Texas Department of Transportation

MEETING AGENDA

TxDOT Bicycle and Pedestrian Advisory Committee (BPAC) Meeting
July 26, 2024 - 9:30 A.M.
Note: This meeting will be held remotely via Zoom
Teleconference instructions below

1.	Call to Order.
2.	Safety briefing.
3.	Approval of minutes from April 12, 2024 BPAC meeting. (Action)
4.	Report from TxDOT's Public Transportation Division (PTN) Director regarding statewide bicycle and pedestrian matters.
5.	Chair and Vice Chair elections. (Action)
6.	Update on TxDOT's Statewide Active Transportation Plan.
7.	Presentation on micromobility best practices.
8.	Presentation and discussion on the Texas Statewide Resiliency Plan.
9.	Presentation on The Loop Dallas.
10.	Updates from committee members on local and statewide issues.
11.	Public comment – Comments will be accepted during the meeting or submitted by email to BikePed@txdot.gov by August 5, 2024, to be included as part of the meeting record.
12.	Discussion of agenda items for future BPAC meetings.
13.	Adjourn. (Action)

The BPAC meeting will be conducted in English. If you need an interpreter or document translator because English is not your primary language or you have difficulty communicating effectively in English, one will be provided for you. If you have a disability and need assistance, special arrangements can be made to accommodate most needs. If you need interpretation or translation services or you are a person with a disability who requires an accommodation to attend or participate in the BPAC meeting, please contact Greg Reininger, PTN, at (737) 285-6184 no later than 4 p.m. CT, July 22, 2024. Please be aware that advance notice is required as some services and accommodations may require time for TxDOT to arrange.

Texas Department of Transportation

BPAC Members

Karla Windsor, Chair, Dallas/Ft. Worth
Philip Hiatt Haigh, Vice Chair, Dallas
Andrew Bernet, Austin
John Brigham, Houston
Ericka Cornejo, El Paso
Eva Garcia, Brownsville
Kim Hooker, Amarillo
Norman Kieke, Austin
Will Parrish, San Marcos
Frank Rotnofsky, Laredo
Lynnette Wood, Lindale

TxDOT Technical Staff

Eric Gleason, Director, Public Transportation Division (PTN)
Bonnie Sherman, Planning & Program Development Director, PTN
Noah Heath, Transportation Alternatives Program Manager, PTN
Greg Reininger, Bicycle & Pedestrian Planner, PTN
Greg Goldman, Data Manager, PTN
Brigida Gonzalez, Planner, PTN
Elizabeth Jones, Planner, PTN
Carl Seifert, Transportation Planner (Contractor), Jacobs
Lauren Osborne, Transportation Planner (Contractor), Jacobs

* * *

Teleconference instructions:

Event address for attendees:
https://cmd-txdot-gov.zoomgov.com/j/1618317631?pwd=Nk9pNjhxRENoMEpyd3pOUlJqcldrQT09
Passcode: 174030
Or One tap mobile :
+16692545252,,1618317631# US (San Jose)
+16692161590,,1618317631# US (San Jose)
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
+1 669 254 5252 US (San Jose)
+1 669 216 1590 US (San Jose)
+1 415 449 4000 US (US Spanish Line)
+1 646 964 1167 US (US Spanish Line)
+1 551 285 1373 US (New Jersey)
+1 646 828 7666 US (New York)
Webinar ID: 161 831 7631

MINUTES FOR ADOPTION

Bicycle and Pedestrian Advisory Committee (BPAC) – 6230 E Stassney Ln, Austin, TX 78744

April 12, 2024

BPAC Committee Members Present and Participating:

Karla Windsor, Chair, Dallas/Ft. Worth
Andrew Bernet, Austin
John Brigham, Houston
Eva Garcia, Brownsville
Kim Hooker, Amarillo
Will Parrish, San Marcos
Frank Rotnofsky, Laredo
Lynnette Wood, Lindale
Norman Kieke, Austin

BPAC Committee Members Absent:

Philip Hiatt Haigh, Vice Chair, Dallas
Ericka Cornejo, El Paso

TxDOT Present and Participating:

Eric Gleason, Director (PTN)
Bonnie Sherman, Statewide Bicycle / Pedestrian Program Supervisor (PTN)
Noah Heath, Transportation Alternatives (TA) Program Manager (PTN)
Greg Reininger, Statewide Bicycle / Pedestrian Planner (PTN)

Also, Present and/or Participating:

Carl Seifert, Jacobs Engineering Group
Jeff Whitacre, Kimley-Horn and Associates
Aaron Sussman, Toole Design Group
Hanna Hutcheson, FHWA

AGENDA ITEM 1: Call to Order.

Karla Windsor, calls the meeting to order at 9:30 A.M.

AGENDA ITEM 2: Safety briefing.

Greg Reininger presented this item beginning at 9:31 A.M.

Comments: No comments

AGENDA ITEM 3: Approval of minutes from January 26, 2024 BPAC meeting. (Action)

Karla Windsor introduced this item at 9:33 A.M.

MOTION Frank Rotnofsky moved to approve the January 26, 2024 BPAC meeting minutes.

SECOND Will Parrish seconded the motion.

The motion passed unanimously at 9:34 A.M.

Comments: No comments

AGENDA ITEM 4: Report from TxDOT's Public Transportation Division (PTN) Director regarding statewide bicycle and pedestrian matters

Eric Gleason presented this item at 9:34 A.M.

Comments/Questions: No Comments/Questions

AGENDA ITEM 5: Update on TxDOT's Statewide Active Transportation Plan.

