

North Central Texas  
Council of Governments

## BICYCLE AND PEDESTRIAN ADVISORY COMMITTEE

North Central Texas Council of Governments  
Virtual Teams Meeting  
February 16, 2022  
2:00 pm - 4:00 pm

<p><b>2:00 – 2:30</b> (30 min)</p>	<p><b>1. Welcome – Introductions</b> Discussion of the November 17, 2021, BPAC meeting summary, and introduction of BPAC Members.</p>	<p><b>Robert Caskey,</b> Chair, City of Frisco</p>
<p><b>2:30 – 3:00</b> (30 min)</p>	<p><b>2. Local Community Updates</b>  a. <a href="#">E-Scooter Policy Update</a> – Jessica Scott, City of Dallas  b. <a href="#">Northaven Trail Crosswalks</a> – Jared White, City of Dallas  c. <a href="#">Bike Lane Transitioning to Off-Street Trails</a> – James Fish, Mansfield  d. <a href="#">Bicycles and Pedestrians Accommodation on Bridges</a> – Amelia Hayes  e. <a href="#">Signing and Pavement Markings (SB 1055)</a> – Tim Wright, TxDOT  f. <a href="#">Upcoming Events</a> – Chad Marbut, BPAC Vice-Chair</p>	<p><b>Various BPAC Members and Guests</b></p>
<p><b>3:00– 3:15</b> (15 min)</p>	<p><b>3. Proven Safety Countermeasures 2021 Update</b> Federal Highway Administration’s Proven Safety Countermeasures 2021 Update in relation to Bicyclist and Pedestrians.</p>	<p><b>Amelia Hayes,</b> FHWA</p>
<p><b>3:15 – 3:25</b> (10 min)</p>	<p><b>4. Sidewalk Workplan and Pedestrian Scrambles</b> Overview of pedestrian scrambles in front of Denton’s County Courthouse and new sidewalks/ADA repairs that are being addressed comprehensively.</p>	<p><b>Nathan George,</b> City of Denton</p>
<p><b>3:25 – 3:55</b> (30 min)</p>	<p><b>5. NCTCOG Updates</b>  a. <a href="#">Regional Sidewalk Data</a> – Travis Liska  b. <a href="#">Monthly Trail Counts</a> – Daniel Snyder  c. <a href="#">Adopted Targets for Crash Performance Measure Update</a> – Daniel Snyder  d. <a href="#">2022 Transportation Alternatives Call for Projects</a> – Kevin Kokes  e. <a href="#">Competitive Infrastructure Funding Opportunities</a> – Kevin Kokes  f. <a href="#">Fort Worth to Dallas Regional Trail Update</a> – Kevin Kokes</p>	<p><b>Various NCTCOG Staff</b></p>
<p><b>3:55 – 4:00</b> (5 min)</p>	<p><b>6. Other Business/Open Discussion</b> This item provides an opportunity to bring items of interest before the Committee or propose future agenda items.</p>	<p><b>Robert Caskey,</b> Chair, City of Frisco</p>

### Next BPAC Meeting

The **next** meeting of the Bicycle and Pedestrian Advisory Committee is scheduled for **May 18, 2022**, from 2:00-4:00pm. The meeting is anticipated to be in person at NCTCOG in the Transportation Council Room.



**City of Dallas**

# Micromobility Update

NCTCOG BPAC  
February 16, 2022

Jessica Scott, AICP, LCI  
Bicycle & Micromobility Manager  
Department of Transportation

# Presentation Overview



**Purpose:** Brief the NCTCOG BPAC on the work plan and schedule for the City of Dallas Micromobility Working Group, and the effort to relaunch the Dockless Vehicle Program.

## Presentation Outline

- Background
- Overview of Outstanding Issues
- Micromobility Working Group Overview
- Work Plan and Schedule
- Next Steps



# Background



## 2018

- Dockless scooters first arrive in Dallas.
- City Council authorized the Dockless Vehicle Ordinance and amended Chapter 28 Sec. 28-41.1 to allow motor assisted scooters to be ridden in public rights-of-way

## 2020 – Spring/Summer

- COVID began exacerbating existing issues, as many younger residents turned to scooters for entertainment

## 2020 – Summer/Fall

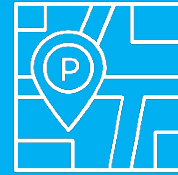
- At the request of downtown area business districts and DPD, all dockless vehicle permits were suspended and companies were asked to pull devices off streets indefinitely until program changes were made. Concerns were related to:
  - extensive sidewalk riding posing a threat to pedestrians.
  - wrong-way riding on downtown area streets.
  - scooters being used to escape police after committing crimes.
  - scooters blocking sidewalk access.



# Issues that Need to be Addressed



## 1- Permit Program (Chapter 43, Article X)



## 17 Issues

Broken down into  
three categories

## 2- Rider/Device Operation (Chapter 28, Sec 41.1.1)



## 3- General Program Management



# Micromobility Working Group Overview



**Working Group Mission Statement:** Review and provide guidance to Councilmembers and staff on proposed strategies, recommendations, and initiatives related to the Dockless Vehicle Program.

**Goal:** Relaunch the Dockless Vehicle Program in a way that is safe, equitable, orderly, and promotes broader City goals.

**Composition:** Working Group members were nominated by members of the City Council Transportation Committee, by Dallas DOT staff, and Mayor Pro Tem Chad West.



# Work Plan and Schedule



1. Working Group Kick-off (November 2021)
2. Confirm list of outstanding issues with Working Group (December 2021)
3. Discuss potential solutions for each issue and recommend solutions to be pursued (December 2021- February 2022)
- 4. Present recommended solutions to City Council Transportation and Infrastructure Committee (February 22, 2022)
5. Working Group review of proposed edits to City ordinance and any new materials (March 2022)
6. City Council briefing on proposed changes.





**City of Dallas**

# Micromobility Update

NCTCOG BPAC  
February 16, 2022

Jessica Scott, AICP, LCI  
Bicycle & Micromobility Manager  
Department of Transportation





Dallas Park & Recreation

## Northaven Trail Crosswalk Enhancements

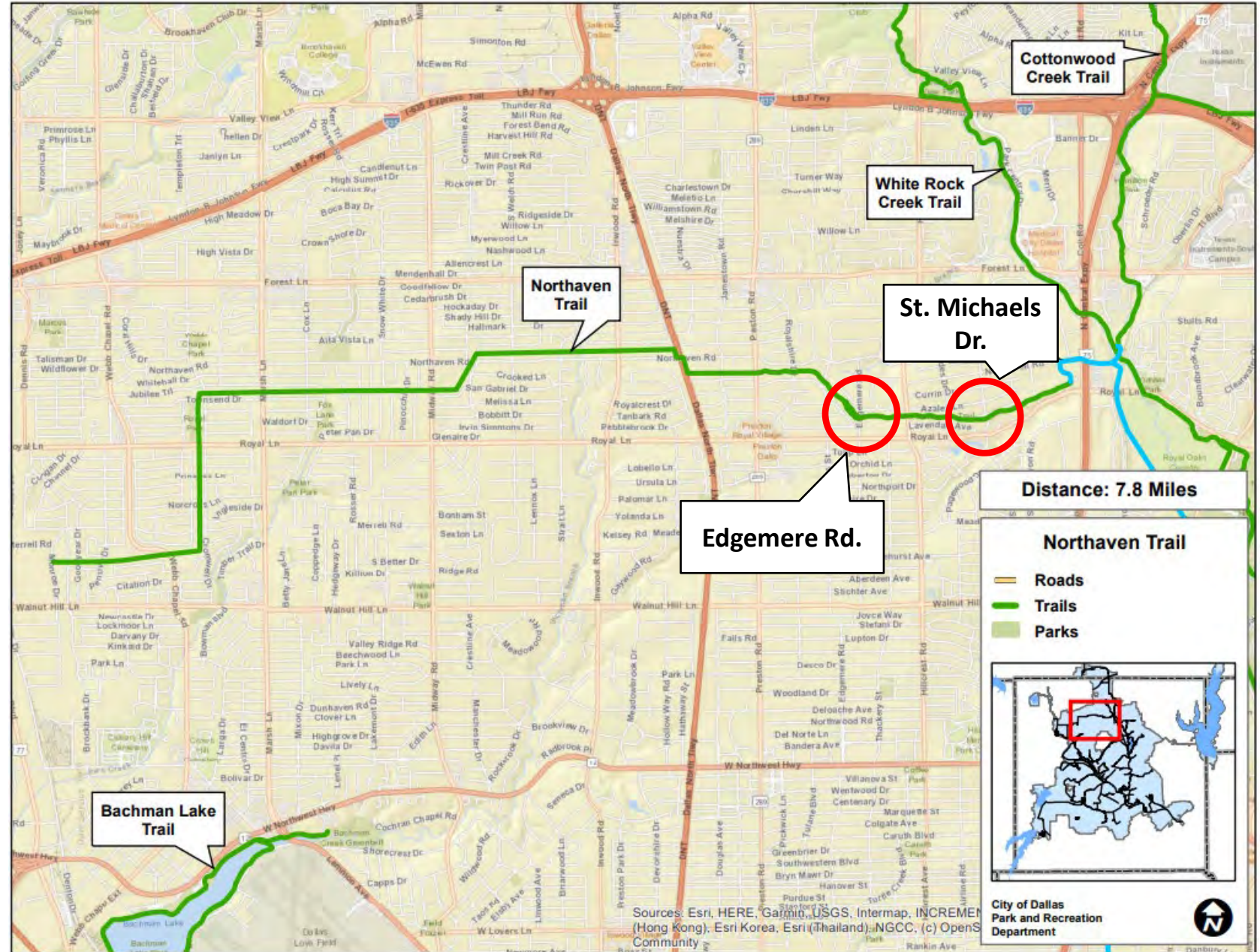
**Bicycle and Pedestrian Advisory Committee**  
**February 16, 2022**

# Northaven Trail Crosswalk Enhancements

To improve and draw attention to trail/roadway crossings

Two locations: St. Michaels Drive and Edgemere Road

Cost: Approx. \$7,300



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENTAL (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, Swatch Communications

# Northhaven Trail Crosswalk Enhancements: St. Michaels Drive



# Northhaven Trail Crosswalk Enhancements: Edgemere Road





Dallas Park & Recreation

Jared White

City of Dallas, Park and Recreation Department

[jared.white@dallascityhall.com](mailto:jared.white@dallascityhall.com)

**Bicycle and Pedestrian Advisory Committee**

**February 16, 2022**

# THE NORTH MAIN STREET IMPROVEMENTS PROJECT CITY OF MANSFIELD



# Project Overview

## 2013 Transportation Alternatives Project

The project consisted of improvements to the N Main Street connection into the Historic Downtown to become more pedestrian and bicycle friendly. This was achieved by narrowing the drive lanes and providing 12' wide pedestrian/bike lanes on each side of the roadway. The roadway crosses Walnut Creek and the Union Pacific Railroad with the length of the project being approximately 3100 LF .

