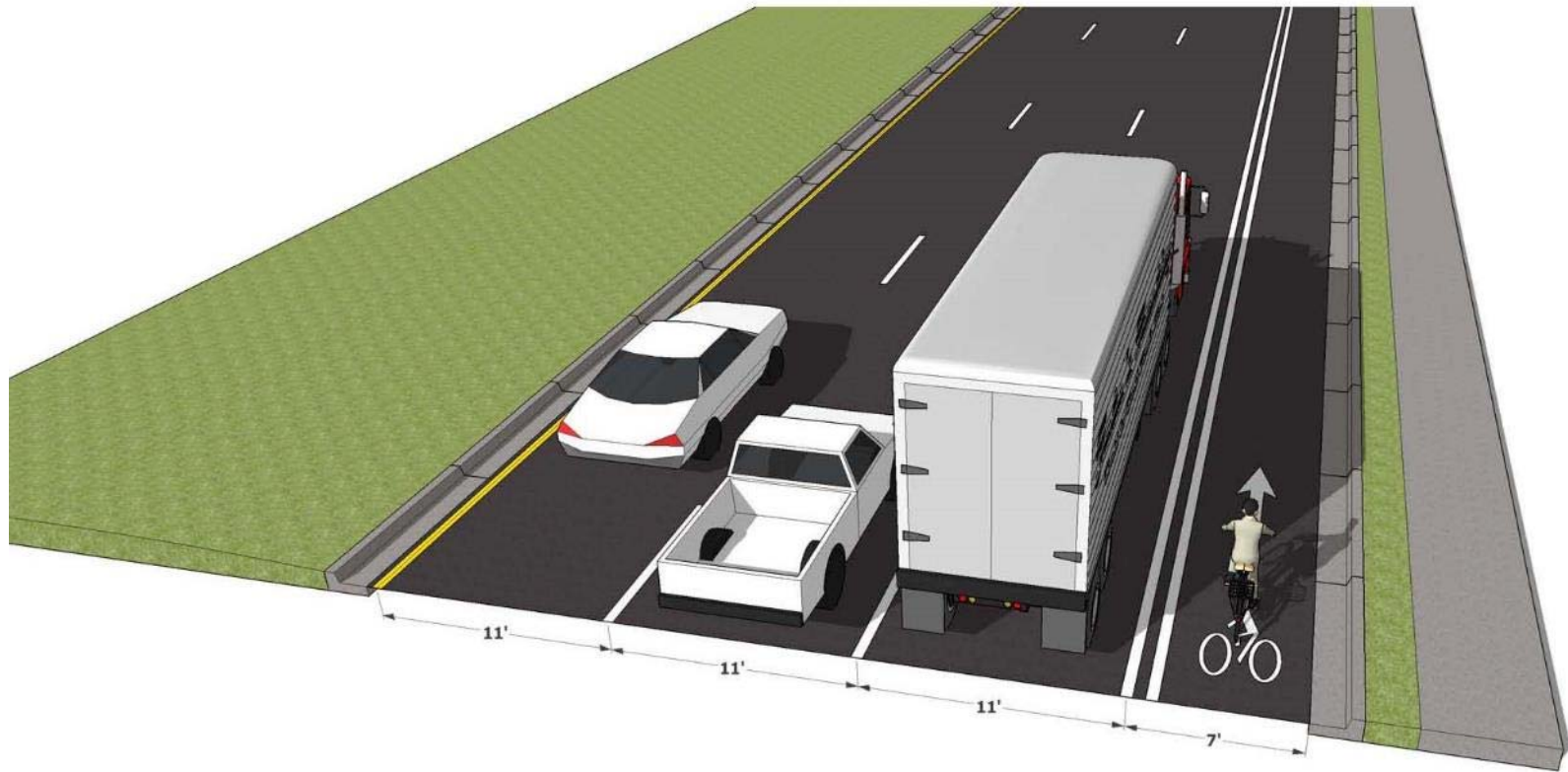
# 4 Lane Retrofit



6' Bike Lane



# 6 Lane Retrofit



7' Bike Lane



# Development Patterns



**Small Blocks/Street Network**



**Buildings at Street**





# Baldwin Park, Orlando, FL



- 1,100 Acres
- 250 Acres of Lakes
- 32 Street Connections
- 14,000 Residents
- 125 Businesses
- Mixed Use
- Publix, CVS
- 20 Neighborhood Parks
- “A” Rated Schools
- 50 miles of Trails
- Single Family
- Town Homes
- Apartments
- Condominiums
- Live/Work



# Mixed Use Development



**New York Ave, Winter Park, FL**



Florida Department of Transportation

# Neighborhood Stores



**Central Ave, Orlando, FL**



Florida Department of Transportation



# Making a Street Complete



**Woodville Hwy, Woodville, FL**



Florida Department of Transportation





## QUESTIONS??



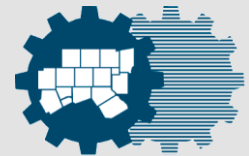
Secretary Boxold...“Addressing the issue of bicycle and pedestrian safety requires a comprehensive approach. We have to change the way we design and engineer our roads, we have to improve our education efforts, and clarify our traffic laws.”

Billy L. Hattaway, P.E.  
billy.hattaway@dot.state.fl.us

# Pedestrian Safety in North Texas

Dallas - Fort Worth Region

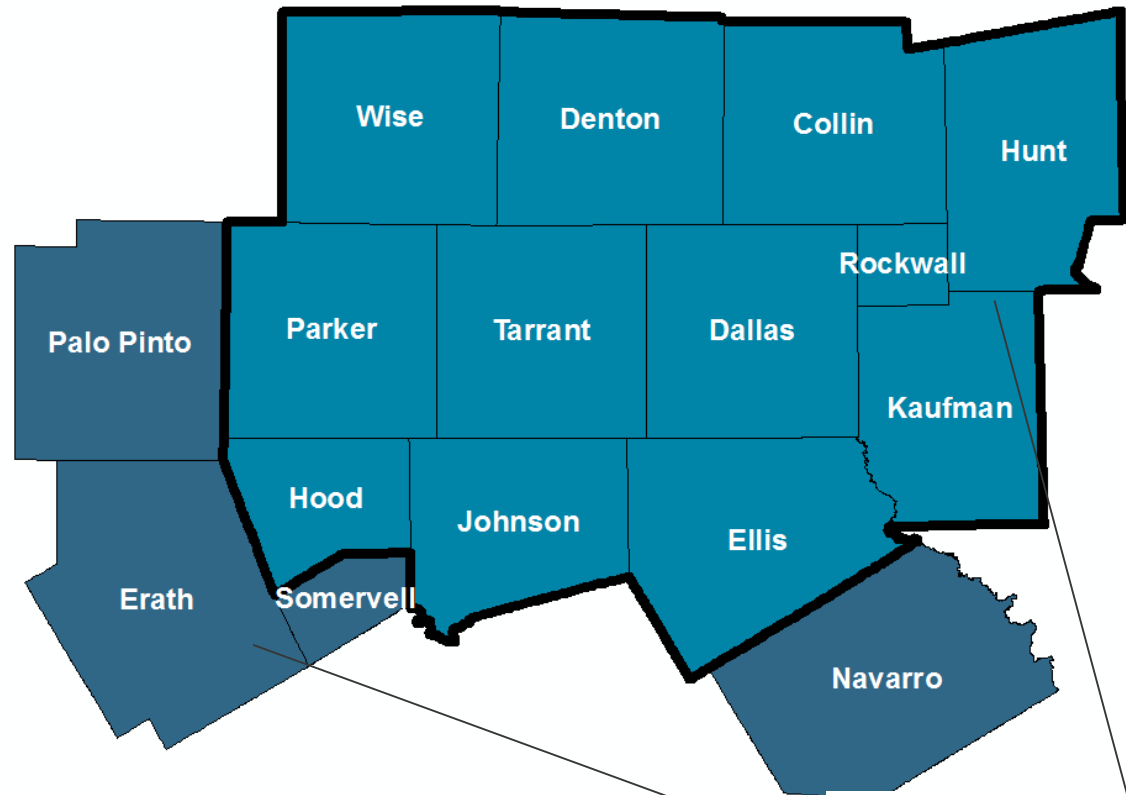
Kevin Kokes, AICP



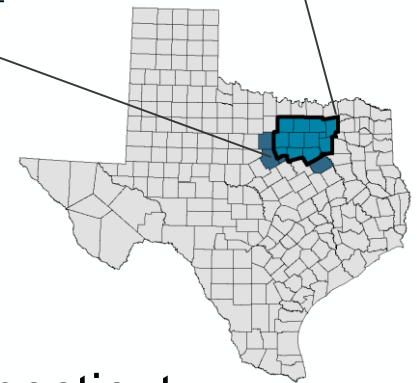
North Central Texas  
Council of Governments

# North Central Texas Council of Governments

MPO for the  
Dallas-Fort Worth  
Region



Metropolitan Planning Area (MPA)  
12 Counties = 9,441 sq. mi.