Jeff Whitacre presented this item at 9:39 A.M.

Comments/Questions: Karla Windsor, Eva Garcia, John Brigham, Noah Heath, Kim Hooker, Will Parrish

AGENDA ITEM 6: Presentation on TxDOT's District Bicycle Plan Pilot.

Aaron Sussman presented the item at 10:29 A.M.

Questions/Comments: Eva Garcia, Frank Rotnofsky, Kim Hooker, Karla Windsor, Bonnie Sherman

AGENDA ITEM 7: Presentation from North Central Texas Council of Governments on Safe Routes to School.

Karla Windsor presented the item at 10:56 A.M.

Questions/Comments: Frank Rotnofsky, John Brigham, Eva Garcia

AGENDA ITEM 8: Updates from committee members on local and statewide issues.

Karla Windsor introduced the item at 11:24 A.M.

Questions/Comments: Hanna Hutcheson, Eva Garcia, Andrew Bernet, Will Parrish, Kim Hooker, Karla Windsor, Frank Rotnofsky, Norman Kieke, John Brigham, Lynnette Wood

AGENDA ITEM 9: Public comment – Comments will be accepted in person during the meeting or submitted by email to BikePed@txdot.gov by April 22, 2024, to be included as part of the meeting record.

Karla Windsor introduced this item at 11:39 A.M.

No public comments were submitted for the April 22, 2024 BPAC meeting.

AGENDA ITEM 10: Discussion of agenda items for future BPAC meetings. (Action)

Karla Windsor introduced this item at 11:40 A.M.

Questions/Comments: Andrew Bernet recommended a presentation of Public Right-of-Way Accessibility Guidelines (PROWAG).

AGENDA ITEM 11: Adjourn. (Action)

Karla Windsor adjourned the meeting at 11:41 A.M.

Prepared by:	Approved by:
Greg Reininger Public Transportation Division	Karla Windsor Chair, Bicycle Advisory Committee

Statewide Active Transportation Plan

TxDOT's Bicycle and Pedestrian Advisory Committee

July 26, 2024

Statewide Vision for Active Transportation

A safe, accessible, connected and fully integrated pedestrian and bicycle network that increases active mobility and supports health, economic vitality, and resiliency within communities and across Texas.

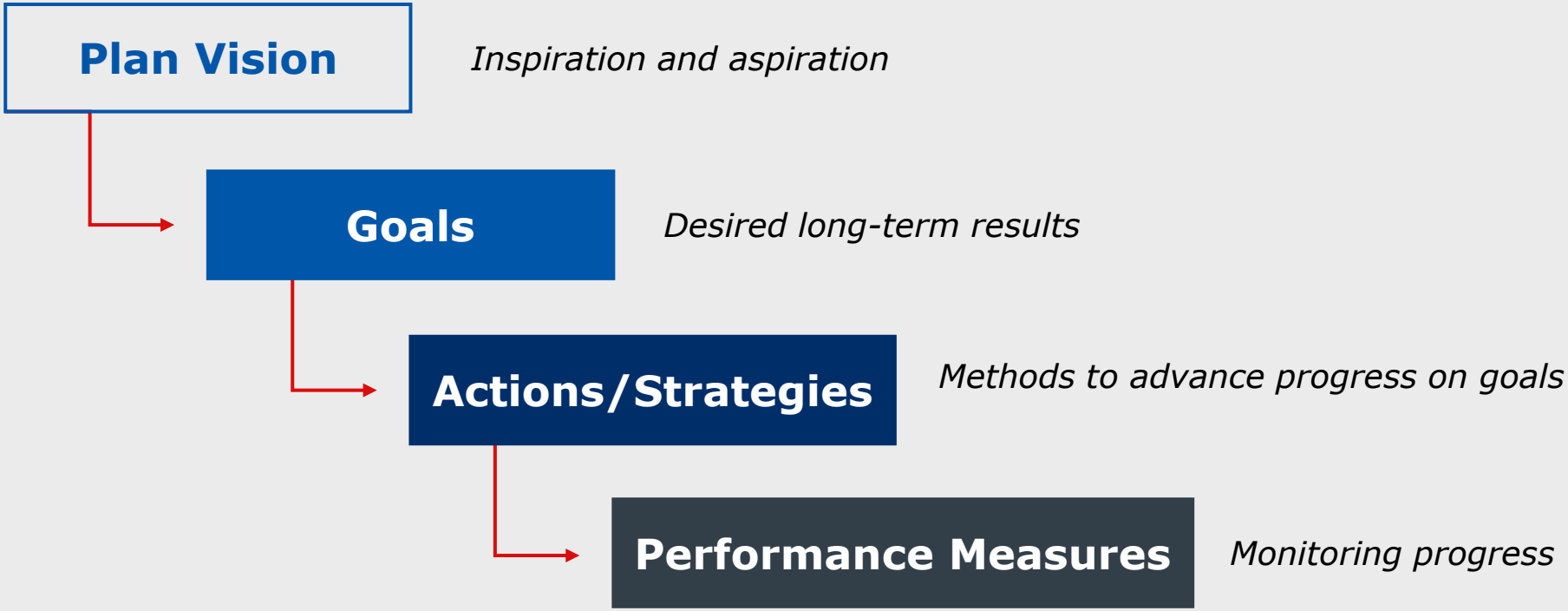
Table of Contents


= Steering Committee
Vision Workshop & Data Collection
Data Analysis
Existing Conditions Report
Emphasis Area Work Groups
Draft Plan
Commission Presentation
Summer 2023
Fall
Winter
Spring 2024
Summer
Fall & Winter
Stakeholder Meetings
Public Meetings Round #1
We are here
Public Meetings Round #2

Plan Framework

July 26, 2024

Plan Framework



SATP Goals

Improve Safety, Comfort, and Accessibility
Design for safety and comfort by providing low stress level facilities.