FHWA Funding Received: \$924,221

City Funding Amount: \$1,710,037

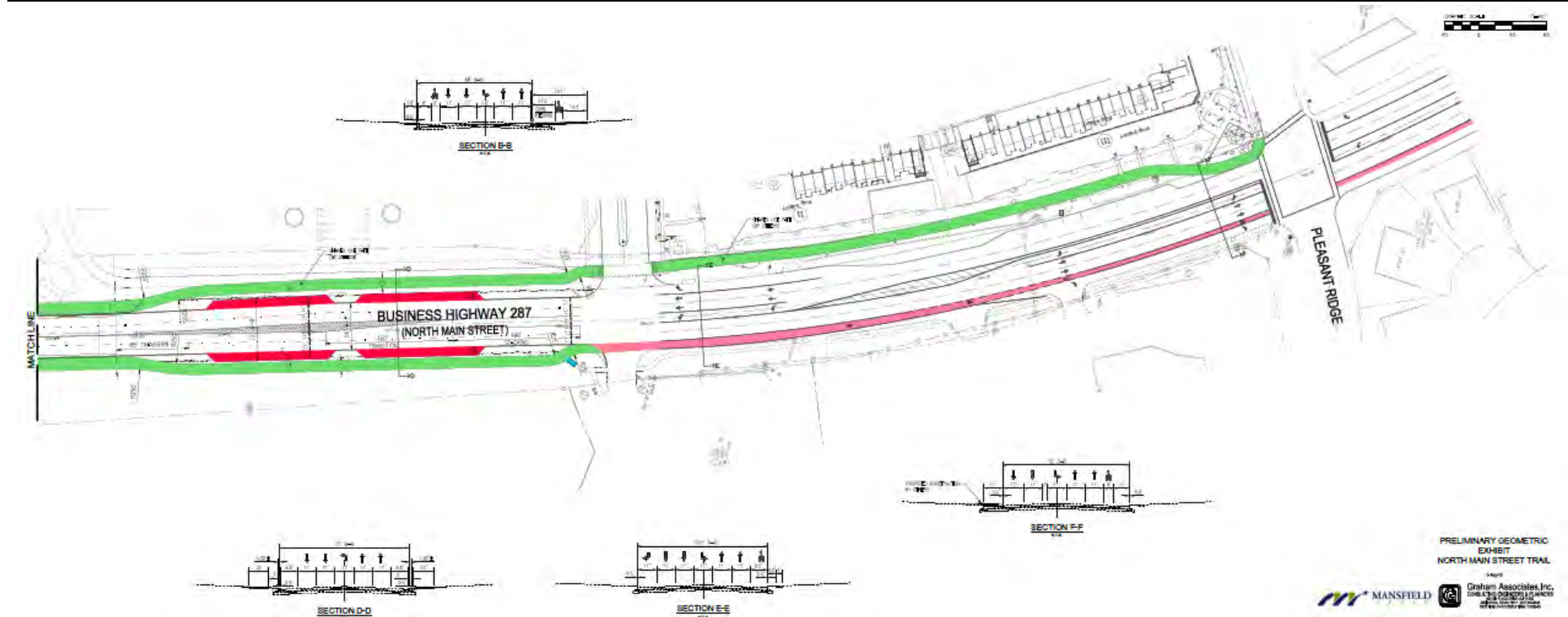
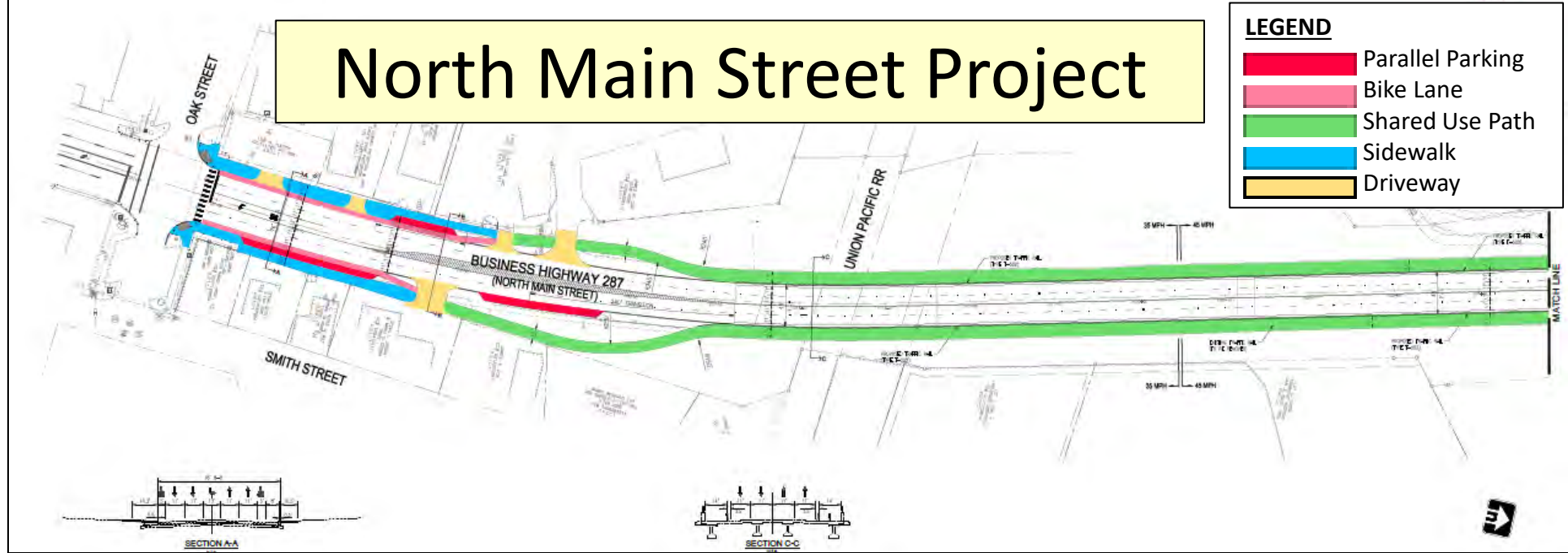
Total Project Cost: \$2,634,258

Project completed in Jan 2019

# North Main Street Project

## LEGEND

- Parallel Parking
- Bike Lane
- Shared Use Path
- Sidewalk
- Driveway



PRELIMINARY GEOMETRIC EXHIBIT  
NORTH MAIN STREET TRAIL







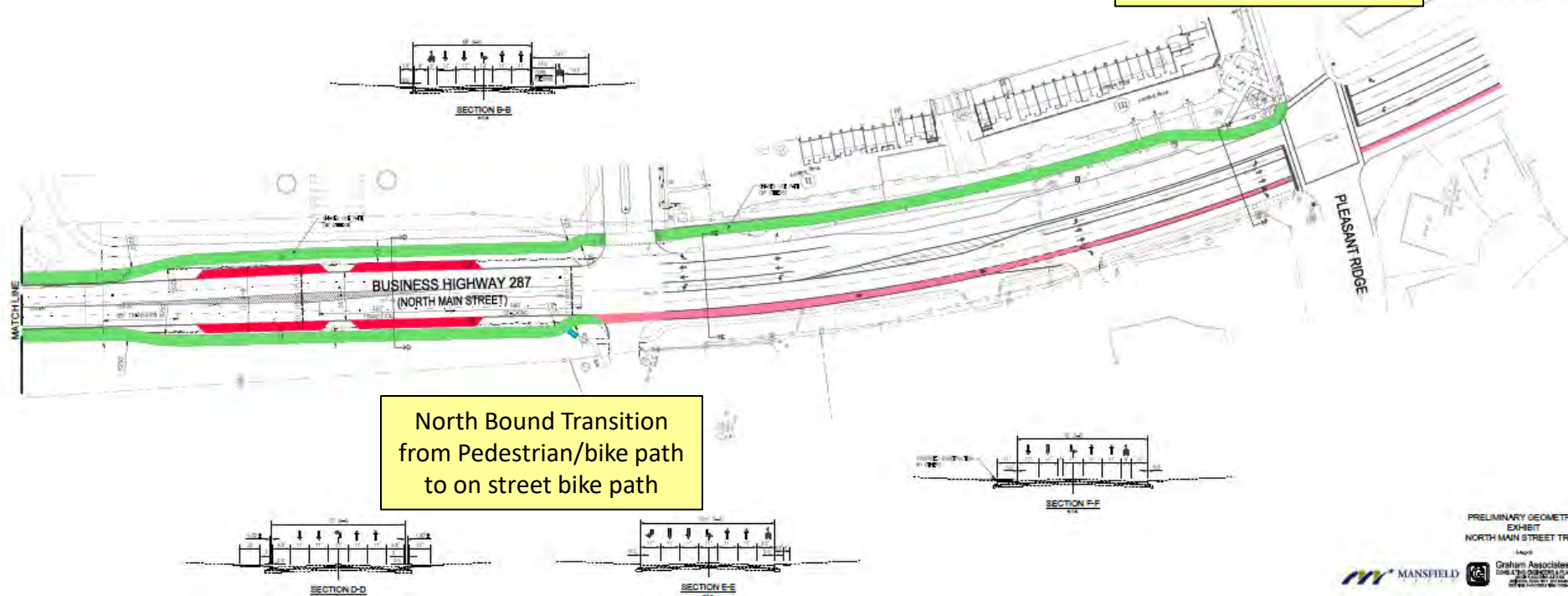
North Bound Bike Lane Transition to the shared use path



South Bound Bike Lane Transition from the shared use path to the Street

# Northern Reach Transitions

South Bound Transition  
to off street pedestrian  
bike path at the  
Intersection



North Bound Transition  
from Pedestrian/bike path  
to on street bike path



North Bound Bike Lane Transition from the shared use path to the Street

# Questions

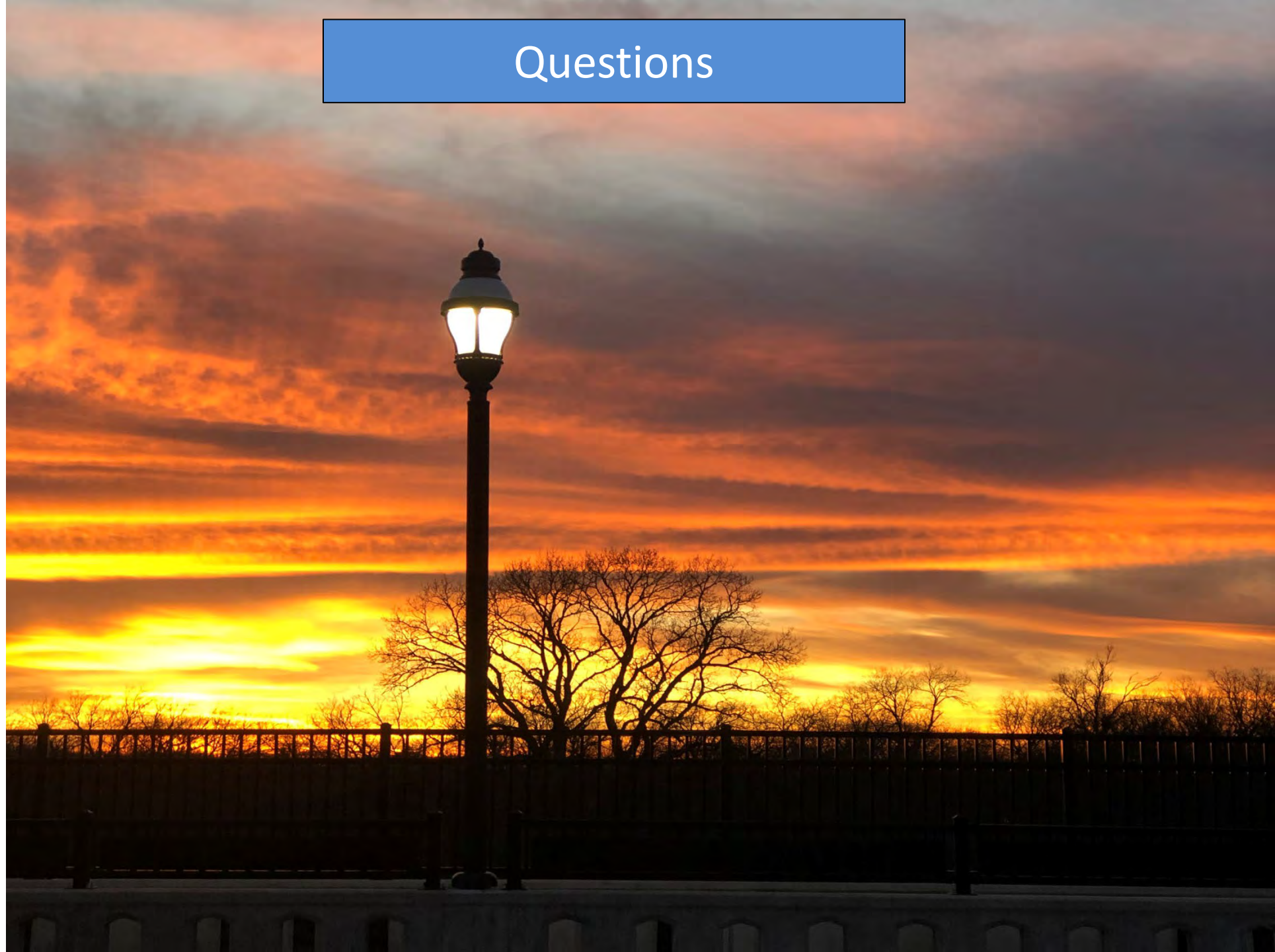




Image Source: [pedbikeimages.org](https://pedbikeimages.org) / Toole Design

## Announcements

- [AASHTO Issues Revised Pedestrian Facilities Guide](#)
- [Pedestrian and Bicycle Crash Analysis Tool, Version 3](#)
- [Federally Funded Bridge Repair/Replacement Includes Accommodations for Pedestrians and Bicyclists](#)



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# NEWS from THE LEAGUE

January 14, 2022

## BIKING AND WALKING ACCESS NOW REQUIRED ON BRIDGES!

ADVOCACY  
FEDERAL NEWS

by Caron Whitaker

The [U.S. Department of Transportation](#) (US DOT) issued guidance today on their bridge improvement program under the Bipartisan Infrastructure Law. Under the law anytime a state replaces or rehabilitates any highway bridge, the bridge must include biking and walking access.