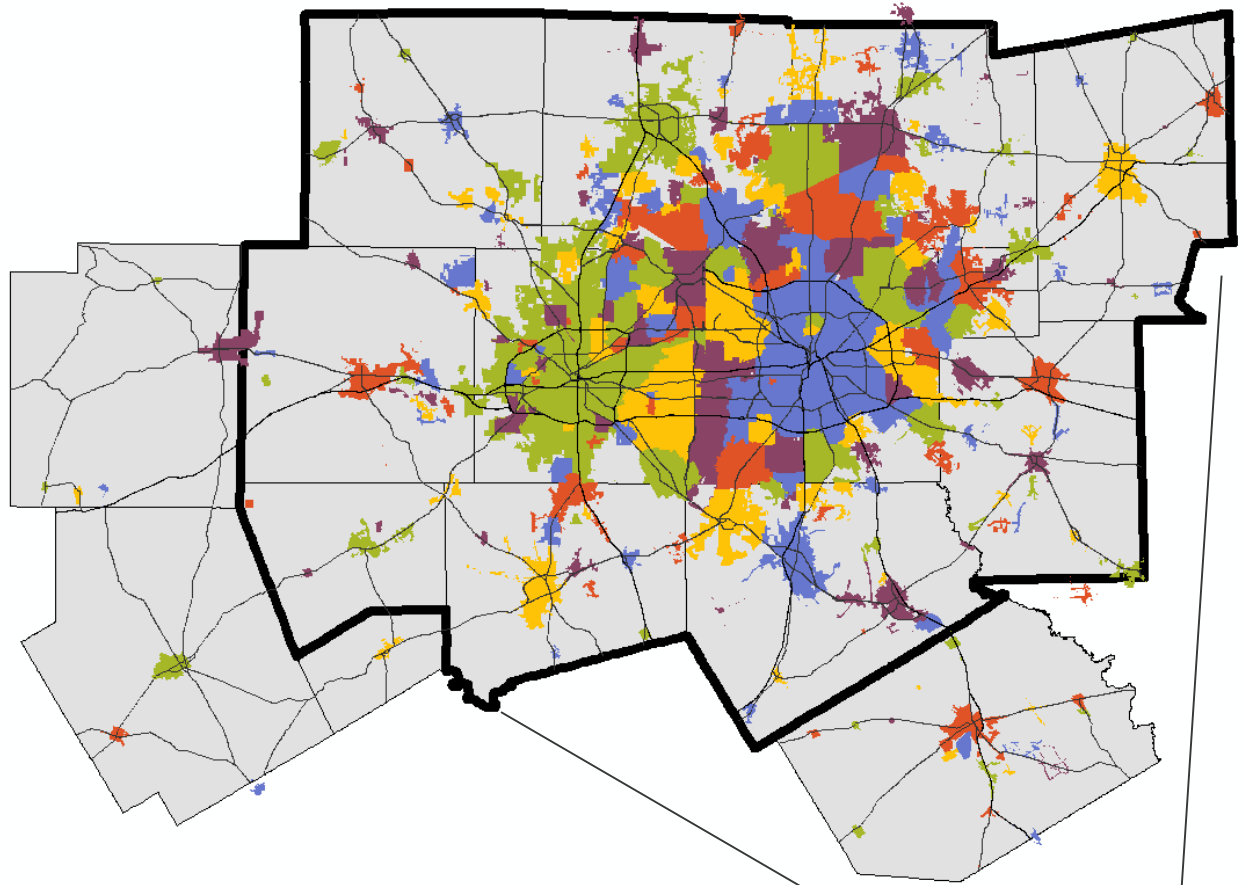
Land area larger than the states of  
New Hampshire, New Jersey, Connecticut,  
Delaware, and Rhode Island.





# North Central Texas Council of Governments

## MPO for the Dallas-Fort Worth Region



### Metropolitan Planning Area (MPA)

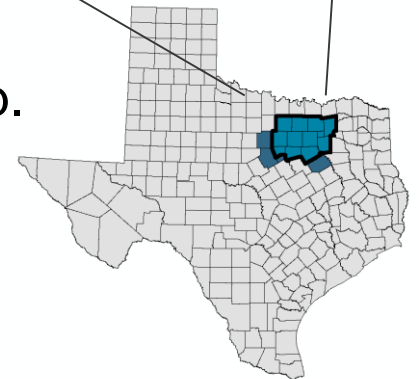
209 cities

13 cities larger than 100,000 pop.

### MPA Population

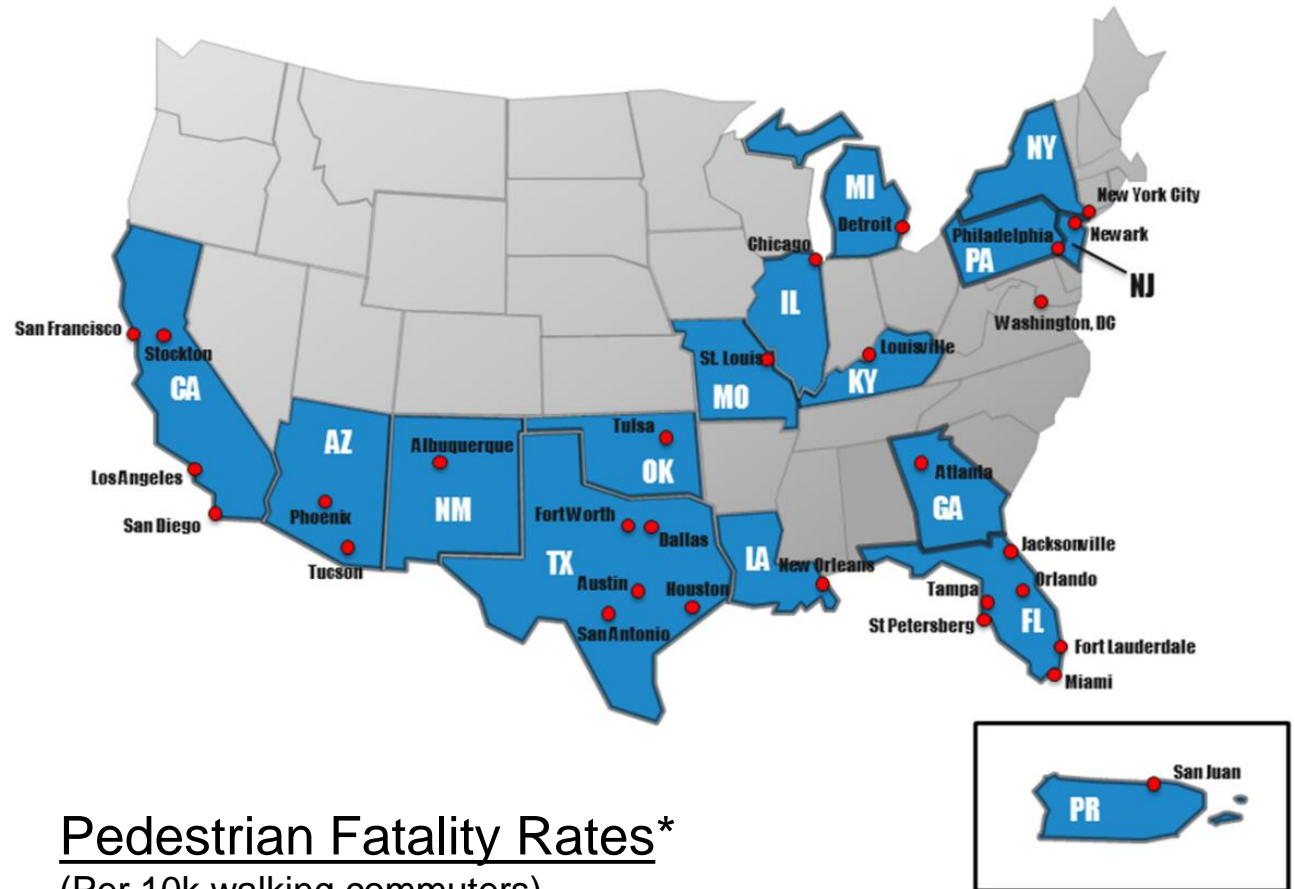
2015 Estimate = 7 million

**2040 Forecast = 10.6 million**



# FHWA Pedestrian Safety Focus States and Cities

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



# Pedestrian Safety

The pedestrian experience along many major roadways is challenging.



## Safety Challenges

- Gaps in the Sidewalk Network
- Wide Intersections/Crossings
- Distance between Crossings
- High Traffic Speeds
- Vehicle Turning Movements
- ADA
- Maintenance
- Barriers





# Pedestrian Fatalities and Crashes

A large number of pedestrian fatalities are “on-system” (interstate and state highways).

The location of pedestrian crashes are more evenly dispersed.

Pedestrian Fatalities (2009-2013)						
County	2009	2010	2011	2012	2013	2009-2013
	Pedestrian Fatalities	Pedestrian Fatalities	Pedestrian Fatalities	Pedestrian Fatalities	Pedestrian Fatalities	Total
Collin	6	1	5	2	6	20
Dallas	29	32	44	43	43	191
Denton	7	1	4	5	1	18
Tarrant	19	19	29	29	21	117
<b>Total</b>	<b>61</b>	<b>53</b>	<b>82</b>	<b>79</b>	<b>71</b>	<b>346</b>

Pedestrian Crash Contributing Factor Analysis 12-County MPA (2009 - 2013)	
Contributing Factors ( <u>Top 3</u> )	% of All Occurrences
Pedestrian Failed to Yield ROW to Vehicle	57%
Vehicle Failed to Yield ROW to Pedestrian	28%
Driver Inattention	11%