Enhance Connectivity
Connect community destinations through plans and project identification activities; and build more connective infrastructure.

Address Community Needs
Providing mobility options for people who don't have vehicle access or rely on active transportation modes.

Support Economic Vitality
Increase accessibility and connect our workforce.

Promote Healthy Communities
Make it easier for Texans to live healthy and safe lifestyles.

Strategies - Developed from EAWG Themes

Safety, Comfort, and Accessibility
Strengthen safety, comfort, and accessibility of the state's bicycle and pedestrian system.

Partnership
Cultivate meaningful partnerships with aligned initiatives that result in improved community conditions through policies and infrastructure investments.

Overcoming Barriers
Identify and overcome barriers (network gaps, excessive crossing distances, railroads, streams, speed) to active transportation networks with emphasis on connecting key community destinations.

Design Compatibility
Promote designs that align with community context and agreed upon target users.

Project Development
Formalize the integration of active transportation elements with all stages of project development and establish requirements for consistent implementation across the state.

Mode Integration and Travel Optionality Connect and integrate active transportation with other modes, especially transit, to connect people with destinations and opportunities.

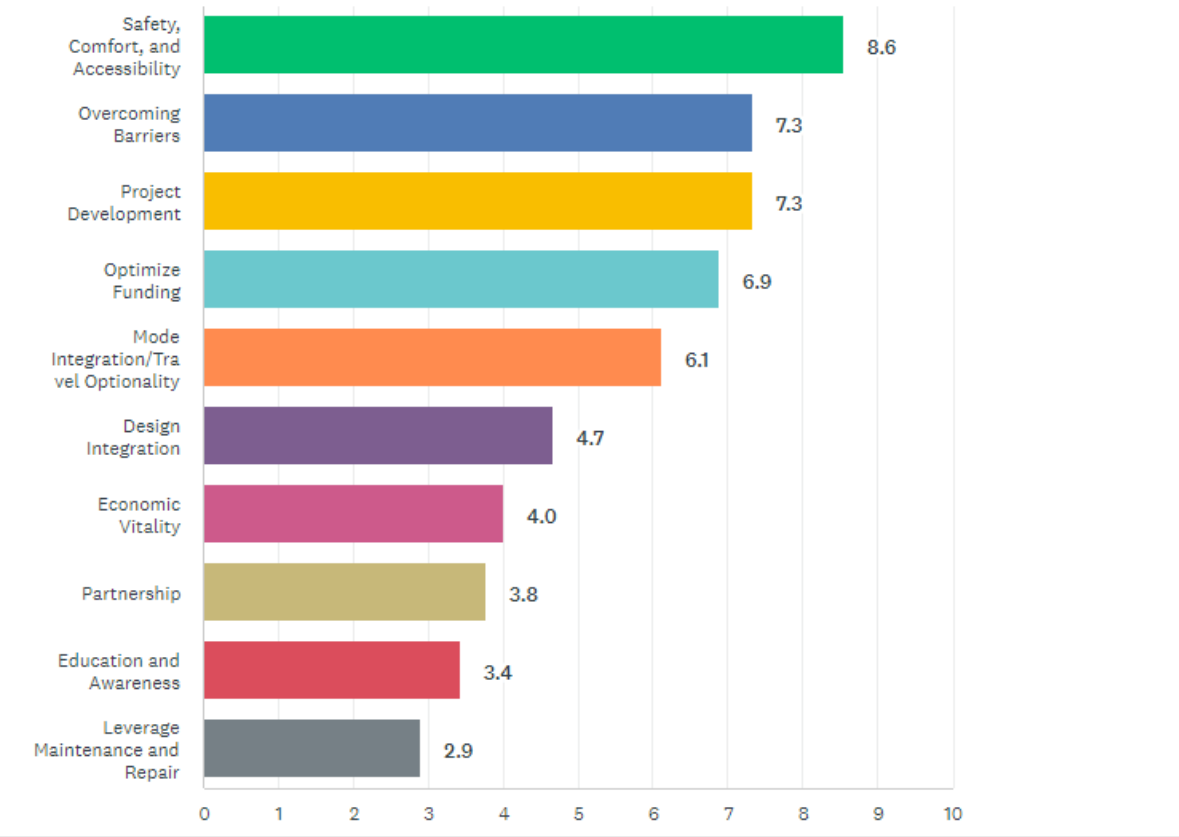
Optimize Funding
Optimize investments in the active transportation system to accommodate future demand.

Economic Vitality
Connect people to jobs, education, and community resources.

Education and Awareness
Increase statewide awareness, promote robust participation to advance active transportation, and encourage safe practices for all users.

Leverage Maintenance and Repair
Integrate active transportation features and infrastructure into recurring street maintenance where feasible.

Highest to Lowest Priority - STRATEGIES



Survey Question Considerations - Actions

- Why did you pick your top choices?
- Why did some actions not get chosen? Should they be revised?
- Were you unclear or unfamiliar with any of the actions?
- Any other revisions?