There are only two exceptions to the rule:



## Infrastructure

### U.S. DOT Announces Historic Bridge Investment with a Focus on Safe Accommodation for Pedestrians and Bicyclists Under Bipartisan Infrastructure Law

The *U.S. Department of Transportation* launched the [Bridge Replacement, Rehabilitation, Preservation, Protection, and Construction Program \(Bridge Formula Program\)](#). Established through the Bipartisan Infrastructure Law, the Bridge Formula Program will provide over \$27 billion to States, the District of Columbia, Puerto Rico, and Tribes to improve an estimated

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## Federally Funded Bridge Repair/Replacement Includes Accommodations for Pedestrians and Bicyclists

The FHWA issued its [Bridge Formula Program \(BFP\) Implementation Guidance](#) for the Bipartisan Infrastructure Law. The Guidance includes accommodations for bicyclists and pedestrians, stating that “all projects with Federal financial participation (including under BFP) that replace or rehabilitate a highway bridge deck are required to provide safe accommodation of pedestrians or bicyclists, as applicable, on the bridge, when both of the following conditions are met: (1) the bridge is located on a highway on which pedestrians or bicyclists are allowed to operate at each end of the bridge, and (2) FHWA determines that safe accommodation can be provided at reasonable cost.” An [announcement from the USDOT](#) provides more information on the



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### Tags

- [Bipartisan Infrastructure Law](#)

# DOT Announces Historic Bridge Investment Under Bipartisan Infrastructure Law

Friday, January 14, 2022

More than \$27 billion to states and tribal transportation facilities to fix an estimated 15,000 bridges nationwide

FHWA 01-22

Contact: Nancy Singer

Tel: (202) 366-0660

WASHINGTON – The U.S. Department of Transportation today launched the historic Bridge Replacement, Rehabilitation, Preservation, Protection, and Construction Program (Bridge Formula Program), made possible by President Biden’s Bipartisan Infrastructure Law. The program, to be administered by the Federal Highway Administration, represents the single largest dedicated bridge investment since the construction of the interstate highway system – providing \$26.5 billion to states, the District of Columbia and Puerto Rico over five years and \$825 million for Tribal transportation facilities. The total amount that will be available to states, D.C. and Puerto Rico in Fiscal Year 2022 is \$5.3 billion along with \$165 million for tribes. The FHWA also published initial guidance on the new





U.S. Department  
of Transportation

**Federal Highway  
Administration**

# Memorandum

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Subject: **ACTION:** Bridge Formula Program  
(BFP) Implementation Guidance

Date: January 14, 2022

From: Hari Kalla *Hari Kalla*  
Associate Administrator, Office of  
Infrastructure

In Reply Refer To:  
HIF-1

To: Division Administrators

## **Purpose**

This memorandum provides background, guidance on Administration priorities and use of Federal-aid highway formula funding, eligibilities, fund information, and definitions for the implementation of the Bridge Replacement, Rehabilitation, Preservation, Protection, and Construction Program (hereafter, Bridge Formula Program (BFP)) as established in title VIII of division J of the Bipartisan Infrastructure Law, enacted as the Infrastructure Investment and Jobs

## **Accommodation for Bicyclists and Pedestrians**

BFP funding is subject to requirements for accommodations for bicycles and pedestrians pursuant to 23 U.S.C. 217(e). Under this provision, all projects with Federal financial participation (including under BFP) that replace or rehabilitate a highway bridge deck are required to provide safe accommodation of pedestrians or bicyclists, as applicable, on the bridge, when both of the following conditions are met: (1) the bridge is located on a highway on which pedestrians or bicyclists are allowed to operate at each end of the bridge, and (2) FHWA determines that safe accommodation can be provided at reasonable cost.

The first step in this process is to assess whether the bridge is located on a highway on which pedestrians or bicyclists are allowed to operate at each end of the bridge. If that is the case, in making a determination as to whether safe accommodation can be provided at a reasonable cost FHWA will rely on its bicycle and pedestrian travel accommodation policy ([https://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/guidance/design.cfm](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design.cfm)); the FHWA will presume, that safe accommodation for bicyclists and pedestrians can be provided at reasonable cost for all BFP projects absent an affirmative showing by the project sponsor that the cost of such accommodation would exceed twenty percent of the cost of the larger transportation project. For instances where such accommodation exceeds twenty percent, the addition of bicyclist and pedestrian accommodation is not required, but FHWA encourages States to consider providing for such accommodation.

## Policy Statement

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:

- bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.
- the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.
- where sparsity of population or other factors indicate an absence of need. For example, the Portland Pedestrian Guide requires "all construction of new public streets" to include sidewalk improvements on both sides, unless the street is a cul-de-sac with four or fewer dwellings or the street has severe topographic or natural resource constraints.

2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day, as in States such as Wisconsin. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

Rumble strips are not recommended where shoulders are used by bicyclists unless there is a minimum clear path of four feet in which a bicycle may safely operate.

3. Sidewalks, shared use paths, street crossings (including over- and undercrossings), pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways shall be designed, constructed, operated and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.

4. The design and development of the transportation infrastructure shall improve conditions for bicycling and walking through the following additional steps:

Amelia (Millie) Hayes, P.E., PTOE, RSP<sub>21</sub>

[amelia.hayes@dot.gov](mailto:amelia.hayes@dot.gov)



Source: Fotosearch

<https://safety.fhwa.dot.gov/>

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

<https://safety.fhwa.dot.gov/fas/>

[https://safety.fhwa.dot.gov/zerodeaths/zero\\_deaths\\_vision.cfm](https://safety.fhwa.dot.gov/zerodeaths/zero_deaths_vision.cfm)



# TEXAS DEPARTMENT OF TRANSPORTATION

**To:** District Engineers

**From:** Michael A. Chacon, P.E.  
Director, Traffic Safety Division

DocuSigned by:

*Michael A. Chacon, P.E.*

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**Subject:** Signing and Pavement Marking Updates Related to SB 1055 Pedestrian Safety

In response to SB 1055 (effective date September 1, 2021), TRF is offering the following guidance related to pedestrian related traffic control devices. SB 1055 amended Transportation Code to add that the operator of a vehicle must stop in addition to yield the right-of-way to pedestrians. Impacted pedestrian signing is revised from YIELD TO PEDESTRIANS to STOP FOR PEDESTRIANS and associated yield lines are revised to stop line pavement markings. Applicable signs and pavement markings are detailed in the attached table.








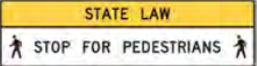


The revised signs and markings should be used in PS&E plans as soon as possible. Signs and pavement markings that are in the field should be updated through regular maintenance cycles.







We have revised the SHSD sign details for the STOP FOR PEDESTRIANS signs and these revisions will be incorporated into the next SHSD update. We have also created the SignCAD templates to help facilitate sign design. Please access the [Stop for Pedestrian Signs – August 2021](#) folder on the TRF SharePoint site.

The SignCAD templates provided may also be added to the Favorites tab in SignCAD under “Add to Favorites” or C:\ProgramData\SignCAD\Favorites\Texas. If for any reason there is a SignCAD upgrade version, you will have to do this again.

If you have any questions, please contact Rafael Riojas.

**CC:**

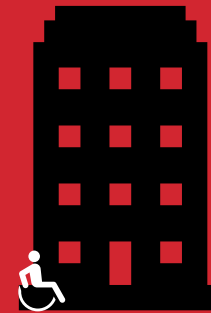
No Longer Recommended for Crosswalks	Follows SB 1055 <i>See Federal MUTCD for these signs.</i>	See References & Guidance TMUTCD: <a href="#">Link</a> MUTCD: <a href="#">Link</a>
 <p>R1-5</p>  <p>R1-5a</p>	 <p>R1-5b</p>  <p>R1-5c</p>	<p>TMUTCD &amp; MUTCD</p> <ul style="list-style-type: none"> <li>Section 2B.11</li> <li>Section 3B.16</li> <li>Figure 3B-17</li> </ul> <p>TxDOT Standards</p> <ul style="list-style-type: none"> <li>PM(4)-20</li> </ul> <p>FHWA Interpretation (Guidance)</p> <ul style="list-style-type: none"> <li><a href="#">Click Here</a></li> </ul>
 <p>R1-6</p>	 <p>R1-6a</p>	<p>TMUTCD &amp; MUTCD</p> <ul style="list-style-type: none"> <li>Figure 2B-2</li> <li>Section 2B.12</li> </ul>
 <p>R1-9</p>	 <p>R1-9a</p>	<p>TMUTCD &amp; MUTCD</p> <ul style="list-style-type: none"> <li>Figure 2B-2</li> <li>Section 2B.12</li> <li>Section 7B.12</li> </ul>
 <p>R10-15</p>	 <p>R10-15a</p>	<p>TMUTCD</p> <ul style="list-style-type: none"> <li>Figure 2B-27</li> <li>Section 2B.53</li> </ul> <p>FHWA Interpretation (Guidance)</p> <p><a href="#">Click Here</a></p>

<p>No Longer Recommended for Crosswalks</p>	<p>Follows SB 1055 <i>See Federal MUTCD for these signs.</i></p>	<p>See References &amp; Guidance TMUTCD: <a href="#">Link</a> MUTCD: <a href="#">Link</a></p>
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>R1-6 with S4-3P plaque</p> </div> <div style="text-align: center;"> <p>OR</p>  <p>R1-6b</p> </div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>R1-6a with S4-3P plaque</p> </div> <div style="text-align: center;"> <p>OR</p>  <p>R1-6c</p> </div> </div>	<p>TMUTCD &amp; MUTCD</p> <ul style="list-style-type: none"> <li>• Section 7B.11</li> <li>• Section 7B.12</li> <li>• Figure 7B-6</li> </ul>
<p><b>Figure 3B-17 &amp; PM(4) Midblock Diagram</b> <i>Use of Striping</i></p>		<p>TMUTCD</p> <ul style="list-style-type: none"> <li>• Section 3B.16</li> <li>• Figure 3B-17</li> </ul>
 <p>Yield Line**</p>	 <p>Stop Line**</p>	<p>TxDOT Standards</p> <ul style="list-style-type: none"> <li>• PM(4)-20</li> </ul>
<p>**This is only intended to apply to Figure 3B-17 &amp; PM(4) in reference to midblock crosswalks, when striping is used. If striping is used, it should be a stop bar to correlate with the stop here for pedestrians signage (R1-5b or R1-5c) which should now be used in-lieu of the yield option.</p>		

# UPCOMING EVENTS AND TRAINING

**Bicycle and Pedestrian Advisory Committee**  
**February 16, 2022**

**Chad Marbut, BPAC Vice-Chair**







# Lifesavers National Conference on Highway Safety Priorities

**March 13–15**

**Chicago, IL**

[lifesaversconference.org](http://lifesaversconference.org)

**SAVE THE DATE!**



**2022**

**NATIONAL BIKE SUMMIT**

**MARCH 27-30, 2022**

**ONLINE & WASHINGTON, DC**

# Texas Trails and Active Transportation Conference

**April 27-29, 2022**

\$250 (Early Bird Price, \$350 after February 27)

**REGISTER:**

[whova.com/portal/registration](https://whova.com/portal/registration)



**SAVE  
THE  
DATE!**

# National Planning Conference 2022



**April 30–May 3, 2022  
San Diego, CA**

**American Planning Association**

**SAVE  
THE  
DATE!**

# National Planning Conference Online 2022

**May 18-20, 2022**

The in-person and online conferences will  
each have unique content and sessions.