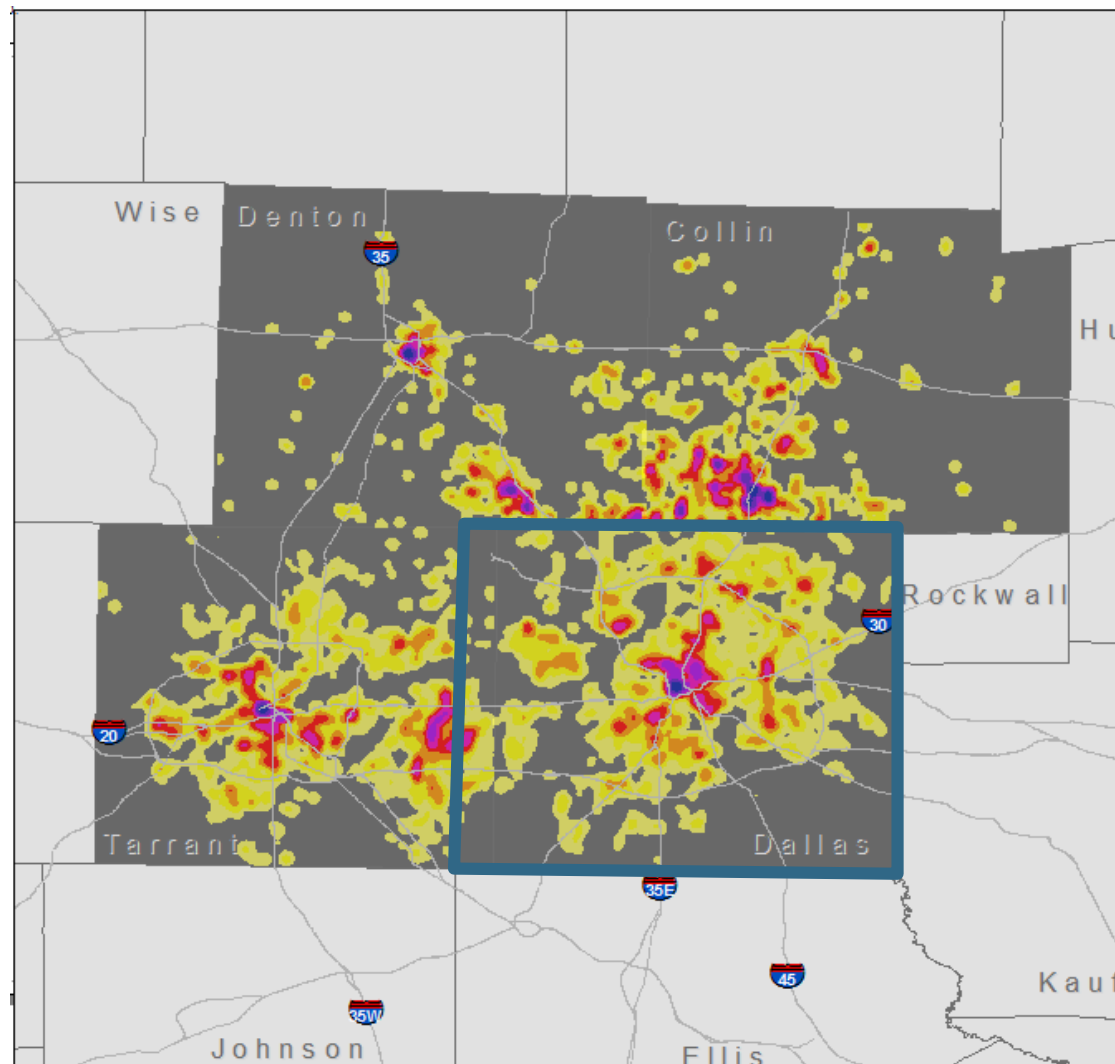


# Regional Bicycle/ Pedestrian Crash Data

Bicycle and  
Pedestrian Crash  
Density  
(2009-2013)

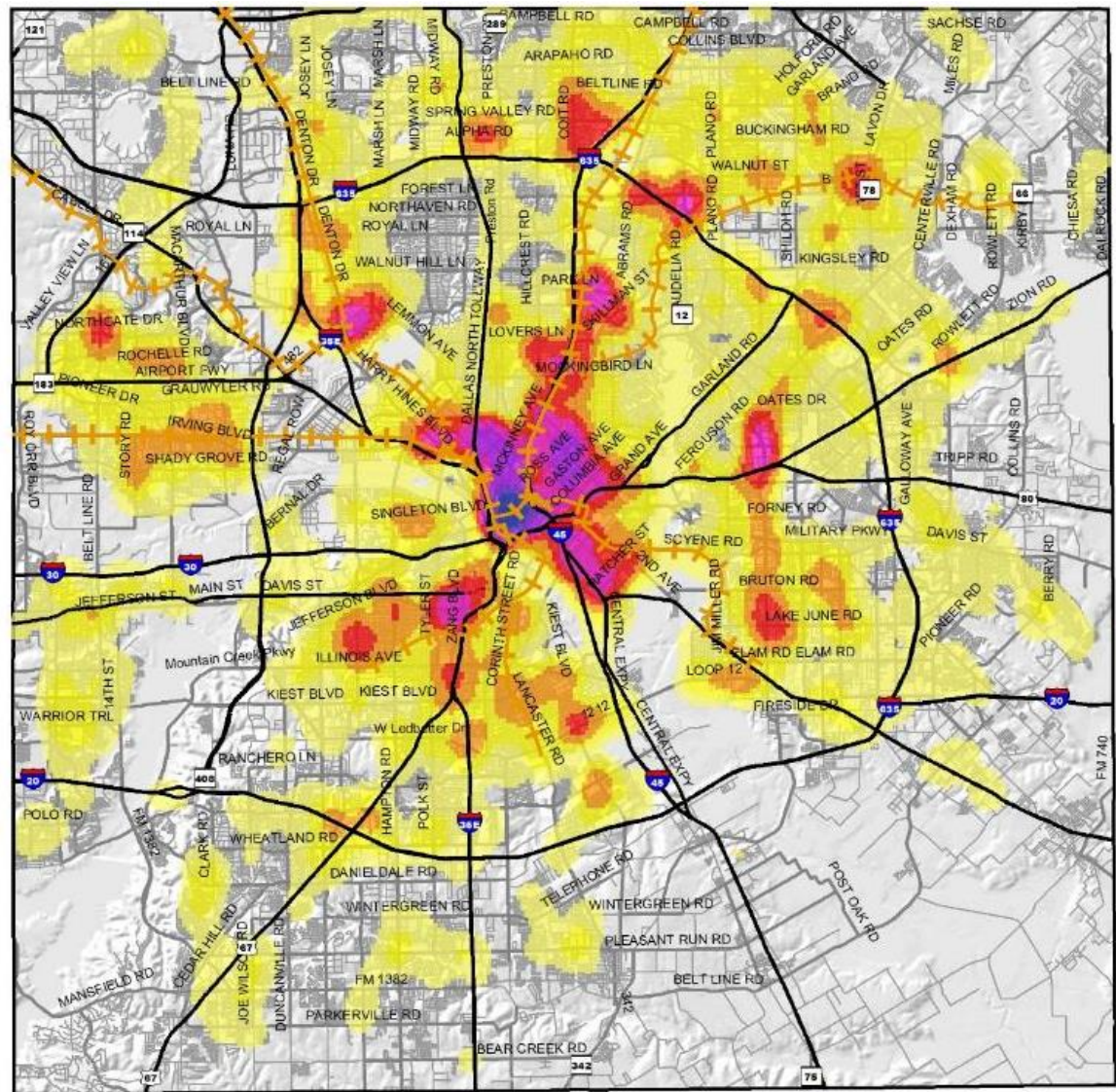
## Legend

- No Crash Density
- Low Crash Density
- Medium Crash Density
- High Crash Density
- Very High Crash Density
- Highway



# Regional Bicycle/ Pedestrian Crash Data

## Dallas County Bicycle and Pedestrian Crash Density (2009-2013)



**Legend**

- No Crash Density
- Low Crash Density
- Medium Crash Density
- High Crash Density
- Very High Crash Density
- Highway
- Major Arterial
- Minor Arterial

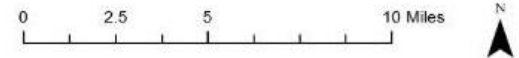
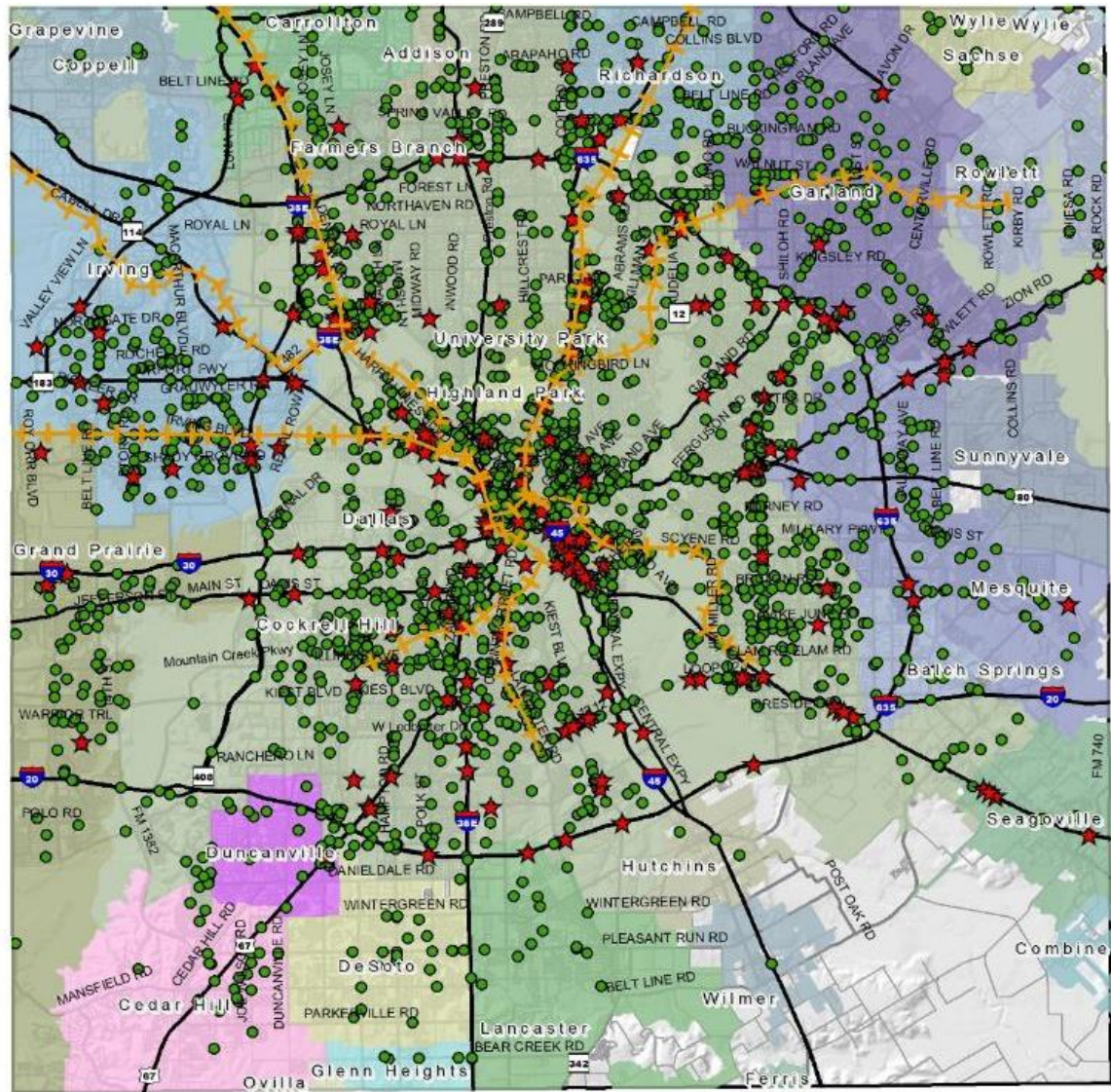