Safety, Comfort, & Accessibility

Highest Priority Actions:

- Develop additional policies, guidelines, and standards to increase accessibility and inclusion of pedestrians and bicyclists across various project types and land use contexts. (55.6%)
- Clarify the intent of the TxDOT Roadway Design Manual to provide effective separation from vehicular travelways for bicycle and pedestrian infrastructure. (44.4%)

Lowest Priority Actions:

- Consider road characteristics and land use context for any requested speed limit adjustments. (0%)
- Update the Highway Safety Improvement Program work codes to increase pedestrian and bicycle safety countermeasures. (0%)

Overcoming Barriers

Highest Priority Actions:

- Develop context-specific design examples to overcome a variety of connectivity barriers. (88.9%)
- Engage communities of need to collect information to identify transportation barriers and evaluate improvement options. (66.7%)

Lowest Priority Actions:

- Prioritize projects that include active transportation options that overcome barriers. (55.6%)
- Apply design strategies identified in the Active Transportation Plan to overcome common barriers. (55.6%)
- Use the combined investments of active transportation and transit to minimize the impact of identified barriers. (33.3%)

Project Development

Highest Priority Actions:

- Require active transportation to be integrated in all phases of project development. (66.7%)
- Consider active transportation facilities during every step of every project, except in cases where they are exempted by the TxDOT Roadway Design Manual. (44.4%)
- Review project plans for consistency with adopted local and regional active transportation plans. (44.4%)
- Increase active transportation training for project development participants. (44.4%)

Lowest Priority Actions:

- Identify technical support for rural communities to advance active transportation goals. (22.2%)
- Implement a project walk-through requirement for urban projects prior to 60% design submittal. (11.1%)

Optimize Funding

Highest Priority Actions:

- Increase active transportation funding. (77.8%)
- Continue to fund planning and conceptual designs to prepare communities for active transportation project implementation. (55.6%)

Lowest Priority Actions:

- Identify and evaluate projects using criteria that address TxDOT's strategic goals including safety, system preservation, congestion, and connectivity. (11.1%)
- Define a consistent method to identify active transportation-priority investment networks. (0%)

Education and Awareness

Highest Priority Actions:

- Align statewide policy, procedures, and internal training to advance active transportation goals. (66.7%)
- Continue using TxDOT's Traffic Safety Campaigns to raise awareness about bicycle and pedestrian safety, sharing real-life stories and safety tips. (55.6%)

Lowest Priority Actions:

- Update and evaluate the targeting of campaigns promoting safe crossing practices, the importance of designated crosswalks, and use of pedestrian signals. (22.2%)
- Increase awareness through accessible wayfinding and signage. (22.2%)

Partnership

Highest Priority Actions:

- Continue to integrate pedestrian and bicycle improvements into subregional plans, access management studies, and other regional planning efforts. (100%)
- Expand support and coordination with aligned agencies (health providers and advocates, law enforcement, emergency management, TPWD, COGs, City officials etc.) to increase safety, awareness, and quality of travel experience. (77.8%)
- Provide technical support to innovative pedestrian and bicycle projects that will spur local investment in underserved communities and/or serve as demonstration projects. (77.8%)

Lowest Priority Actions:

- Assist local entities and organizations like the League of American Bicyclists or BikeTexas in developing and maintaining programs that raise public awareness of the benefits of walking and biking. (11.1%)
- Incorporate Texas into the United States Bike Route System (USBRS). (11.1%)

Design Compatibility

Highest Priority Actions:

- Refine design guidance to implement context sensitive design based on different criteria for various contexts beyond the existing urban and rural classifications. (88.9%)
- Develop standards or guidelines for the distance between safe crossings given land uses, densities, and roadway function. (77.8%)

Lowest Priority Actions:

- Develop a map that separates the urban context into urban core/urban/suburban/rural town to allow for more specifically developed bicycle and pedestrian improvements. (33.3%)
- Develop appeals process for inconsistent design decisions. (11.1%)

Mode Integration and Travel Optionality

Highest Priority Actions:

- Identify and implement strategies to enhance bicycle and pedestrian connectivity for first and last-mile connections more broadly throughout communities and at the border. (77.8%)
- Partner and participate in the creation of local and regional active transportation planning. (55.5%)
- Minimize policy and procedural barriers that impede the implementation of active transportation facilities. (55.5%)

Lowest Priority Actions:

- Complete bike plans for all TxDOT Districts. (22.2%)
- Accommodate and expand ridesharing, microtransit, and micromobility options in appropriate contexts. (22.2%)
- Increase funding and implementation of active transportation amenities (including, bike racks, benches, bike lockers, repair stations). (22.2%)

Economic Vitality

Highest Priority Actions:

- Prioritize active transportation options that provide access to key community features (access to jobs, healthcare, education, and parks) and connect with existing and future transit service. (88.9%)
- Adhere to strict design guidance that promotes walkability and safety along "main streets" (new and old) and Transit Oriented Developments. (77.8%)

Lowest Priority Actions:

- Invest in locations where active transportation infrastructure will attract future economic opportunities and enhance competitiveness. (33.3%)
- Measure the effect of newly implemented active transportation facilities on the tourism industry, real estate values, and business attraction, over time. (33.3%)

Leverage Maintenance and Repair

Highest Priority Actions:

- Establish a funding mechanism to ensure the maintenance and upkeep of active transportation facilities statewide. (100%)
- Identify and prioritize maintenance efforts in areas with high active transportation usage to ensure that infrastructure remains safe and accessible for all users. (77.8%)
- Prioritize rehabilitating major thoroughfares to safely accommodate all travel modes. (77.8%)

Lowest Priority Actions:

- Expand asset management procedures to include active transportation infrastructure. (33.3%)
- Conduct routine performance audits of active transportation infrastructure to assess the effectiveness of maintenance practices and identify areas for improvement. (11.1%)

Future Progress Reporting

Goals	Progress Metrics
Improve Safety, Comfort, and Accessibility	??
Enhance Connectivity	??
Address Community Needs	??
Support Economic Vitality	??
Promote Healthy Communities	??