# American Planning Association

# Designing Pedestrian Facilities for Accessibility (Virtual Workshop)

May 2022

Registration and  
Workshop Details  
COMING SOON

Facilitated by FHWA Resource Center

Anticipated  
PE Engineering Continuing Education  
and AICP Certification Maintenance

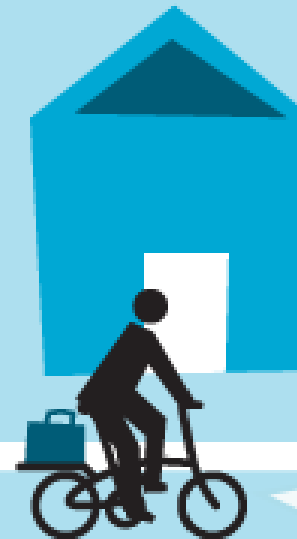
# Bike-to-Work Day

## May 20, 2022

MAY IS  
BIKE  
MONTH



I RIDE BECAUSE IT  
MAKES MY BUSINESS  
RUN BETTER.



I RIDE TO TURN  
MY COMMUTE  
INTO A WORKOUT.



#BIKEMONTH [BIKELEAGUE.ORG/BIKEMONTH](https://bikeleague.org/bikemonth)

# Master Plans Underway or Anticipated in 2022

- Carrollton Trails Master Plan (expected February 2022)
- Flower Mound Parks and Trails Master Plan (expected March 2022)
- City of Denton Mobility Plan (expected spring 2022)
- McKinney Trails Master Plan (expected spring 2022)
- City of Ennis Parks Master Plan (expected June 2022)
- Highland Village Trails Master Plan (expected fall 2022)
- Cedar Hill Trails Master Plan (expected fall 2022)
- Richardson Active Transportation Plan (expected fall 2022)
- City of Dallas Bikeways Master Plan (expected late 2022)

## **Recently Completed**

Southlake Mobility Master Plan  
(December 2021 Adoption)



# Other Events or Training?

For any suggestions/topics for future training opportunities that NCTCOG can help coordinate or promote, please contact:

**Bobby Kozub**  
[rkozub@nctcog.org](mailto:rkozub@nctcog.org)



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# Proven Safety Countermeasure Initiative 2021 Update

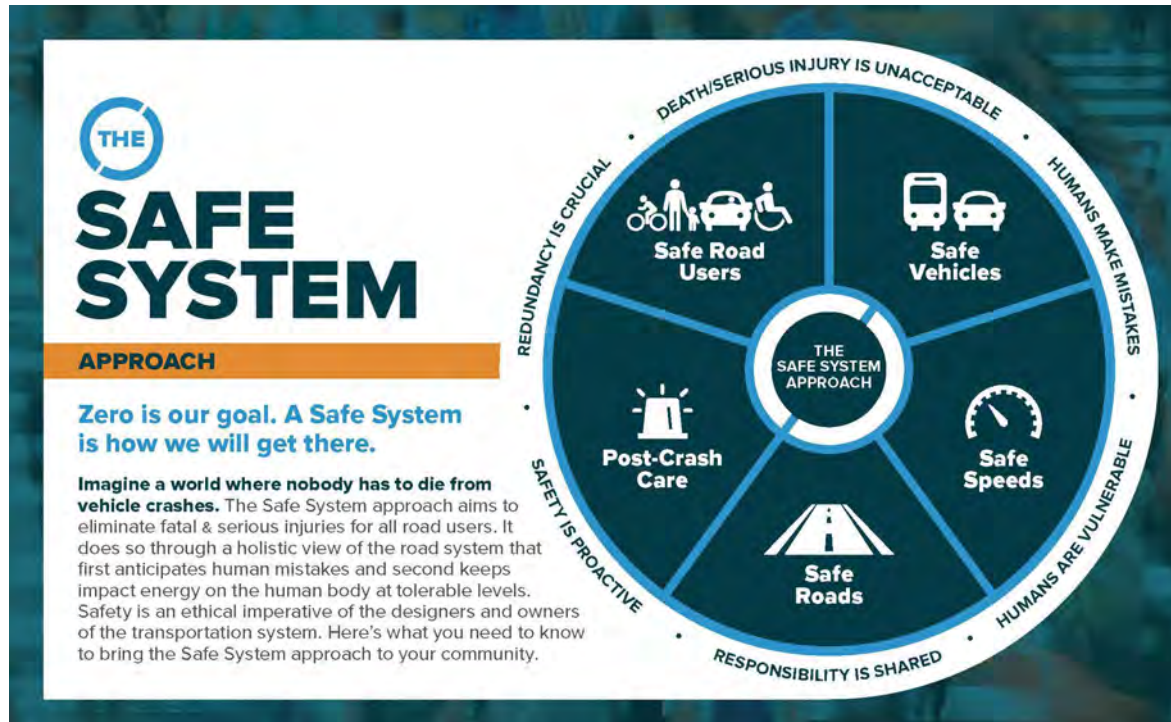
Source: Fotosearch

# History of the Proven Safety Countermeasures



- Launched in 2008
- Updated in 2012 and 2017
- 20 countermeasures
- Selection Criteria
  - Proven effective
  - Not widespread deployment
- Guidance and Technical Assistance

Source: FHWA



Source: FHWA

# PSCs

## Emphasize Our Priorities

- Complete Streets
- Safe System Approach
- Speed Management
- Equity
- Climate



## Existing PSCs

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

# New PSCs



**Rectangular Rapid Flashing Beacons (RRFBs)**



**Lighting (Intersection and Segments)**



**Crosswalk Visibility Enhancements**



**Pavement Friction Management (CPFM and HFST)**



**Wider Edge Lines**



**Bicycle Lanes**



**Variable Speed Limits**



**Speed Safety Cameras**



**Appropriate Speed Limits for All Road Users**

# Rectangular Rapid Flashing Beacons (RRFBs)



# Rectangular Rapid Flashing Beacons (RRFBs)

- Pedestrian-actuated conspicuity enhancement
- Supplements Pedestrian, School, or Trail Crossing post-mounted warning signs
- Solar-powered or hard wired



Source: Toole Design Group



# Rectangular Rapid Flashing Beacons (RRFBs)

- Used at uncontrolled, marked crosswalks
- Effectiveness
  - 47% reduction in pedestrian crashes
  - Up to 98% motorist yielding rate
  - For best locations for installation see Table 1 of *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① 5 7 9	① 5 7 9	① 3 4 5	① 5 7 9	① 5 7 9	① 4 5 7 9	① 5 7 9	① 5 7 9
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6	① 5 6 7 9	① 5 6 7 9	① 3 4 5 6	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9
4+ lanes with raised median (2 or more lanes in each direction)	① 5 7 8 9	① 5 7 8 9	① 5 7 8 9	① 5 7 8 9	① 5 7 8 9	① 5 7 8 9	① 5 7 8 9	① 5 7 8 9	① 5 7 8 9
4+ lanes w/o raised median (2 or more lanes in each direction)	① 5 6 7 8 9	① 5 6 7 8 9	① 5 6 7 8 9	① 5 6 7 8 9	① 5 6 7 8 9	① 5 6 7 8 9	① 5 6 7 8 9	① 5 6 7 8 9	① 5 6 7 8 9

Given the set of conditions in a cell,

- \* Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.\*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

- 1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning sign
- 2 Raised crosswalk
- 3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
- 4 In-Street Pedestrian Crossing sign
- 5 Curb extension
- 6 Pedestrian refuge island
- 7 Rectangular Rapid-Flashing Beacon (RRFB)\*\*
- 8 Road Diet
- 9 Pedestrian Hybrid Beacon (PHB)\*\*

Source: FHWA

# Rectangular Rapid Flashing Beacons (RRFBs)

- **For any approach, two RRFBs are required, one on left-side and one on right-side of roadway**
  - If used on divided highway, should be installed on left-side of median if practical, rather than far left-side of roadway
- **Flash period initiated each and every time a pedestrian is detected**



Source: Peter Eun

# Crosswalk Visibility Enhancements





# Crosswalk Visibility Enhancements

- **High visibility crosswalks**
  - Consider at all midblock and uncontrolled crossings
  - Use inlay or thermoplastic tape (instead of paint or brick)
  - Reduce pedestrian injury crashes up to 40%
- **Improved intersection lighting**
  - Place luminaires in forward locations
  - Reduce pedestrian crashes up to 42%



Source: FHWA

# Crosswalk Visibility Enhancements

- **Advance Yield or Stop signage and markings**
  - 20-50 feet in advance of marked crosswalk
  - Stop bar or Yield markings
  - Better sight lines to reduces multi-threat crashes
- **In-Street Pedestrian Sign**
  - Reminds drivers of state law
  - Secure to the pavement



Source: Peter Eun

# Bicycle Lanes



# Bicycle Lanes

- New or existing roadways
- Consider separated lanes
- Use *Bikeway Selection Guide* to choose lane design



Source: FHWA



# Bicycle Lanes

- **Effectiveness**

- Up to 57% reduction in total crashes on 4-lane undivided collectors and local roads
- Up to 30% reduction in total crashes on 2-lane undivided collectors and local roads



Source: FHWA

# New PSC Resources





### Speed Safety Cameras

VIEW THE NEW COUNTERMEASURE!

## Proven Safety Countermeasures

FHWA's Proven Safety Countermeasures initiative (PSCI) is a collection of countermeasures and strategies effective in reducing roadway fatalities and serious injuries on our Nation's highways. Transportation agencies are strongly encouraged to consider widespread implementation of PSCs to accelerate the achievement of local, State, and National safety goals.

PROVEN SAFETY COUNTERMEASURES (PSC) TOOLS **NEW**

**FILTER TOOL »**  
Filter countermeasures by focus area, crash type, problem identified, and area type.

SEARCH PSCs

### SPEED MANAGEMENT



Speed Safety Cameras



Variable Speed Limits



Appropriate Speed Limits for All Road Users

### ROADWAY DEPARTURE



Wider Edge Lines



Enhanced Delineation for Horizontal Curves



Longitudinal Bumble Strips and Stripes



SafetyEdge 2.0



Roadside Design Improvements at Curves



Median Barriers

Proven Safety Countermeasures Filter Tool

All 28 PSCs are listed at the bottom of the page in alphabetical order. Answer one or more of the following questions to obtain a tailored listing of potential PSCs for the location of interest. Users may select multiple answers for each question. After checking the desired boxes, click "Apply Filters," then the list of PSCs will update at the bottom of the page to match the query. Click "Clear Form" to remove all filters and return to the default display of all 28 PSCs. Select a countermeasure name to learn more including a description, safety effectiveness, context, application, and considerations for implementation.

<p><b>What type of area is the roadway located?</b></p> <input type="checkbox"/> Urban <input type="checkbox"/> Suburban <input type="checkbox"/> Rural	<p><b>What is the functional classification of the roadway?</b></p> <input type="checkbox"/> Freeway <input type="checkbox"/> Highway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input type="checkbox"/> Local
<p><b>Which focus area is being addressed?</b></p> <input type="checkbox"/> Roadway Departure <input type="checkbox"/> Intersection <input type="checkbox"/> Pedestrian <input type="checkbox"/> Bicyclist <input type="checkbox"/> Speed Management	<p><b>What is vehicular volume in Average Annual Daily Traffic (AADT) along the major roadway?</b></p> <input type="checkbox"/> Low (<2,000) <input type="checkbox"/> Medium (2,000-15,000) <input type="checkbox"/> High (>15,000)
<p><b>What problem is being addressed?</b></p> <input type="checkbox"/> Inadequate Visibility, Conspicuity, or Sight Distance <input type="checkbox"/> Excessive Vehicular Conflicts <input type="checkbox"/> Congestion <input type="checkbox"/> Excessive Speeds <input type="checkbox"/> Non-Compliance (yielding right-of-way) <input type="checkbox"/> No Separation of Users <input type="checkbox"/> Driver Inattention (distracted/drowsy) <input type="checkbox"/> Driver impairment (alcohol/drugs)	<p><b>What specific crash types are being targeted at the location?</b></p> <input type="checkbox"/> Angle <input type="checkbox"/> Left-Turn <input type="checkbox"/> Right-Turn <input type="checkbox"/> Rear End <input type="checkbox"/> Pedestrian/Bicyclist <input type="checkbox"/> Head On <input type="checkbox"/> Run-Off-Road/Single Vehicle <input type="checkbox"/> Sideswipe, same direction <input type="checkbox"/> Sideswipe, opposite direction <input type="checkbox"/> Wet <input type="checkbox"/> Nighttime <input type="checkbox"/> Speed-related <input type="checkbox"/> Rollover <input type="checkbox"/> Fixed-Object

PROVEN SAFETY COUNTERMEASURES (PSC) TOOLS **NEW**

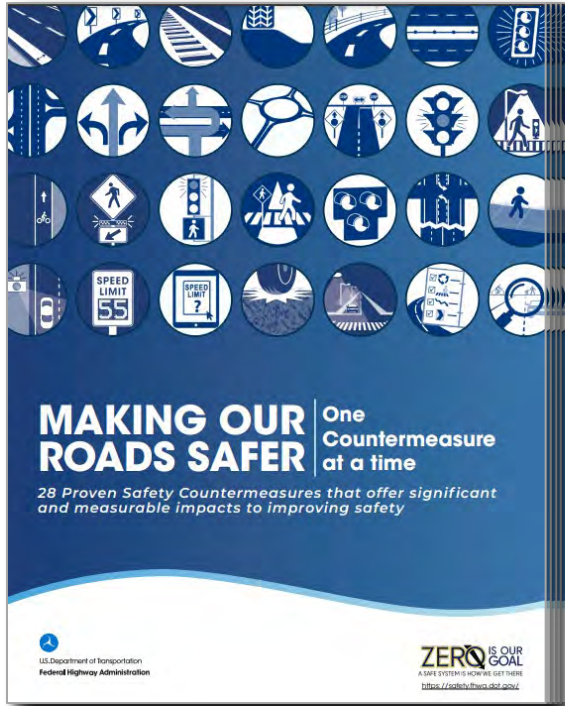
**FILTER TOOL »**  
Filter countermeasures by focus area, crash type, problem identified, and area type.