# Regional Pedestrian Crash Data

## Dallas County Pedestrian Crash and Fatality Locations (2009-2013)

### Legend

- ★ Pedestrian Fatal Crash Location (207)
- Pedestrian Crash Location (3,080)
- Highway
- Major Arterial
- Minor Arterial
- Passenger Rail



# 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

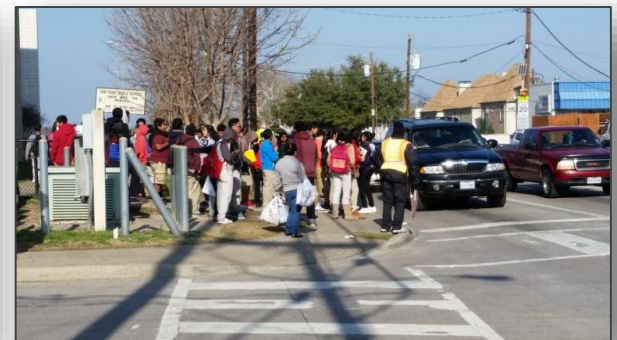




# Education and Training

## Bike / Walk North Texas Regional Safety Education Campaign

- Promote bicycle and pedestrian safety
- Rights and responsibilities of all road users
- Targeted messaging for:
  - School-aged children
  - University students
  - Spanish speaking residents



# Regional Transportation Council (RTC)

## Policy Supporting School Districts

127 School Districts  
209 Municipalities

### School Siting Issues

Schools located along major roadways, and limited infrastructure, or where not accessible by active transportation facilities

### School Policy Recommendations (Safety and Health Related)

- Pilot school-siting programs integrating schools within neighborhoods and reducing the frequency of schools being located on major thoroughfare streets
- SRTS, Precious Cargo Program, and others that advance the safety of children traveling to/from school
- Vehicle idling-reduction programs
- Clean School Bus and Clean Fleet Vehicle programs



# TIGER 2014 Planning Study

## Land Use – Transportation Connections to Sustainable Schools

### TIGER Planning Study Key Elements:

- Long-term planning for school siting (Policies, Possible Landbanking Program)
- Work Group for Interagency Coordination (ISDs, Local Govt., TxDOT, Public Safety, Health)
- Strategies to improve multimodal transportation options to schools
- Related Activities:
  - Safety audits at pilot school sites
  - Recommendations for bicycle and pedestrian safety near schools
  - Bilingual bicycle and pedestrian safety program and transportation safety information guide





# Pedestrian Routes to Rail Stations

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

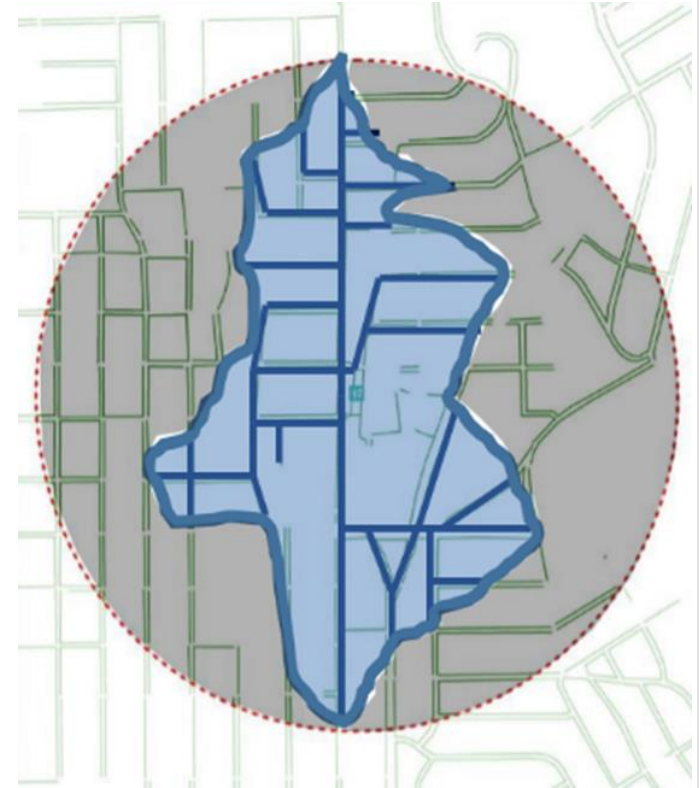
[nctcog.org/RoutesToRail](http://nctcog.org/RoutesToRail)

## Pedestrian Network Analysis

GIS network-based assessment of pedestrian routes (distance) within half mile to/from rail stations

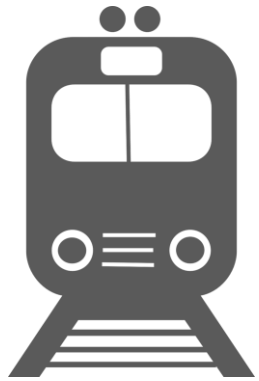
Impacts of barriers on the actual distance of travel

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



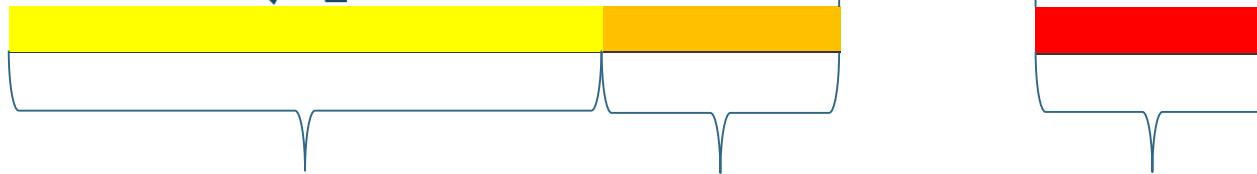
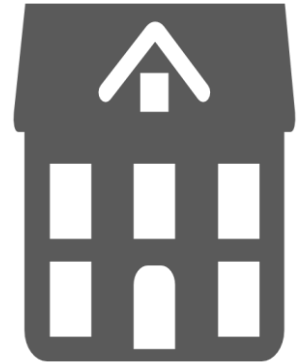
# Pedestrian Routes to Rail Network Analysis