Will send post meeting for input

Thank you and Wrap Up

July 26, 2024

Greg Reininger

Bicycle & Pedestrian Planner

Public Transportation Division

Texas Department of Transportation

(737) 285-6184

Gregory.Reininger@txdot.gov

Bonnie Sherman

Planning and Program Development Director

Public Transportation Division

Texas Department of Transportation

(512) 571-9825

Bonnie.Sherman@txdot.gov

Micromobility Best Practices

Texas Department of Transportation

June 24, 2024

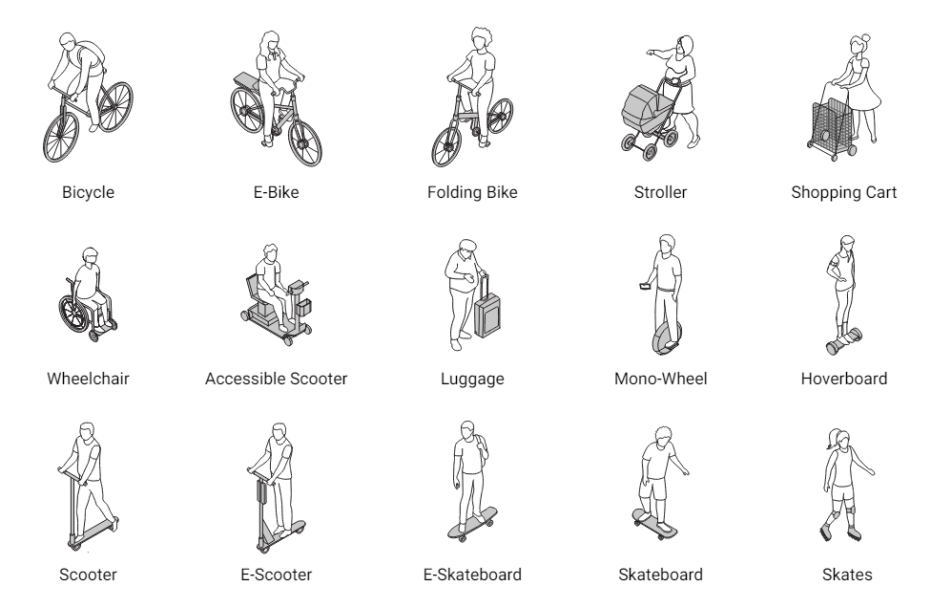
Need

1. Ubiquitous access
2. Exponential Growth

1. Need for safe conditions
2. Need for new ways to design infrastructure and regulate use

Recommendation

- Create starting point and best practice resource to define and design micromobility use and infrastructure



Micromobility in Texas

Micromobility policies

- Austin
- San Marcos
- Lubbock
- Houston
- Dallas
- San Antonio
- El Paso

Example: Austin

- Chapter 12-2 Micro-Mobility Devices and Bicycles
  - Micromobility riders on the road must obey same laws as motorists
  - Children 17 and younger must wear helmets
  - Phone use while driving a micromobility device is prohibited
  - More than one rider may not be on a micromobility device
  - Parked devices must not impede pedestrian traffic
  - Parked devices may not be tied to public or private property in a way that could damage the property

Micromobility in Texas

Shared micromobility systems

- Austin
- College Station
- San Marcos
- Lubbock
- Houston
- Dallas
- San Antonio
- Plano
- Fort Worth
- El Paso
- Galveston

Micromobility Areas of Focus

Personal Use + Universal Design & Policy

Shared Use Systems

Definitions and Standards

- Provide multiple variations of micromobility definition to give flexiibility

Federal Highway Administration (FHWA)

Micromobility is as any small, low-speed, human or electric-powered transportation device, including bicycles, scooters, electric-assist bicycles, electric scooters (e-scooters) and other small, lightweight, wheeled conveyances.

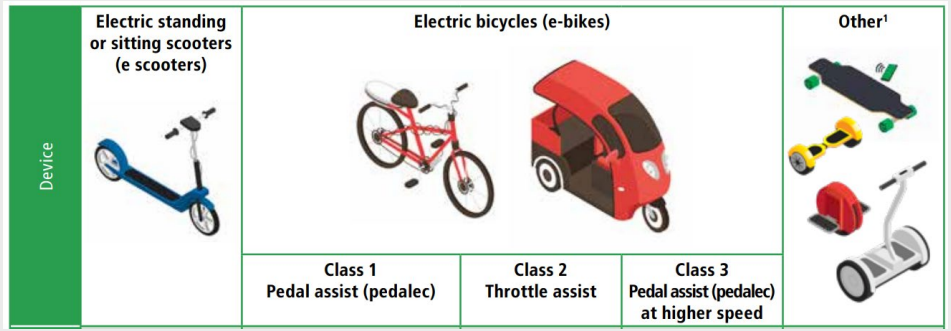
Society of Automotive Engineers (SAE)

Micromobility is:

- **Motorized.** They can either be fully or partially powered by a motor.
- **Low Speed.** Devices with a top speed of 30 MPH or less
- **Small Size.** Devices have a weight under 500 pounds, with many typically less than 100 pounds.