SEARCH PSCs

# Updated Site

- New look/branding
- New search and filter tool
- Focus areas:
  - Speed Management
  - Intersections
  - Roadway Departures
  - Ped/Bicyclist
  - Crosscutting

Source: FHWA



# Other Resources

- Overview Flyer
- PSC Booklet
- Videos
  - PSC Overview
  - Lighting

**2021 PSC ROLLOUT** NEW

[RECORDED WEBINAR »](#)  
Listen to the webinar highlighting the 2021 updates and additions to the PSC.

[OVERVIEW FLYER »](#)  
Download the 2-page PSC overview flyer.

**GUIDANCE MEMOS** NEW

Read the Guidance Memoranda on Promoting the Implementation of Proven Safety Countermeasures.

[2021](#) | [2017](#) | [2012](#) | [2008](#)

[WEBINAR TRANSCRIPT »](#)  
Read a transcript of the PSC webinar recording.

[PROVEN COUNTERMEASURES BOOKLET »](#)  
Download a comprehensive booklet on all 28 proven countermeasures.

Source: FHWA

Amelia (Millie) Hayes, P.E., PTOE, RSP<sub>21</sub>

[amelia.hayes@dot.gov](mailto:amelia.hayes@dot.gov)



Source: Fotosearch

<https://safety.fhwa.dot.gov/>

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

<https://safety.fhwa.dot.gov/fas/>

[https://safety.fhwa.dot.gov/zerodeaths/zero deaths vision.cfm](https://safety.fhwa.dot.gov/zerodeaths/zero_deaths_vision.cfm)



# Sidewalk Workplan & Pedestrian Scrambles



Capital Projects/Engineering Department

Nathan George, AICP

Sr Planner: Bicycle, Pedestrian & ADA Coordinator

[nathaniel.george@cityofdenton.com](mailto:nathaniel.george@cityofdenton.com)

# Pedestrian Scrambles



Capital Projects/Engineering Department

# Pedestrian Scramble "All Way Crossings"

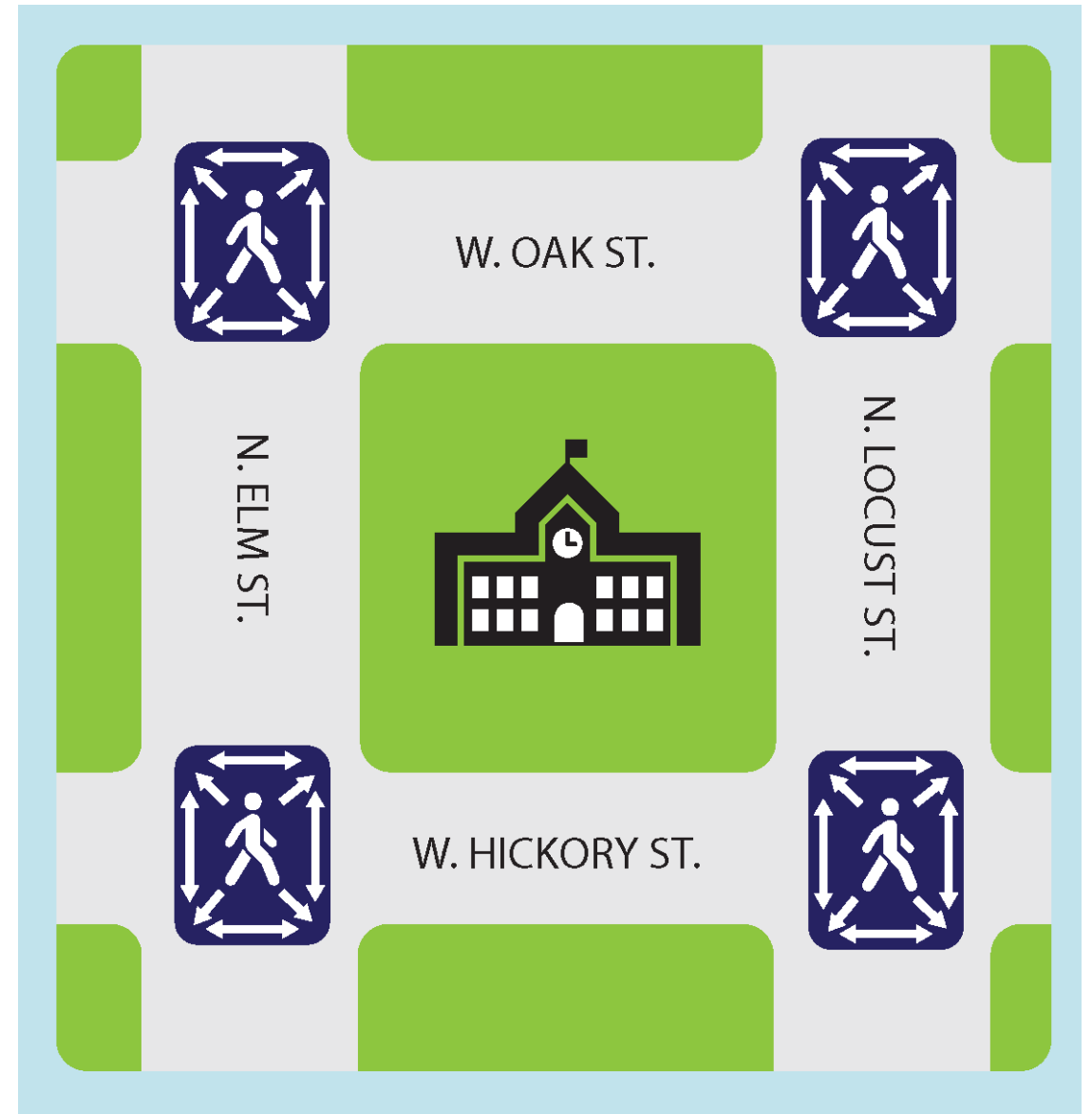
Vision: October 2019

Pilot Project: November 2019

6-month Monitoring & Public Input

Decision: July 2020

Design: Ongoing (60%)