Rail Station



Barriers  
and Gaps  
in the  
Network

Destination



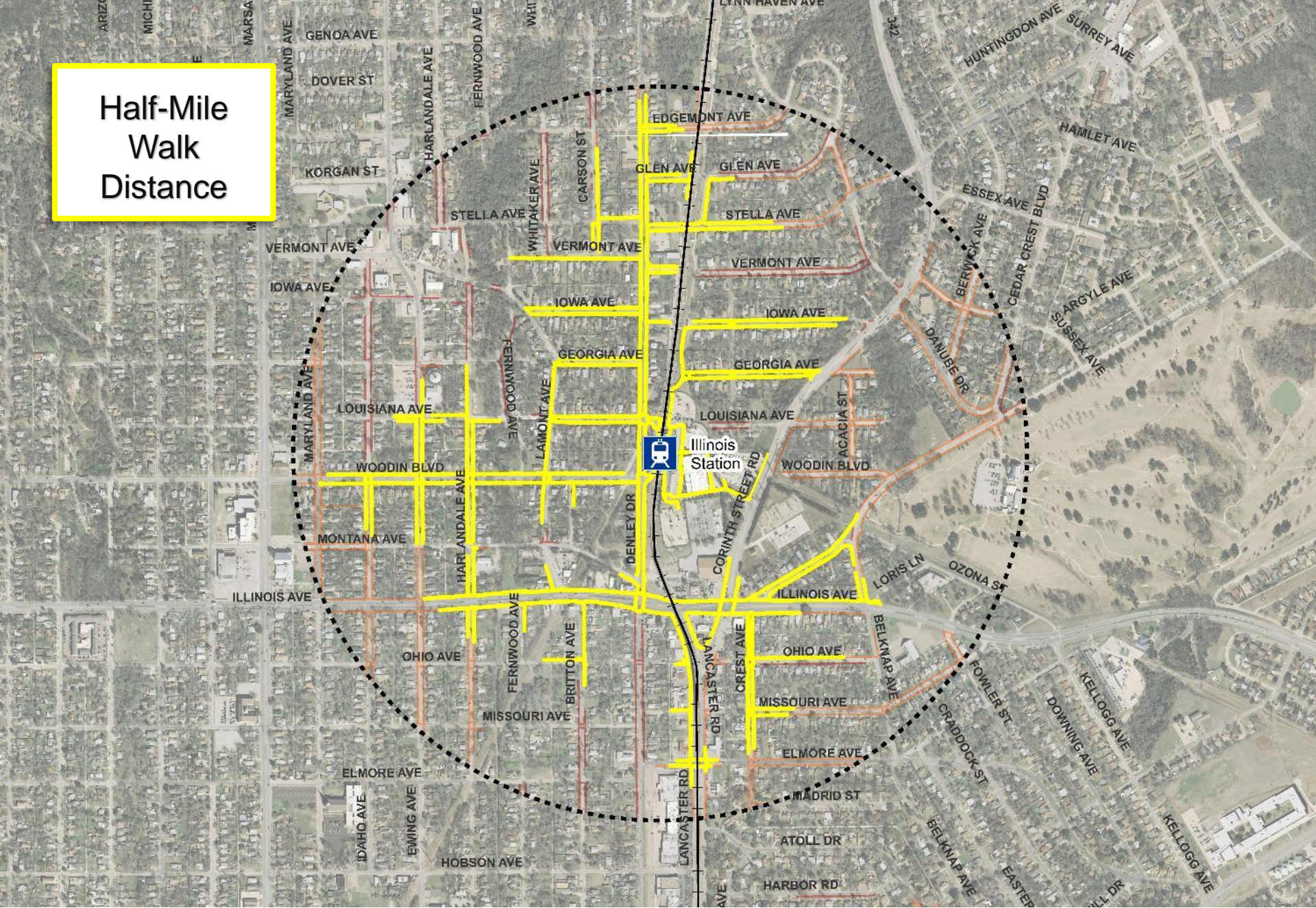
Half-mile  
walk distance

Beyond half-mile  
*actual* walk  
distance

Disconnected  
pedestrian  
facility

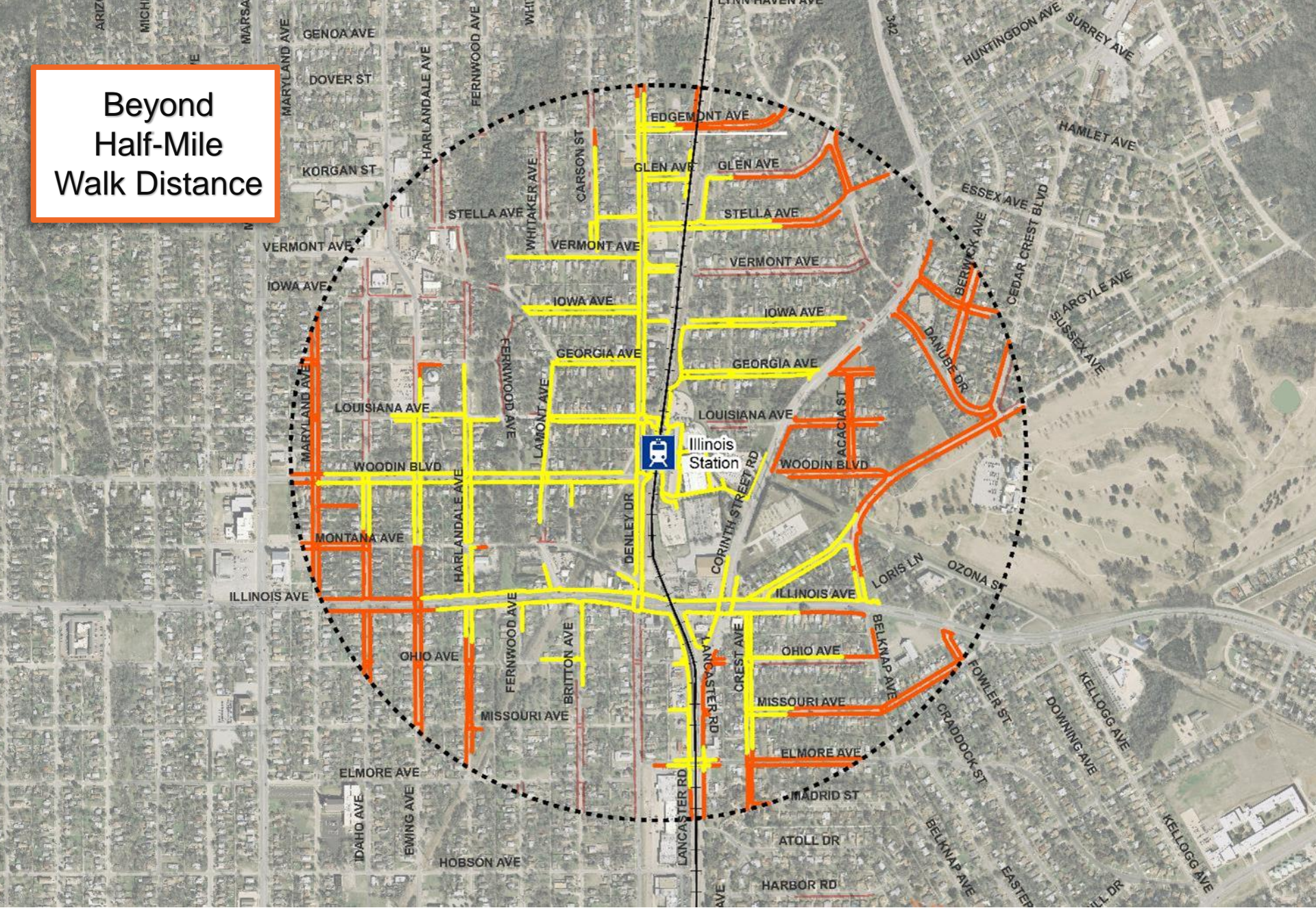


Half-Mile  
Walk  
Distance



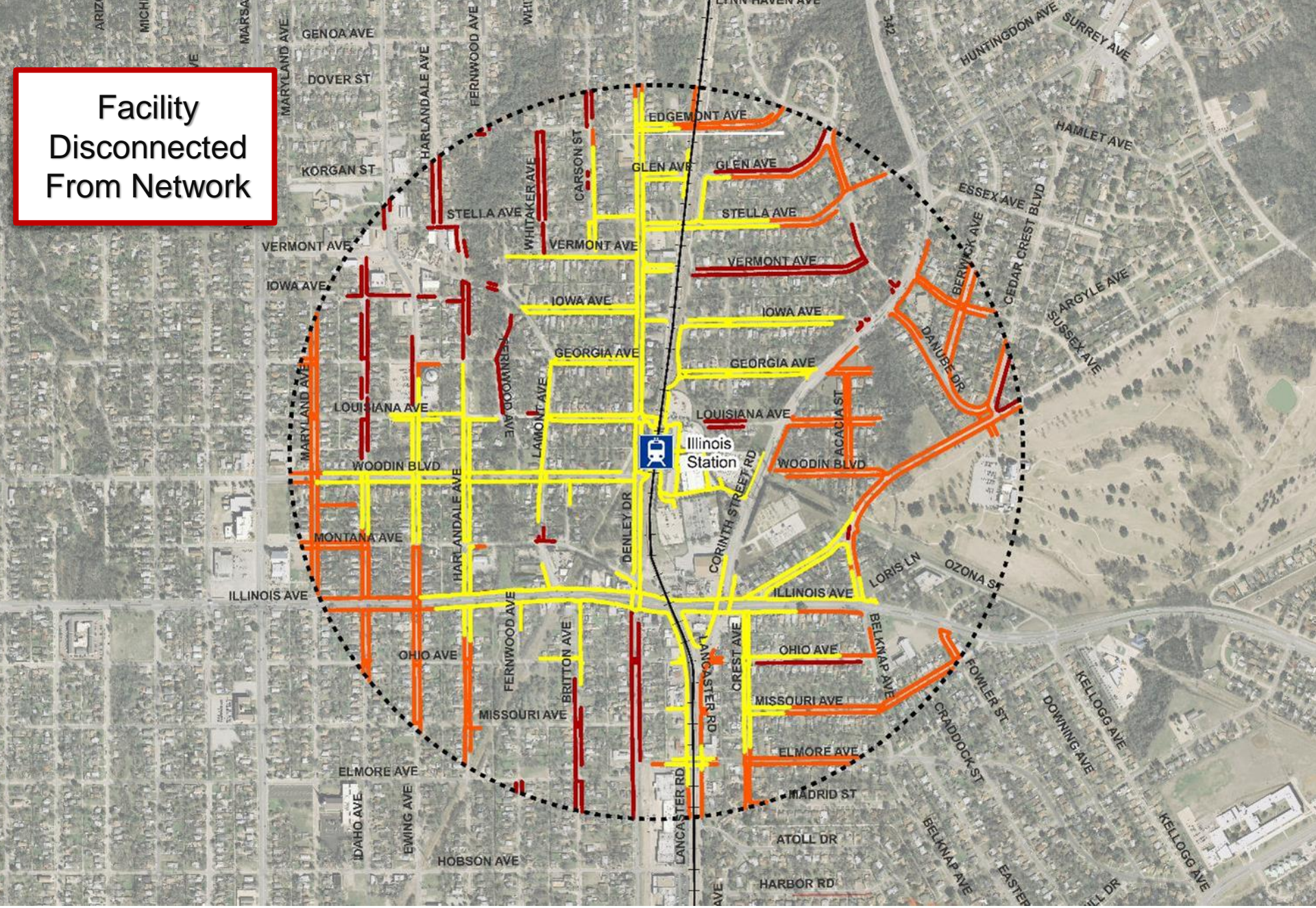


# Beyond Half-Mile Walk Distance





Facility  
Disconnected  
From Network



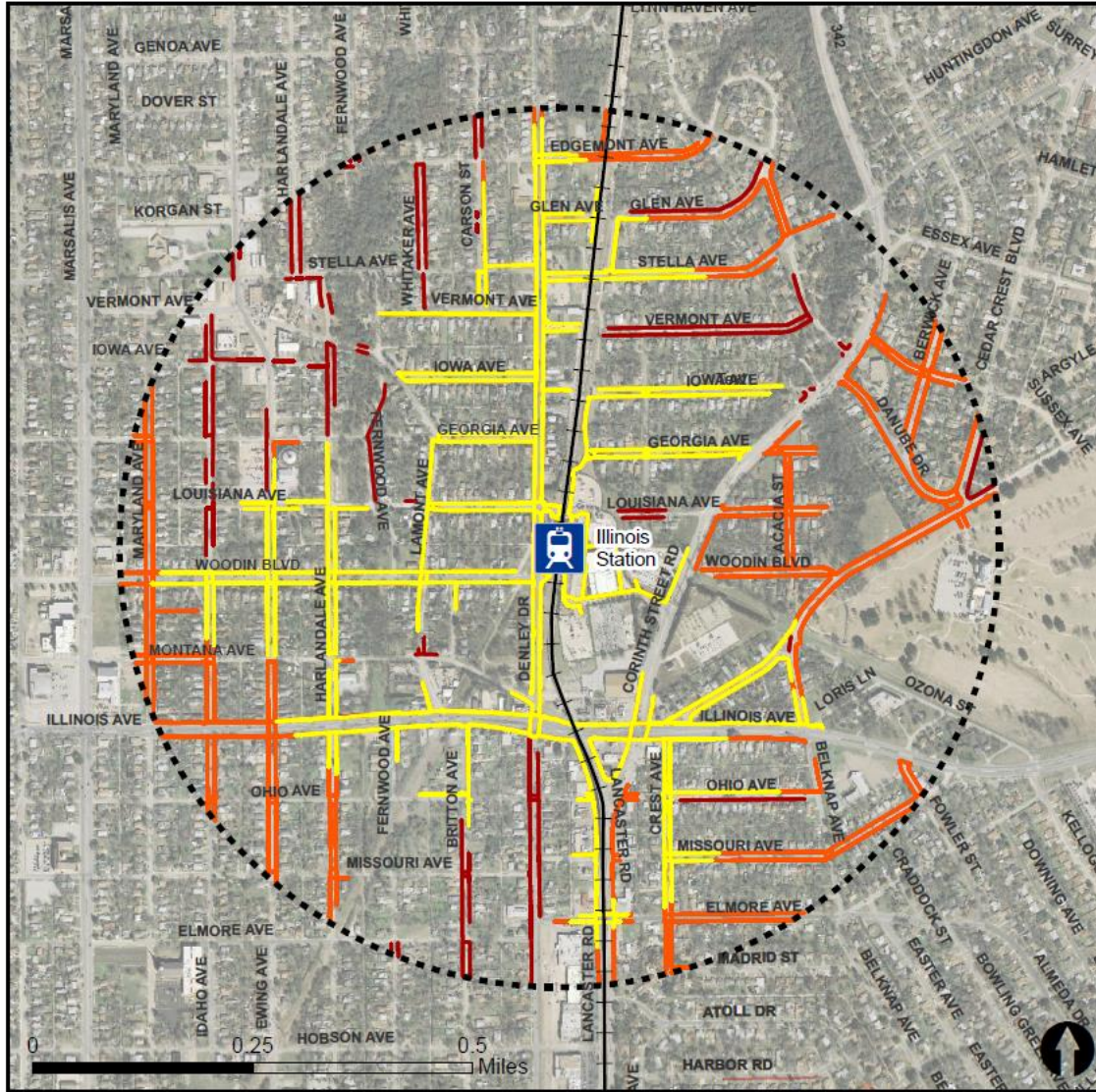


# Pedestrian Routes to Rail - Illinois Station

Last Updated: February 2015



North Central Texas  
Council of Governments



## Legend



Rail Stations



0.5 Mile  
Station Buffer

—+— Railroads

Existing sidewalk facilities within a  
0.5 mile walk distance

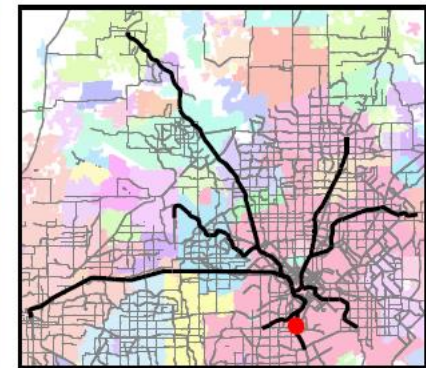
Existing sidewalk facilities greater than a  
0.5 mile walk distance

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)





# Bicycle and Pedestrian Advisory Committee (BPAC)

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

- NCTCOG facilitates quarterly meetings
- Members include: planners, engineers, consultants and advocates representing local communities
- Technical expertise and information sharing
- Guidance for the Active Transportation elements of the Metropolitan Transportation Plan (MTP) – Mobility 2040





# North Central Texas Regional TAP Call for Projects (2014)

Safety-related projects typically scored well in multiple categories.

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

TAP Application Evaluation Categories	Scoring (Maximum Points)
<b>Making Regional Linkages and Connections (Completing the Gaps)</b>	25
<b>Implementing Adopted Active Transportation / Mobility Plans</b>	20
<b>Improving Safety</b>	15
<b>Reducing Barriers</b>	10
<b>Connections to Employment, Households, and Activity Centers</b>	10