Definitions and Standards

Micromobility



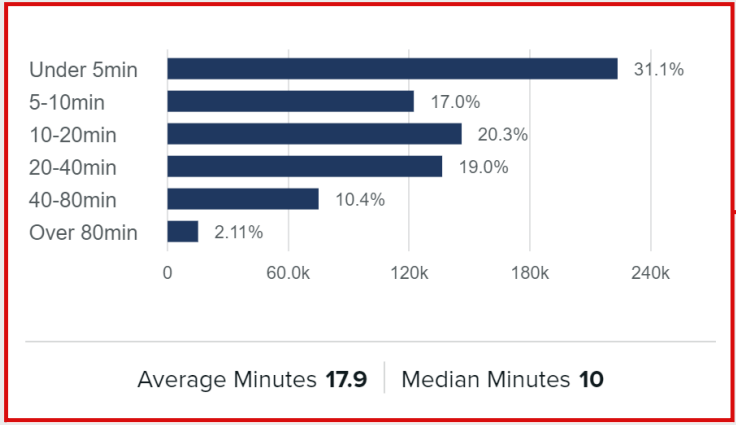
Micromobility-Related

Source: Pedestrian and Bicycle Information Center The Basics of Micromobility and Related Motorized Devices for Personal Transport

Travel Patterns

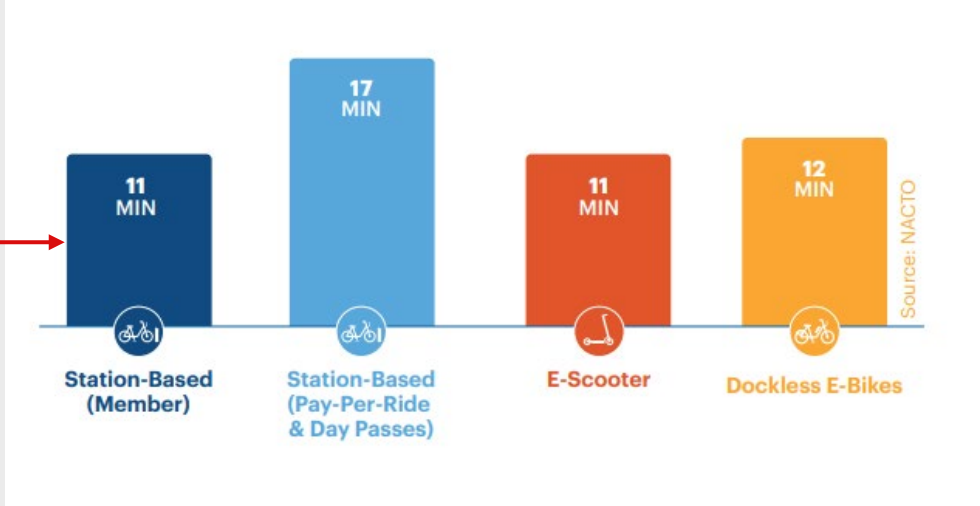
- How do people use micromobility and why?

Bike Trips in Texas by Travel Time



Source: Replica 2024

Average Ride Times Based on Shared Micromobility Vehicle



Source: NACTO 2022 Shared Micromobility Report

Example

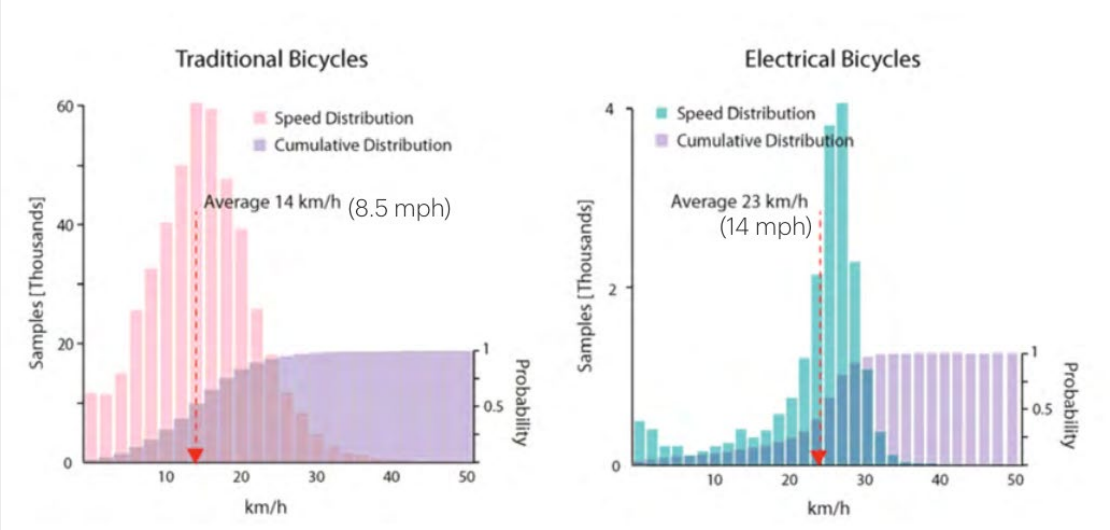
Many people use micromobility devices for trips that may be too long to walk, but inconveniently short to drive. This leads to trips with shorter distances and ride times.