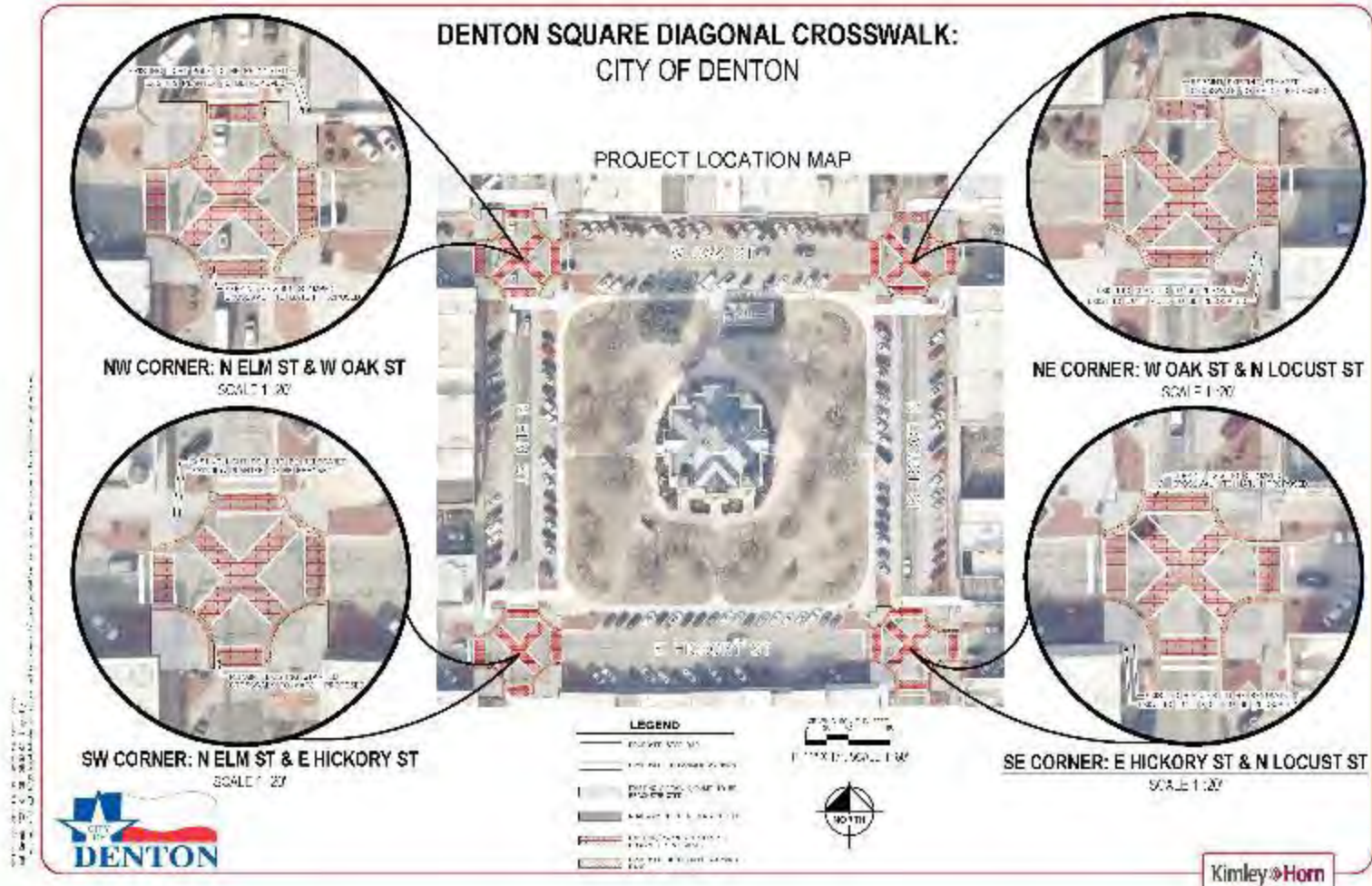


# Step 1: Pedestrianize the Square

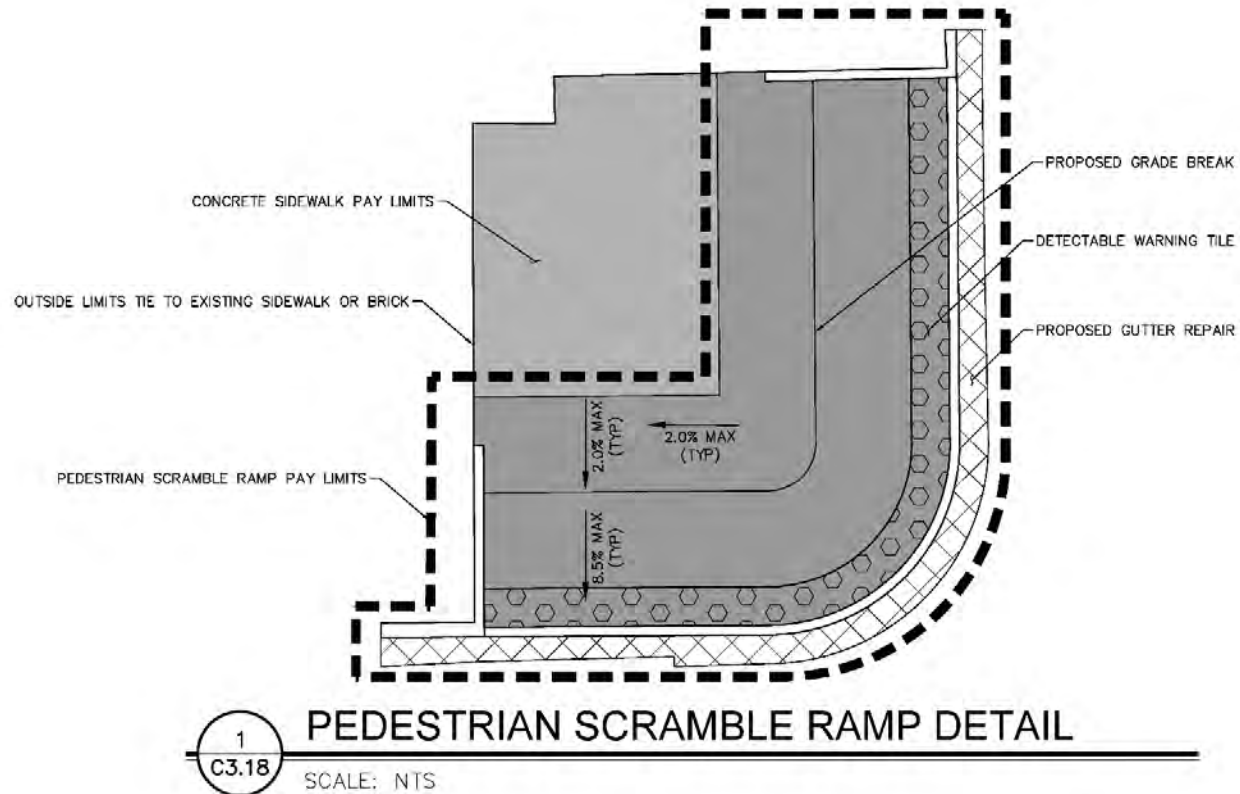
Pilot implemented an exclusive pedestrian phase:

- All vehicular traffic stops, allowing pedestrians to cross in any direction
- Prohibit turns on red

Diagonal Crossings are permitted, but facilities are not provided



# Step 2: Upgrade the Intersections



Making the operation permanent requires construction of facilities to address accessibility, provide diagonal crossings and associated signal equipment.

# The Road User

A fundamental assumption of the pedestrian scramble signal operation:

Users will not encounter conflicts



# An Opportunity, or a Challenge

At intersections of one-way streets, pedestrians can still safely cross one leg of the intersection without conflict.



# Serving Bicyclists

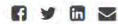


# Current Status & More Details



Home » Construction and Improvement Projects » All-Way Crossing Downtown Pedestrian Safety Improvement Project

## All-Way Crossing Downtown Pedestrian Safety Improvement Project



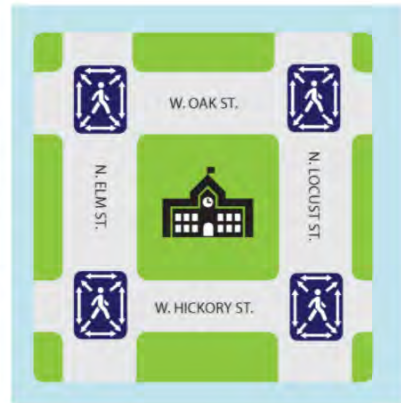
### Latest News on the All-Way Crossing Downtown Pedestrian Safety Project

In November 2019, a pedestrian-only traffic phase known as an all-way crossing was implemented at four Downtown Denton intersections for a planned pilot project through spring 2020. The project tested the effectiveness of stopping all vehicle traffic when a walk signal is activated, allowing pedestrians to safely and simultaneously cross an intersection in any direction.

The all-way crossing pilot project is now complete. On March 16, 2021, the Denton City Council approved the Professional Service Agreement with Kimley-Horn and Associates for the design of the All-Way Crossings Pedestrian Improvements Project.

The pilot project will now be considered for full implementation at the downtown square intersections with curb enhancements, ADA improvements, and pavement striping.

Before the design is complete and implementation schedule is finalized, City staff hosting a virtual community meeting with community members on Thursday, April 22 at 11am and 6pm, to provide an additional feedback opportunity and update on the next



### Learn More at Improving Denton



### Who's Listening

**Robin Davis**  
Construction Projects Manager



Email [Robin.Davis@cityofdenton.com](mailto:Robin.Davis@cityofdenton.com)

## Project Timeline

- Project Under Design with Kimley-Horn and Associates Q2 2021\***

Tentative timeline based on calendar year divided into four quarters, often abbreviated as Q1, Q2, Q3, and Q4.

  - First quarter, Q1: 1 January – 31 March (90 days or 91 days in leap years)
  - Second quarter, Q2: 1 April – 30 June (91 days)
  - Third quarter, Q3: 1 July – 30 September (92 days)
  - Fourth quarter, Q4: 1 October – 31 December (92 days)
- 90% Design Community Meetings Q2 2022\***

Tentative timeline based on calendar year divided into four quarters, often abbreviated as Q1, Q2, Q3, and Q4.
- Final Design of All-Way Crossing Intersections Completed Q2 2022**

Tentative timeline based on calendar year divided into four quarters, often abbreviated as Q1, Q2, Q3, and Q4.
- Advertise for Construction Q2 2022\***

Tentative timeline based on calendar year divided into four quarters, often abbreviated as Q1, Q2, Q3, and Q4.
- Begin Construction - Issue Notice to Proceed (NTP) Q3 2022\***

Tentative timeline based on calendar year divided into four quarters, often abbreviated as Q1, Q2, Q3, and Q4.

Project page: <https://www.discussdenton.com/allwaycrossing>



# Sidewalk Workplan



Capital Projects/Engineering Department

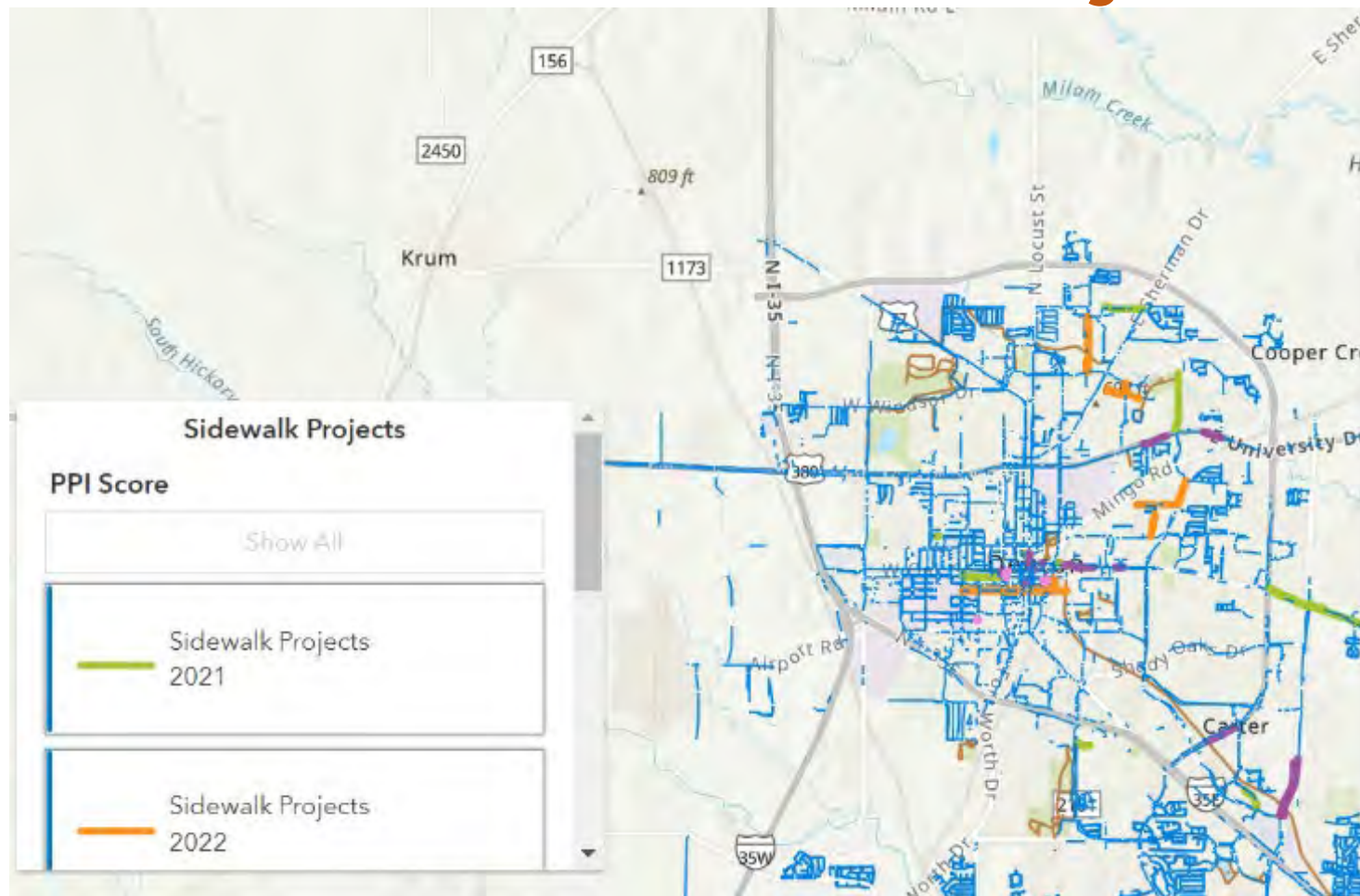
# Why a Sidewalk Workplan?

The City of Denton develops workplans to strategically deliver Capital Programs, in this case constructing new sidewalks.





# Current Sidewalk Projects



Sidewalk projects in the current Sidewalk Workplan for 2021 - 2024 are presented on this map. The legend is interactive, so the project years of interest may be displayed, or existing sidewalks not displayed, allowing project areas to be more easily identified.

The magnifying glass button in the upper left corner will also search for an address, to quickly navigate to areas of interest

# Leveraging Resources in our Workplan

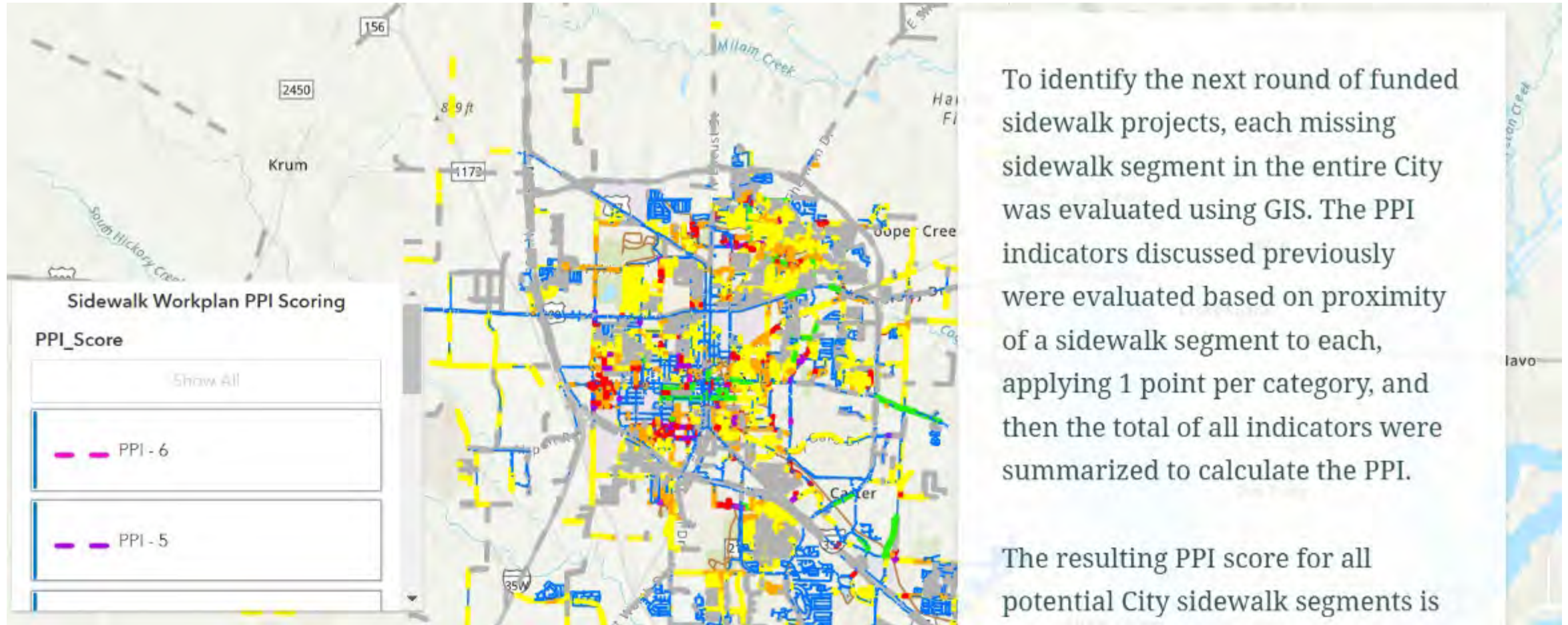
## How did staff prepare this Sidewalk Workplan?