<b>Providing Environmental Benefits</b>	10
<b>Serving Disadvantaged (Environmental Justice) Areas</b>	5
<b>Creating Economic Development Opportunities</b>	5
<b><u>Total</u></b>	<b><u>100</u></b>





# Kevin Kokes, AICP

Senior Transportation Planner

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



North Central Texas  
Council of Governments



**SFMTA**  
Municipal  
Transportation  
Agency

# Achieving Vision Zero: San Francisco Leadership & Pedestrian Safety

PBIC Webinar  
May 5, 2015

Chava Kronenberg, SFMTA Sustainable Streets



**SAN FRANCISCO  
PLANNING  
DEPARTMENT**

# Vision Zero Adoption

An aerial photograph of a city street intersection. The street has multiple lanes with white lane markings. Several vehicles are visible, including a white van, a blue car, a black car, a white car, and a white bus with the number '8330' on its side. Pedestrians are walking on the sidewalk. A large, semi-transparent dark blue rectangle is overlaid on the center of the image, containing the text 'ZERO TRAFFIC DEATHS IN SAN FRANCISCO BY 2024' in white, bold, uppercase letters.

## ZERO TRAFFIC DEATHS IN SAN FRANCISCO BY 2024

- In 2014, the SFMTA Board and the San Francisco Board of Supervisors passed the Vision Zero policy
- Ten City agencies have agreed to work toward achieving Vision Zero



# A public health crisis





# Citywide Support



# Before ....

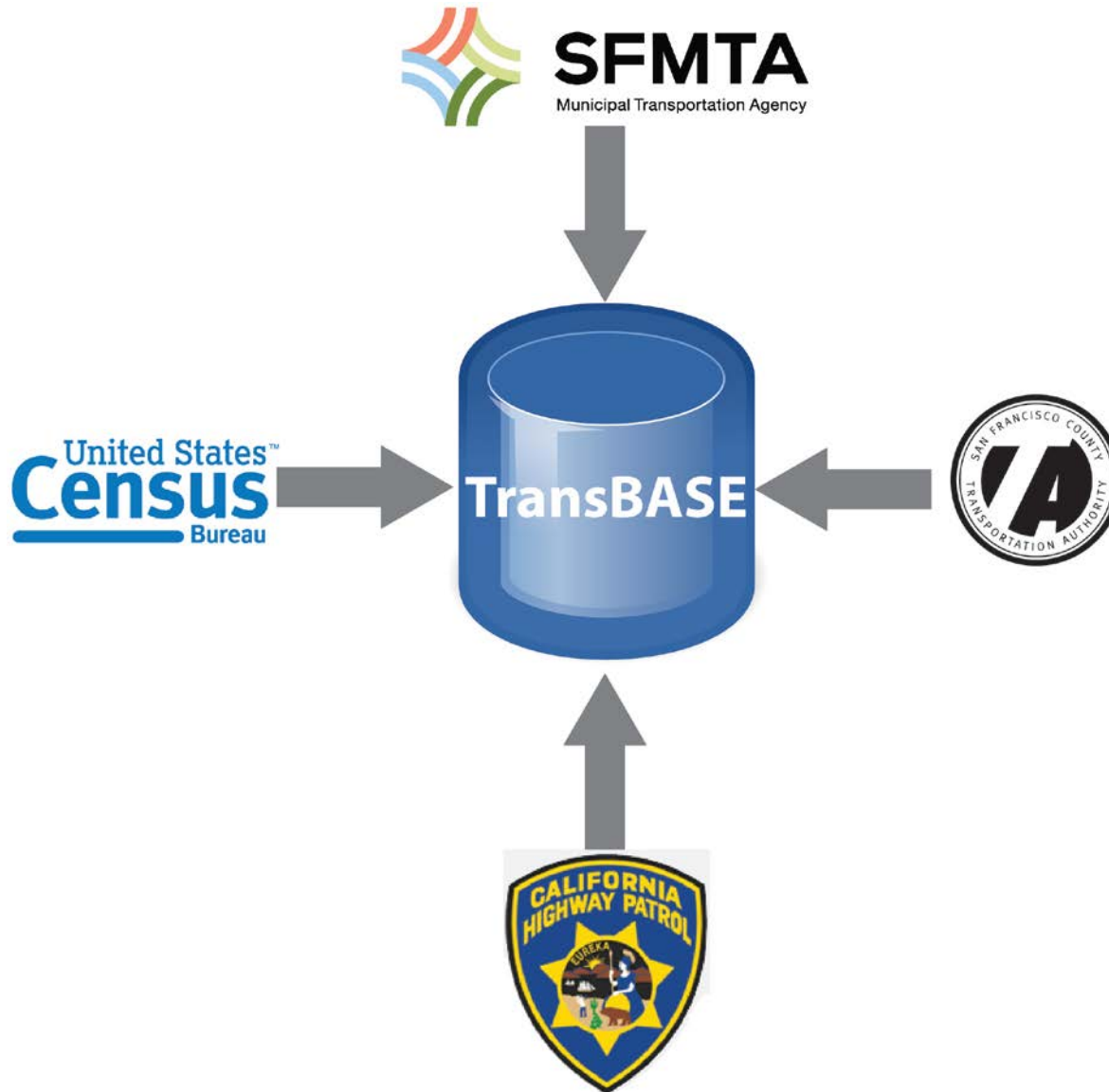
- Reactive improvements for people who walk
- Streetscape projects driven by other priorities
  - Bicycle projects
  - Paving program
- Hard to get data – information siloes
- Limited shared understanding of interventions
- Limited advocacy from single pedestrian safety advocacy organization
- Low priority in relationship to other transportation needs