Mobility Network Design

Flexibility in infrastructure design is needed to:

- Accommodate varied and faster speeds (e.g. bike vs e-bike)
- Adapt to wide range of vehicle sizes (e.g. e-cargo bikes vs e-skateboards)
- Accommodate multiple modes using same space (e.g. bikes, e-bikes, e-scooters, and e-skateboards all using a bike lane)

Urban E-Bike Operating Speed Research



Source: NACTO Designing for Small Things

Shared Micromobility Systems

Key Elements of Successful Systems

- Regulation
- Operations
- Mobility Data
- Accessibility

Shared Systems: Regulation

- Legal permission to operate in the public right-of-way should be provided from a city or relevant local government
- Types of procurement
  - License
  - Permit
  - Contract
- Terms should address risk (insurance, bonds, etc) and also have terms for non-compliance, ceasing operations, as well as rewards for good performance.

Shared Systems: Operations

- Fleet size
- Rebalancing and fleet distribution
- Customer service
- Pricing
- Staffing and workforce development
- Fleet removal/ relocation
- Equipment and vehicle maintenance

Shared Systems: Mobility Data

Require data to:

- Determine permit compliance
- Evaluate system performance and impact
- Evaluate travel patterns
- Help customers use the system

Priority Topics:

- Real-time data access
- Data management
- Data formats
- Sharing Data
- Consumer Privacy
- Data security

Texas Data Privacy and Security Act

- New law took effect on July 1, 2024
- Need to evaluate how this law will impact shared mobility systems
- The law provides the following:
  - **Right to Access:** You can request a copy of the personal information businesses have collected about you.
  - **Right to Correct:** You can request a business correct inaccuracies in the personal information it has collected about you.
  - **Right to Delete:** You can request a business delete the personal information it has collected about you.
  - **Right to Opt Out:** You can opt out of businesses selling your personal information to advertisers and other third parties.

Share Systems: Accessibility

Equitable Access

Is the system equitably distributed across a city?

Can people use the system without a credit card or bank account?

Station Access

Is the station and the area around it ADA compliant?

Are the screens and apps used to access the system ADA compliant?

Vehicle Access

Are the vehicles able to accommodate a wide range of physical abilities?

Statewide Transportation Resilience Plan

July 25, 2024

Agenda

July 25, 2024

1. Plan Overview
2. Technical Approach
3. Stakeholder Engagement
4. Questions and Discussions

Plan Overview

Scope

The SRP is:

- High-level first pass to assess TxDOT transportation system vulnerabilities
- Actions/strategies to help improve the resiliency of TxDOT's most vulnerable assets
- Specific to TxDOT owned transportation assets and some non-TxDOT owned

The SRP is not:

- An emergency preparedness plan
- A detailed action plan to improve resiliency for individual cities
- A broad assessment of the system's vulnerability to climate-related disruptors

Goals

Strengthen Infrastructure Resilience

Strengthen infrastructure resilience by **implementing strategic measures, resilient design, and proactive planning** to ensure the sustained functionality and adaptability of vulnerable multimodal assets.

Ensure Operational Continuity

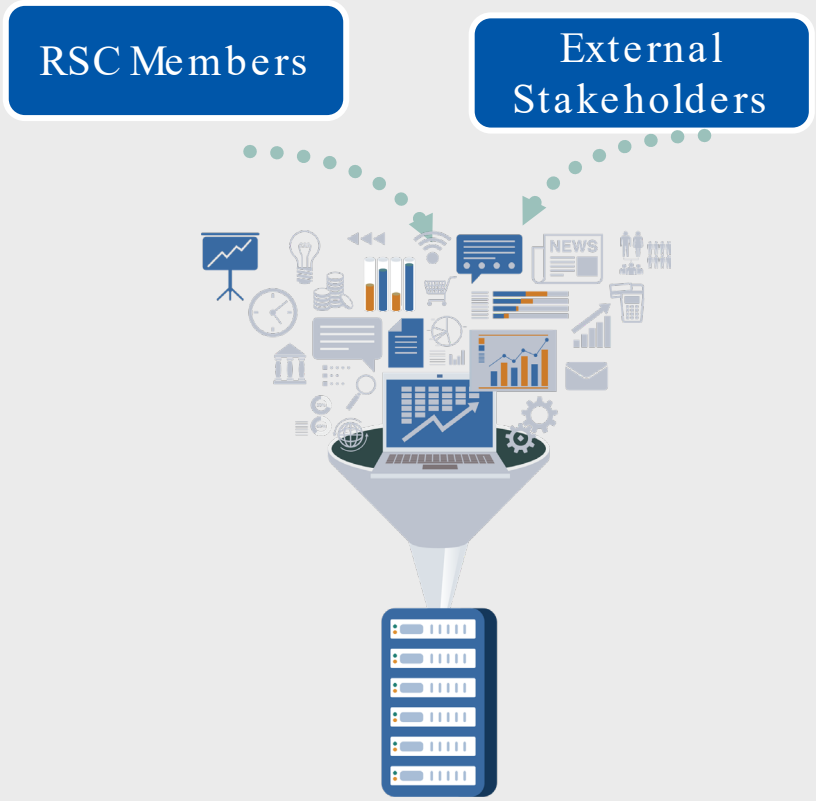
Ensure the operational continuity of transportation systems by **employing resilient recovery and adaptive responses** to facilitate the seamless movement of people and goods in an event of a disruption.

Improve Organizational Adaptability

Improve adaptability at the organizational level to ensure sustained performance through **innovative solutions, continuous learning and cross-functional collaboration** .