Denton recently developed an ADA Transition Plan that assessed the condition of the existing sidewalk network, and identified missing sidewalks throughout the City. In all, nearly 450 miles of new sidewalks are needed.

Staff is strategically planning for new sidewalks where they will



# Data-Driven Sidewalk Project Planning



# Pedestrian Potential Index (PPI)

PPI includes:

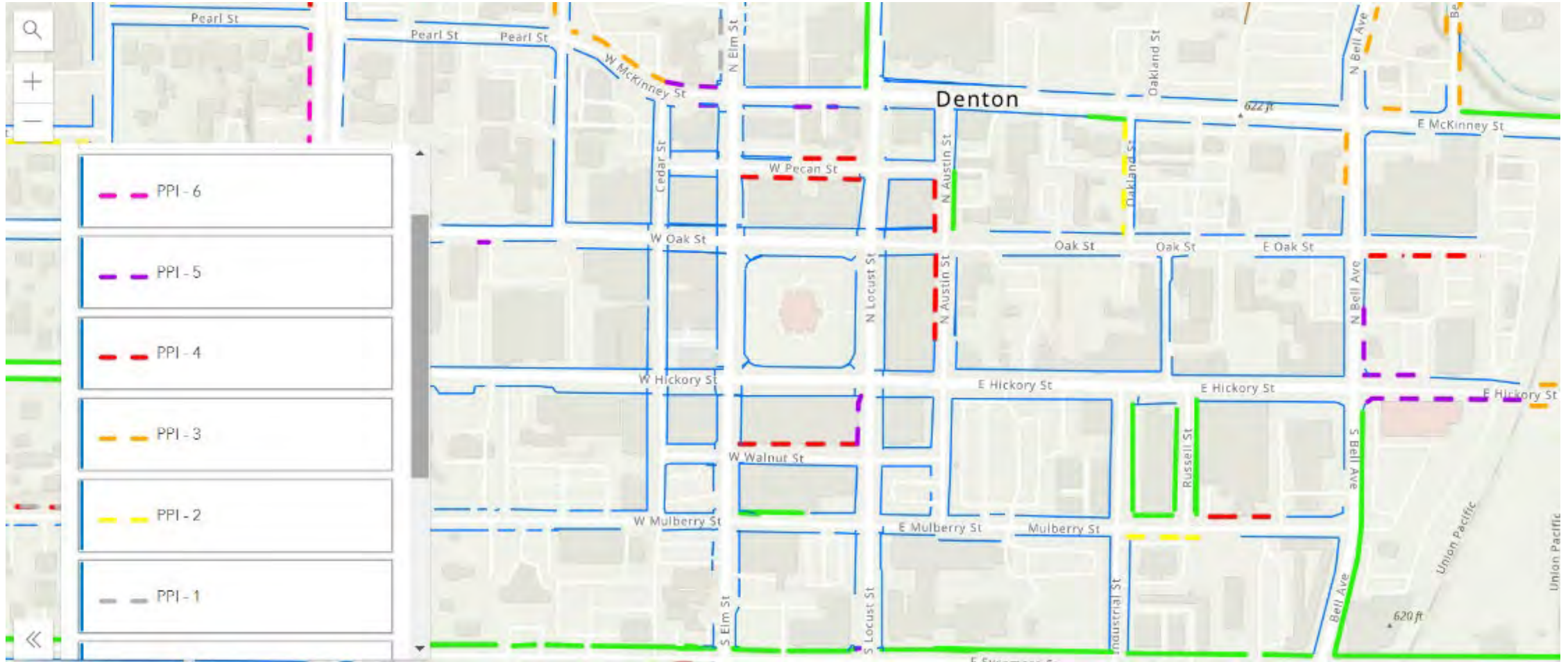
- Major Streets
- Schools
- Government Facilities
- Points of Interest
- Crashes
- Gaps



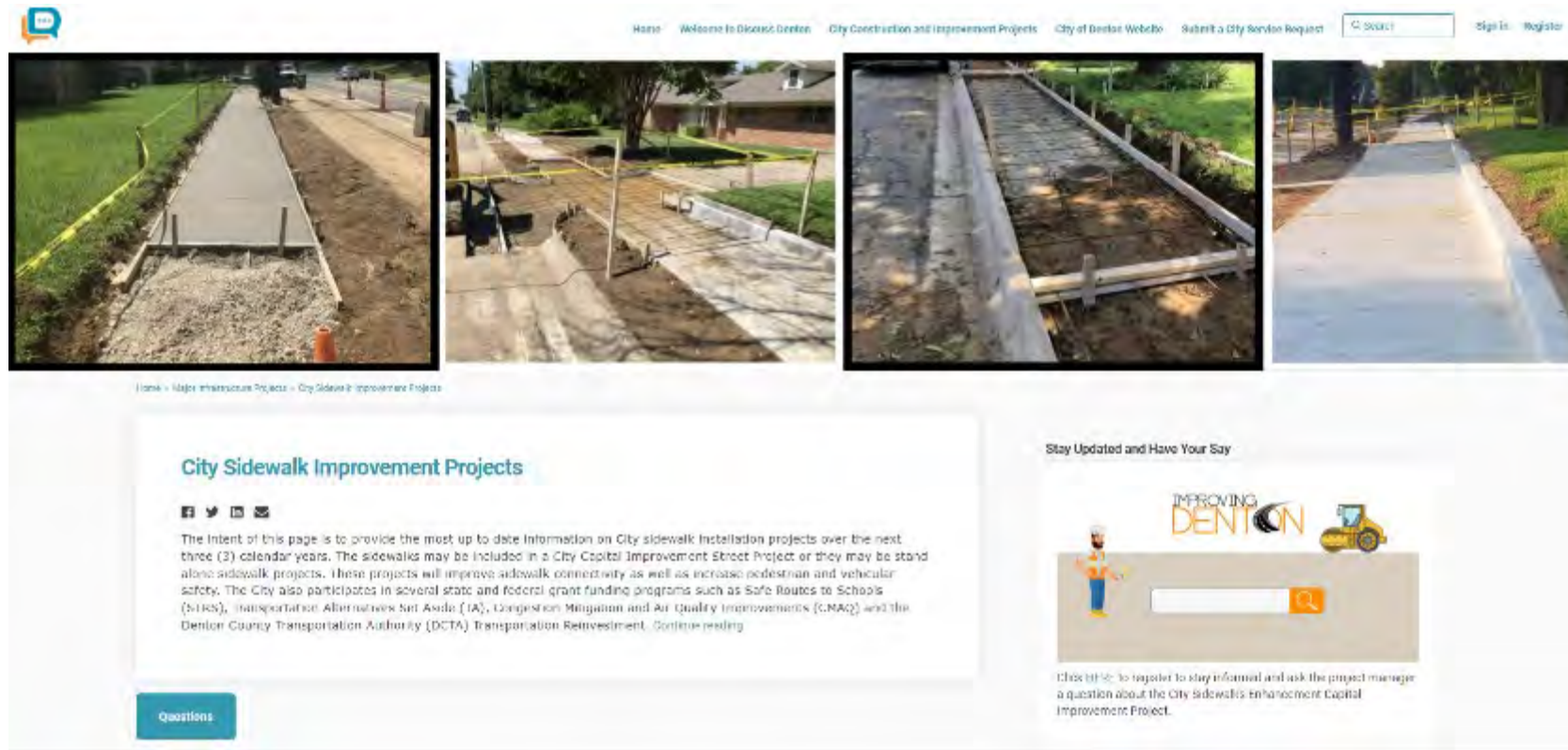
## PPI Calculation

The Capital Projects Department's current sidewalk workplan projects were identified by calculating a PPI score of each segment under consideration, and establishing an annual program, based on scoring of each segment and available

# Snapshot of PPI in Downtown



# Current Status & More Details



Project page: <https://www.discussdenton.com/citysidewalks>

Storymap: <https://storymaps.arcgis.com/stories/bc652d6cbddf46a491c653b8ec2043af>

# Thanks!



Capital Projects/Engineering Department

Nathan George, AICP

Sr Planner: Bicycle, Pedestrian & ADA Coordinator

[nathaniel.george@cityofdenton.com](mailto:nathaniel.george@cityofdenton.com)



North Central Texas Council of Governments

# Regional Sidewalk Data Layer Purchase

Bicycle and Pedestrian Advisory Committee | 2.16.2022

Travis Liska, AICP



# BACKGROUND

**GOAL:** regional data resource for planning and analysis of sidewalk needs and impact

Long term: comparable to trails geodatabase

NCTCOG's Regional Information Services  
SDCP can provide a regional layer digitized from aerial imagery

NCTCOG sent a survey asking if cities have data or would like it purchased for them – due February 7<sup>th</sup> (73 cities responded)

See if your city responded here:

<https://publish.smartsheet.com/9b642de2db0246a38f8250bc7f1a7b03>



# SCOPE OF PROJECT

**159** cities: Population over 1,000 in the Metropolitan Planning Area (12 counties)

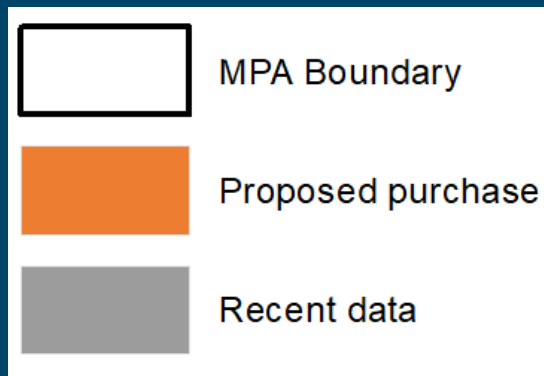
**17** cities: Received sidewalk Geographic Information Systems (GIS) data (2019 or later)\*