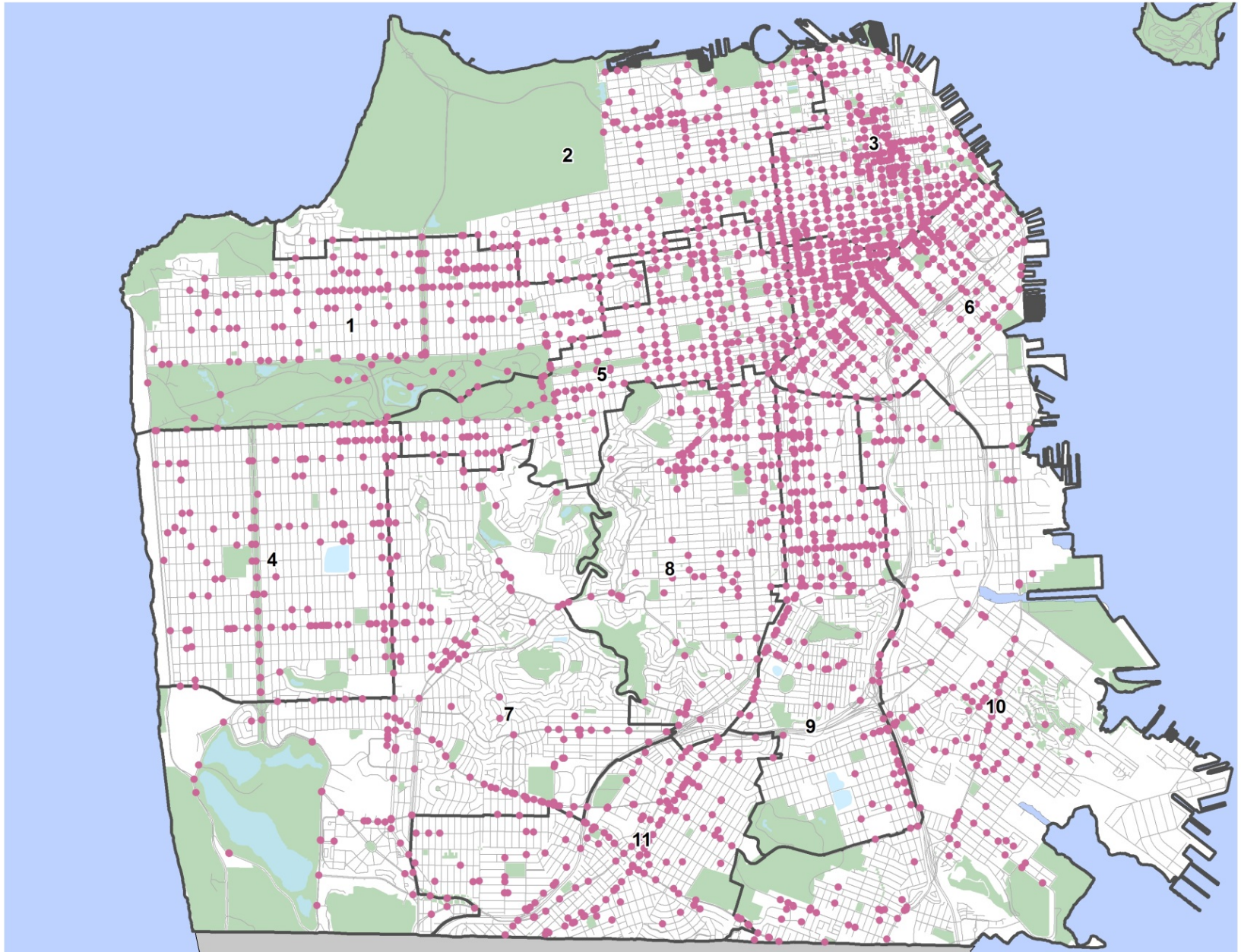
# Recipe for Leadership Buy-In

- **Collision data management**
  - SF Dept. Public Health TransBASE tool
- **Relevant data analysis**
  - Citywide WalkFirst planning effort
- **Coordinated advocacy**
  - Vision Zero Coalition

# Collision Data Management

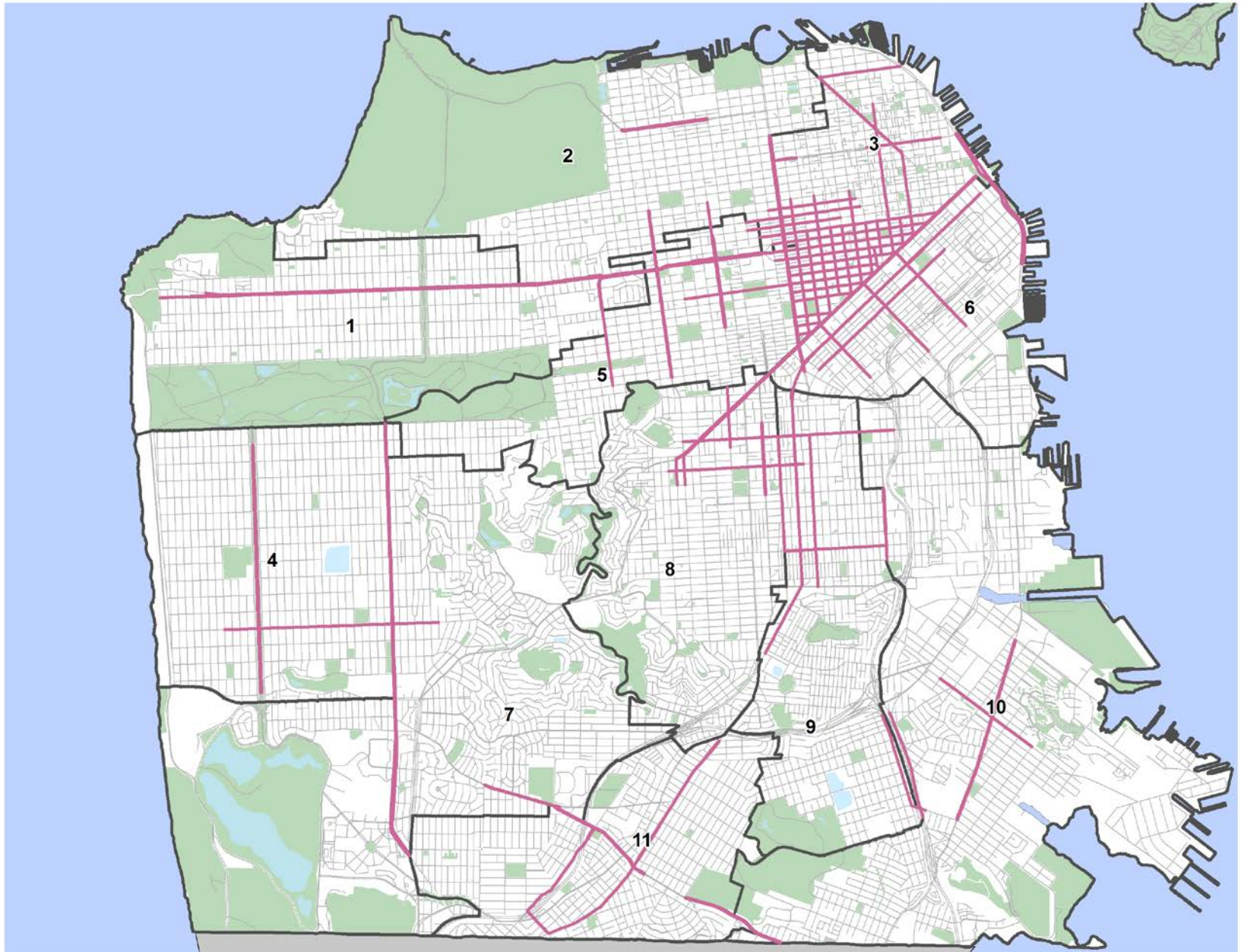


# Pedestrian High Injury Corridors





# Pedestrian High Injury Corridors



# WalkFirst Planning Effort

How can the City develop site-specific, data-driven recommendations for a geographic area that encompasses thousands of intersections?

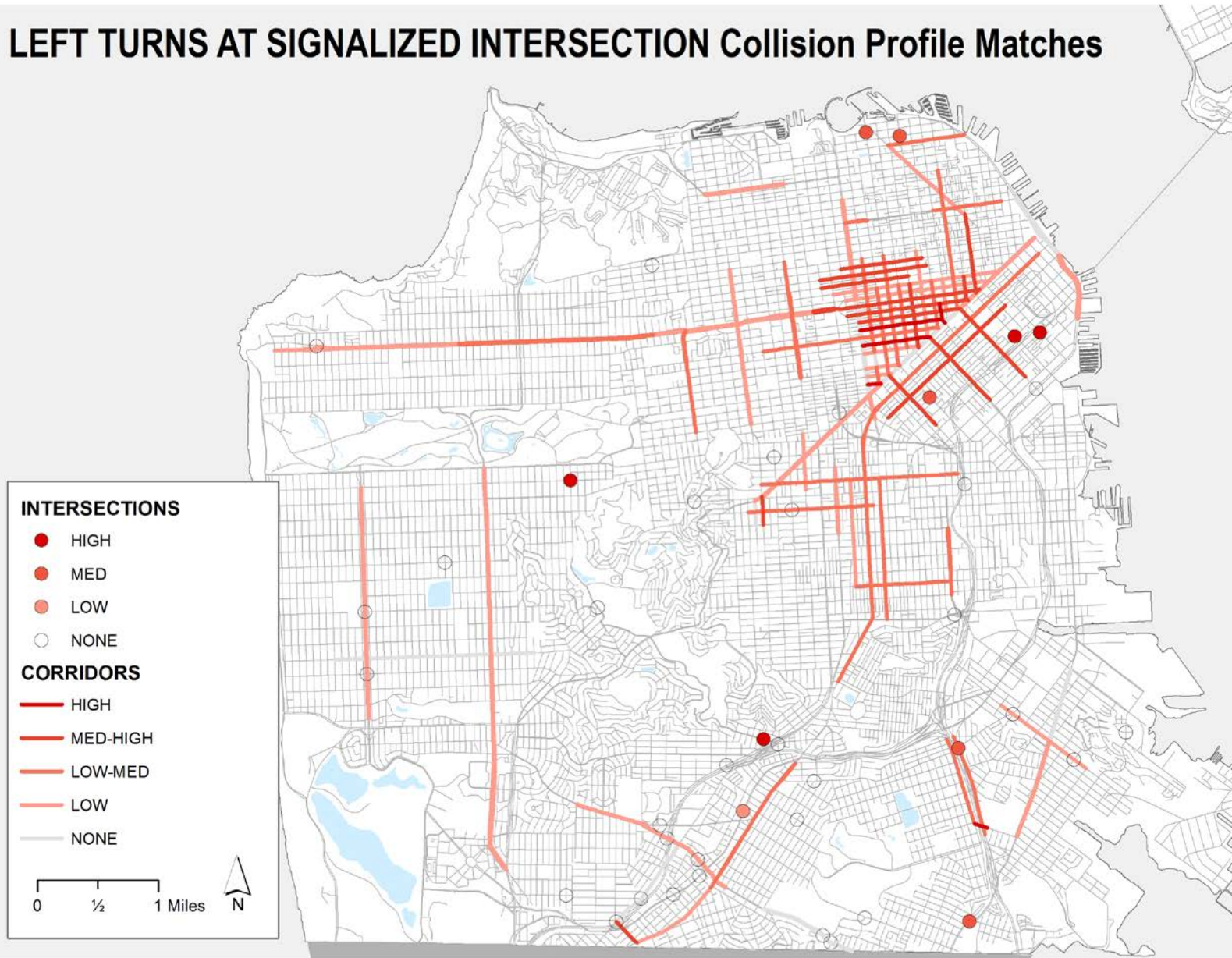
How can funds be allocated effectively and efficiently to reduce pedestrian injury in a fiscally-constrained environment?





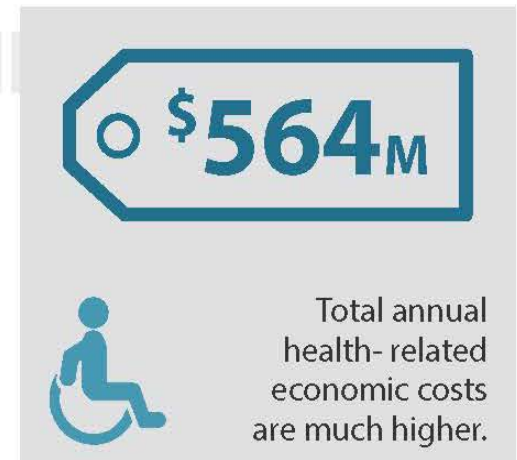
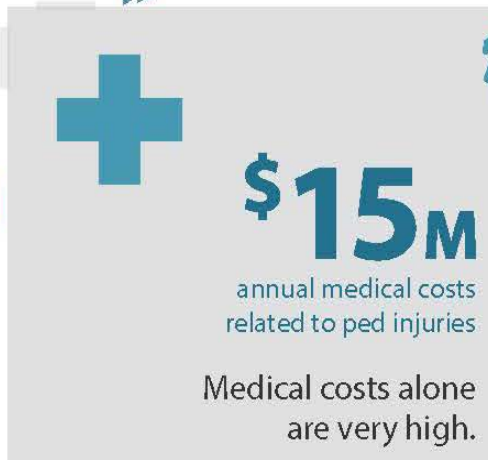
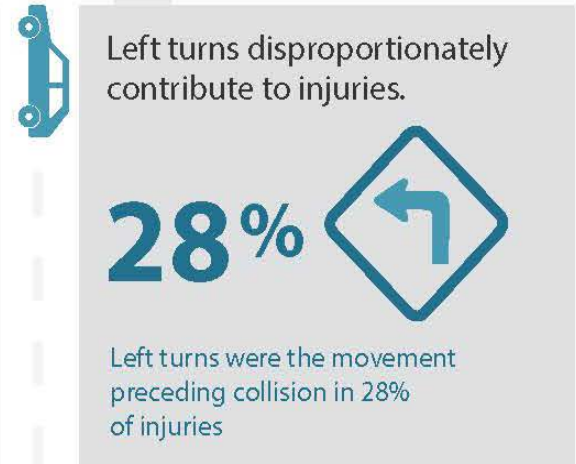
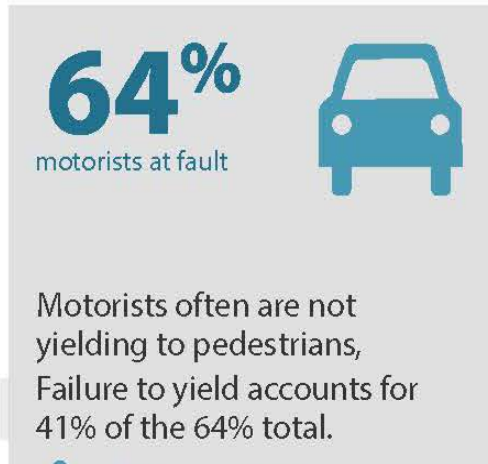
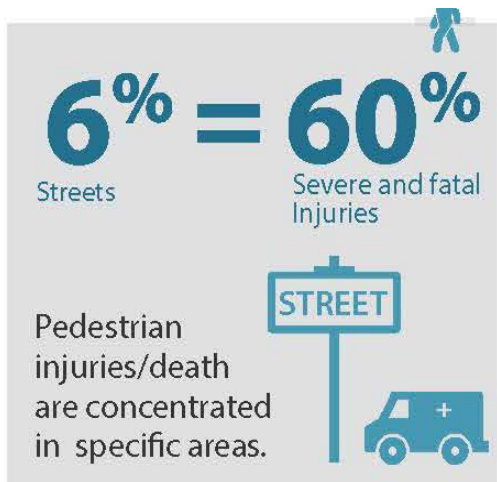
# WalkFirst Collision Profiles

## LEFT TURNS AT SIGNALIZED INTERSECTION Collision Profile Matches





# WalkFirst Findings



\*Injury statistics based on analysis of California Highway Patrol SWITRS data, 2007-2011, by SFDPH.



# WalkFirst Public Outreach

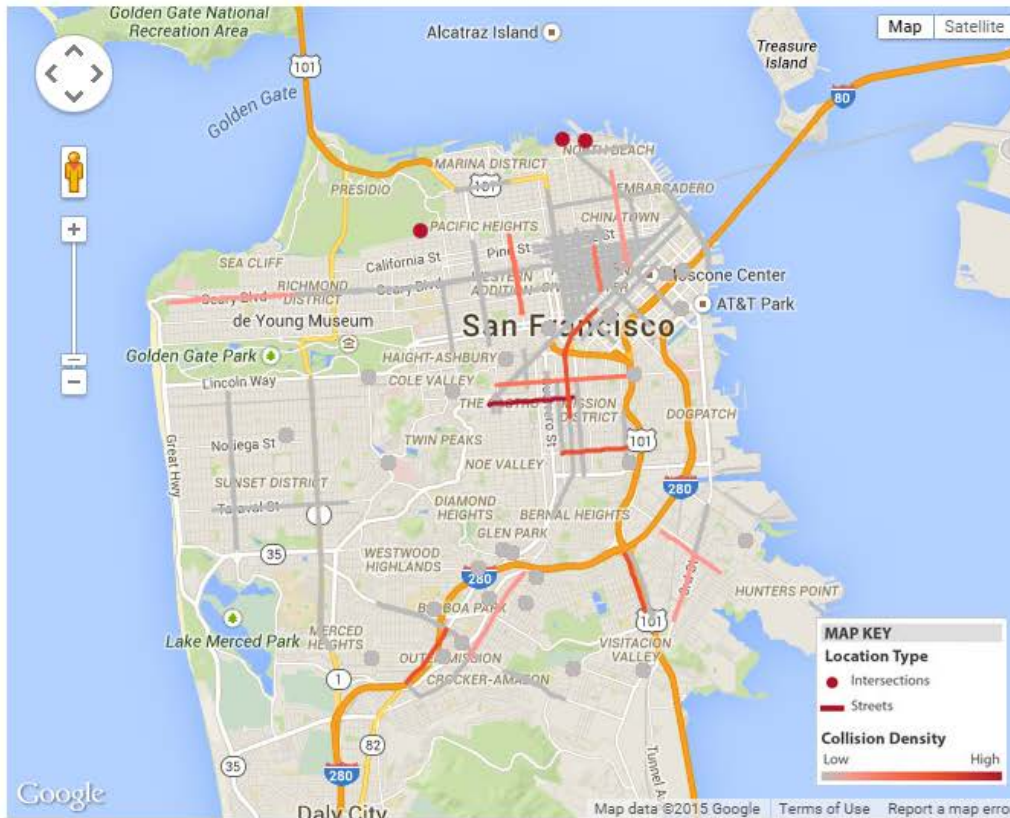


[Overview](#) | [Participate](#) | [Streets](#) | [Tools](#) | [Summary](#)



## Safety Streets

[View Larger Map](#)



[How We Got Here](#)

[View All Crash Profiles](#)

[Where's My Street?](#)

### Right Turn At Signalized Intersection

Collisions that occurred when a motorist made a right turn at a traffic signal.

### Relevant Tools

- [Automated Speed Enforcement](#)
- [Pedestrian Countdown Signals](#)
- [Radar Speed Display Sign / Portable Speed Trailer](#)
- [Road Diets](#)
- [Speed Humps](#)
- [Speed Tables & Raised Crosswalks](#)
- [Traffic Circles, Roundabouts & Chicanes](#)
- [Enforcement](#)

### Crash Profiles

- 01
- 02
- 03
- 04
- 05
- 06
- 07
- 08
- 09
- 10
- 11
- 12

# Vision Zero Coalition



SFGATE NEW!

FOOD LIVING TRAVEL REAL ESTATE CARS

## Walking tour highlights efforts to cut traffic fatalities in S.F.

By Michael Cabanatuan Updated 12:09 pm, Wednesday, April 15, 2015



SUSTAINABILITY INTERNATIONAL TECHNOLOGY SUPPLIERS DIRECTORY CONFERENCE NEWS CASE STUDIES

SUSTAINABILITY

## State and Federal Officials Study San Francisco's Vision Zero Efforts

SOURCE: SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY (SFMTA) APR 15, 2015



Mayor Edwin M. Lee welcomes state and federal officials.

Photo credit: SFMTA

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The San Francisco Municipal Transportation Agency (SFMTA) on April 14 joined the San Francisco Department of Public Health and the San Francisco County Transportation Authority to host federal and state transportation officials interested in San Francisco's Vision Zero efforts and successes.

With the goal of advancing pedestrian and bicyclist safety at the federal, state and local levels, senior officials from the National Highway Traffic Safety Administration, California Office of Traffic Safety, Federal Highway Administration and California State Transportation Agency, are today convening at San Francisco City Hall to learn about how San Francisco has been boosting street safety citywide in support of Vision Zero.

"I'm looking forward to hearing more about Vision Zero SF and how it is contributing to our nationwide efforts to save lives and reduce crashes on our roads. In particular, I'll be appreciating the city's efforts to



Photo: Michael Macor / The Chronicle

# After Vision Zero

- Shared information through TransBASE
  - Improved data reporting from SFPD
- Defensible recommendations to save lives
- Proactive approach for improving streets for safety
- Coalition for pedestrian improvements from transportation and community advocates



# Recent Highlights

- New funding for traffic safety improvements
  - 2014 Transportation Bond
    - passed with 71% of voter approval
    - \$200M for Vision Zero projects and programs
  - Additional City General Funds
- Focus on implementation and project delivery
  - Public facing Vision Zero project dashboard
- Participation from State and Federal partners
- On-going public dialogue on pedestrian safety

# Take Aways

- Use the power of data and advocates to share:
  - What it would take to end road fatalities
  - What public agencies are doing to address the challenge
- Have a platform to make a case for:
  - More funding
  - Better research
  - New ideas and approaches
  - Legislative hurdles
  - Program evaluation

# Thank you



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# Thank You!

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## ⇒ Archive at [www.pedbikeinfo.org/webinars](http://www.pedbikeinfo.org/webinars)

- Downloadable/streaming recording and presentation slides

## ⇒ Questions?

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