**142** cities: New sidewalk GIS data purchased\*

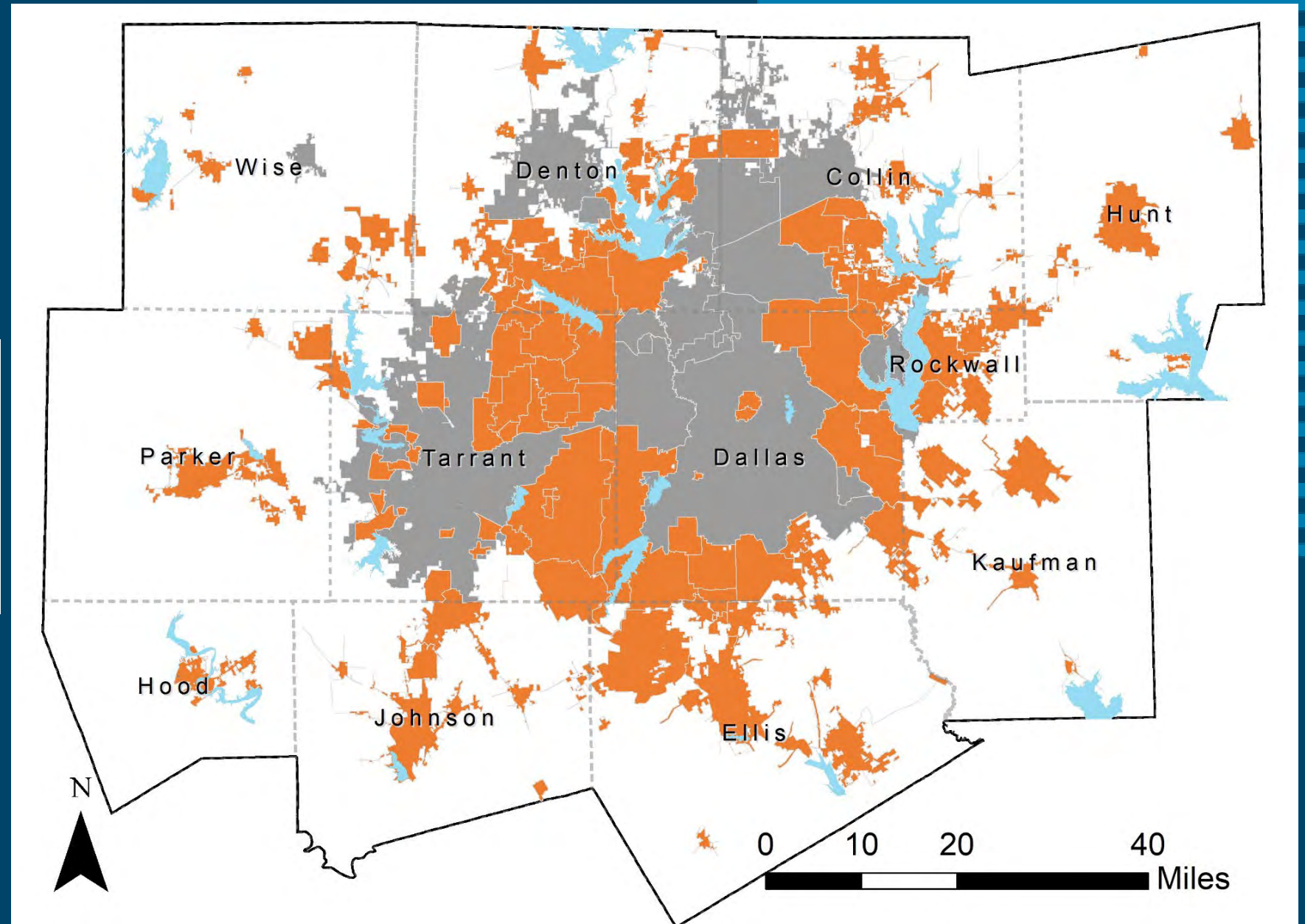
*\*Subject to adjustment pending ongoing coordination*



# SCOPE OF PROJECT



*\*Subject to adjustment pending ongoing coordination*



# NEXT STEPS

## Does your city have updated sidewalk GIS data?

Contact Travis Liska [tliska@nctcog.org](mailto:tliska@nctcog.org) if your city did not respond to survey before 2/7/22

See if your city responded here:

<https://publish.smartsheet.com/9b642de2db0246a38f8250bc7f1a7b03>

COG will send follow up communications on partnership by STTC meeting on 3/25/22

Availability of data to be announced later in 2022

**All cities:** Assist NCTCOG with data quality control and updates as able. More information to come.



# Questions?

## CONTACT US



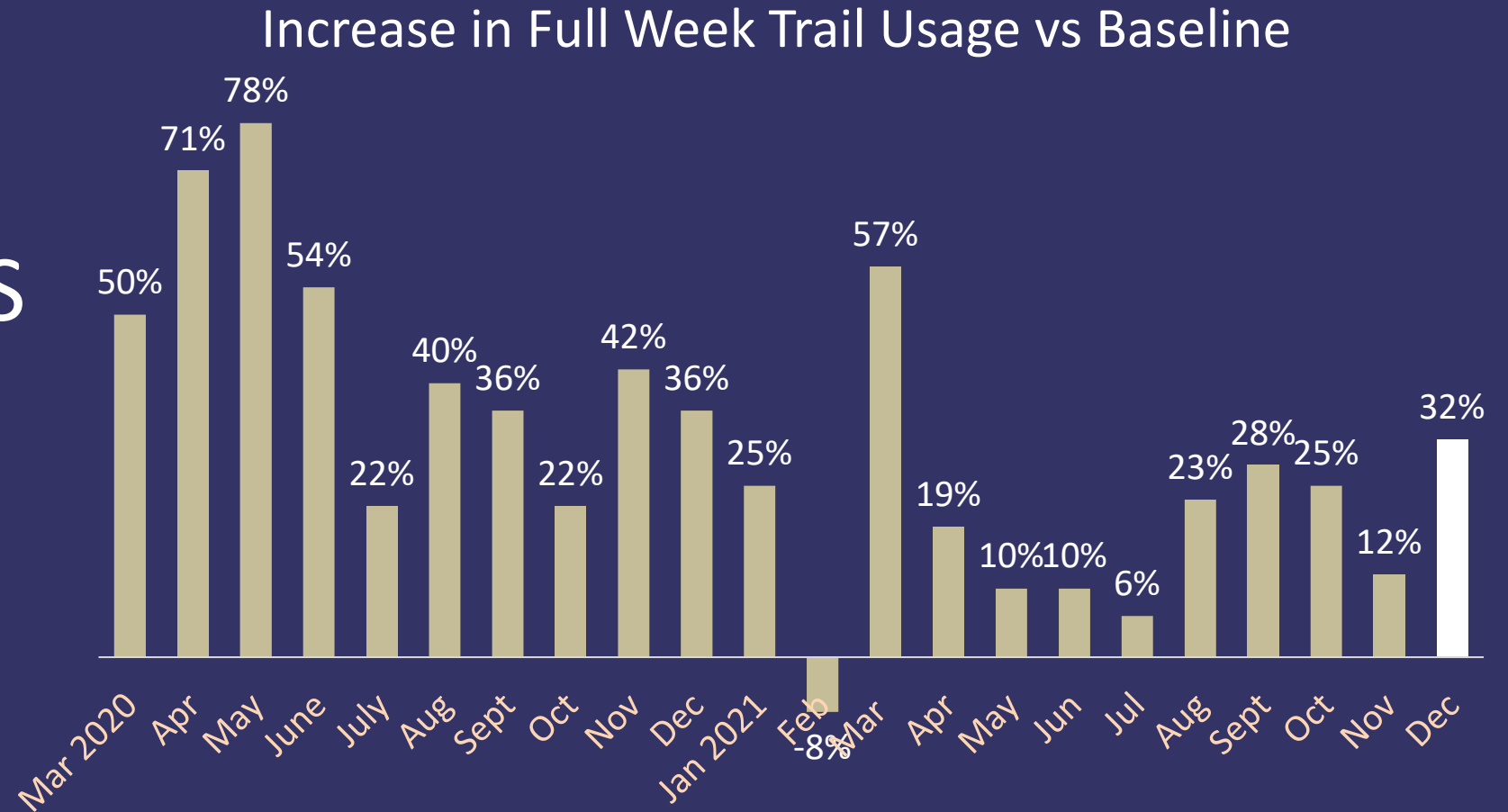
Travis Liska

Principal Transportation Planner

[tliska@nctcog.org](mailto:tliska@nctcog.org) | 817-704-2512



# BICYCLE AND PEDESTRIAN TRAIL COUNTS



Source: NCTCOG - collected at sites located in Plano, North Richland Hills, Denton, Dallas, Fort Worth, and Allen

Note: Baseline is March 2019-February 2020; No adjustments for weather were applied.

Note: Trail usage impacted in Feb 2021 by week-long winter storm

# Adopted Targets for Non-Motorized Safety Performance Measure Update

Bicycle and Pedestrian Advisory Committee

Daniel Snyder, AICP

February 16, 2022



# Background

*“Number of Non-Motorized Fatalities and Serious Injuries”*

is a Federal performance measure

- Fatalities and serious injuries are combined for federal reporting purposes

Based on 5-year rolling averages





# Safety Target Setting and Performance

**Adopted Statewide and Regional Safety Target:**  
**2% reduction by 2022.**

Performance Measure	Desired Improvement Trend	Current Trend*	2018 Target Met	2019 Target Met	2020 Target Met**
	North Central Texas (NCTCOG) Region				
No. of Non-motorized Fatalities and Serious Injuries	⬇️	⬆️	Yes	Yes	Yes

**New Statewide Safety Target: 50% reduction in fatalities by 2035.**

\*Current trend using data from the previous five years of available data (2016-2020)

\*\*FHWA expected to release state results in March 2022.

Observed safety performance is compared to targets on a two-year delay

# NCTCOG Ongoing Safety-Related Policies, Programs, and Projects

Regional Transportation Council Position on Safety:

*Even one death on the transportation system is unacceptable. Staff will work with our partners to develop projects, programs, and policies that assist in eliminating serious injuries and fatalities across all modes of travel.*

## Active Transportation

Education and Outreach - Look Out Texans  
Regional Pedestrian Safety Plan  
Bike/Ped Technical Training/Workshops  
Safety Spot Improvement Program  
Transportation Alternative Funding CFPs  
“Routes to Rail Stations” Study  
Safe Routes to School  
Bicycle and Pedestrian Advisory Committee

# Contact Information

**Daniel Snyder, AICP**

Senior Transportation Planner

[dsnyder@nctcog.org](mailto:dsnyder@nctcog.org)

817-608-2394

**Kevin Kroll**

Senior Transportation Safety Planner

[kkroll@nctcog.org](mailto:kkroll@nctcog.org)

817-695-9258



# Anticipated Transportation Alternatives Call for Projects (North Central Texas Region)

Bicycle and Pedestrian Advisory Committee

February 16, 2022



**North Central Texas  
Council of Governments**

# Project Development Considerations

- Construction-implementation focus
- All right-of-way and easements must be secured before application
- Coordinate with stakeholders such as TxDOT, railroads, neighborhoods, adjacent property owners, etc.
- Well defined project scope of work
- Schematics
- Opinions of Probable Construction Costs





Questions?



North Central Texas  
Council of Governments

# Infrastructure Investment and Jobs Act

Kevin Kokes

NCTCOG

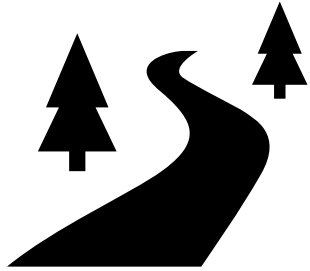
February 16, 2022

# Increased Funding to Improve Safety for People Walking, Biking, and Safe Routes to School

- **Transportation Alternatives Program** (Sec. 11109)  
Funding increased by 60 percent
- **Safe Routes to School program** (Sec. 11119)  
Recodifies into current law **and expands it to cover high schools**
- **Complete Streets** (Sec. 11206)  
Requires that states and MPOs adopt plans to consider the needs of multimodal road users of all ages, abilities, and travel modes.







## Safe Streets and Roads for All (Sec. 24112)

- Federal funding opportunity for local governments
- Grant program administered by USDOT
- Support efforts to advance “vision zero” plans and other complete street improvements to reduce crashes and fatalities, especially for cyclists and pedestrians.
- The program will offer competitive grants to:
  - Develop a comprehensive safety action plan;
  - Conduct planning, design, and other developmental activities for projects and strategies identified in a comprehensive safety action plan; or
  - Implement projects and strategies identified in a comprehensive safety action plan
- **Applications to USDOT are expected to open in May 2022**

# Fort Worth to Dallas Regional Trail Branding and Wayfinding Project Update

## Project Activities:

### Activities to Date

- Steering Committee
- Stakeholder Interviews (in progress)
- Virtual Open House #1

### Upcoming Public Input: Virtual Open House #2

- Mid to late April
- Preliminary naming and branding concepts

## More Information:

### Project Website:

[www.nctcog.org/FWtoDalTrail](http://www.nctcog.org/FWtoDalTrail)

### Virtual Open House / Email List Sign-Up:

<https://fortworthtodallastrail.altaplanning.cloud/>

### Contact:

Shawn Conrad  
sconrad@nctcog.org