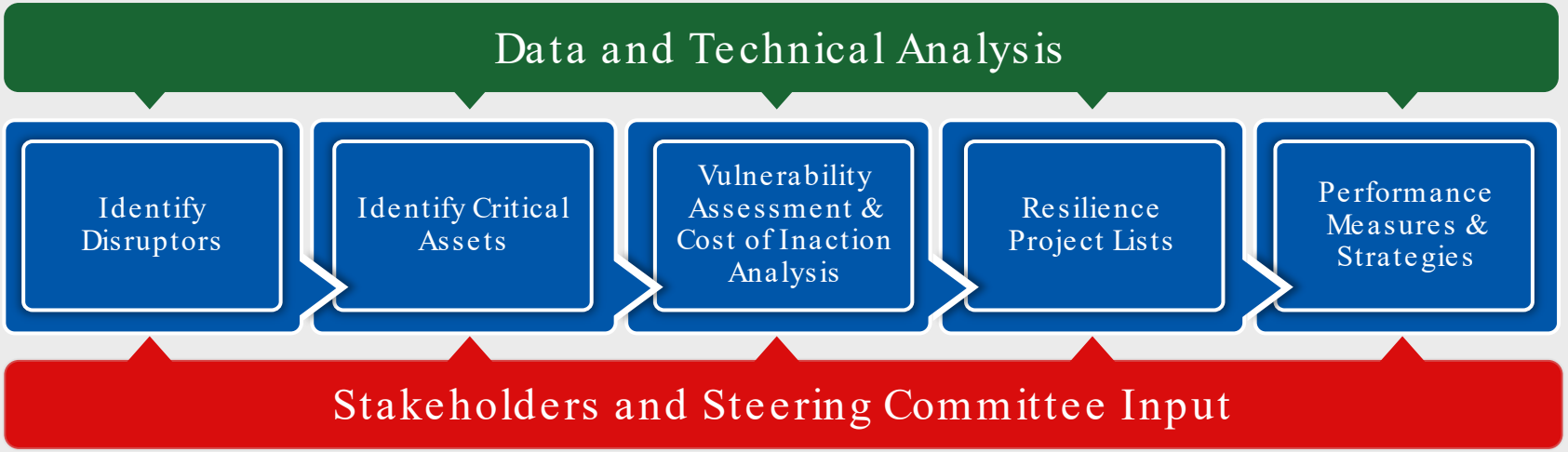
Resilience Definition

Resilience is the ability to support and maintain a **multimodal** transportation system that can **safely move people, goods, and services** during adverse conditions, and can **anticipate**, **prepare** for, **adapt** to, **withstand**, **respond** to, and **recover** efficiently from both human and natural disasters and disruptions.



Resilience Definition

Plan Development Framework



Technical Approach

Disruptors

Key Disruptors

- Extreme Heat
- Extreme Cold
- Inland Flooding
- Coastal Flooding (Sea Level Rise and Storm Surge
- Hurricane
- Wildfire
- Drought
- Humanmade (includes social unrest, cyberattack, physical damage, etc)

Transportation Assets

- Roadways
- Bridges/ Culverts
- Intelligent Transportation Systems (ITS)
- Maritime Ports
- Border Crossings
- Maintenance Facilities
- Airports
- Pedestrian and Bicycle Lanes
- Railways
- Transit

Vulnerability Assessment

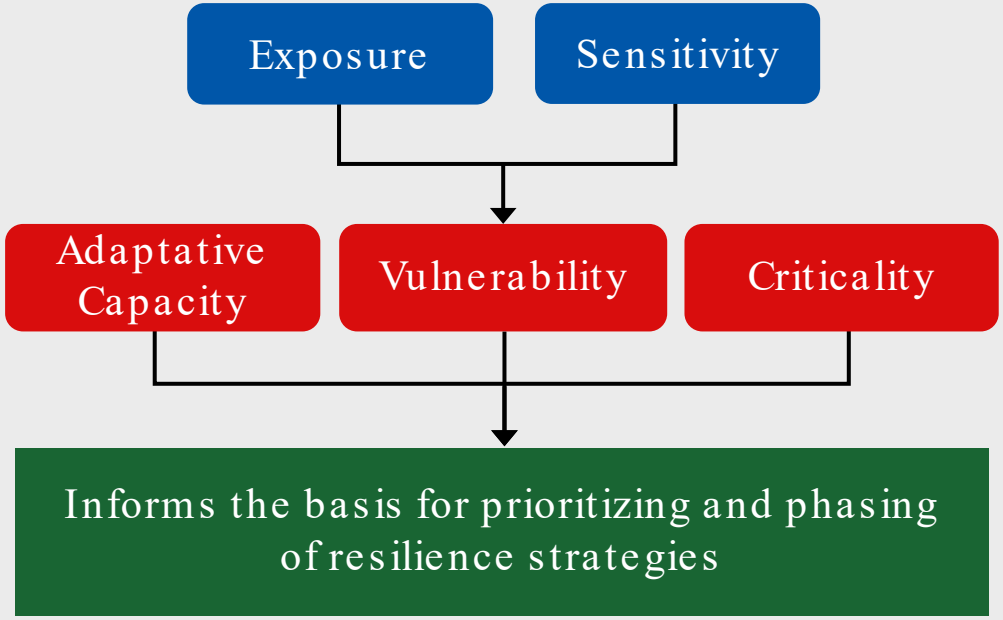
EXPOSURE: Presence of assets in areas subject to disruptors

SENSITIVITY: Degree that assets are affected by disruptors

ADAPTIVE CAPACITY: Ability to modify asset to maintain function

VULNERABILITY: Degree to which an asset or system is susceptible to adverse impacts

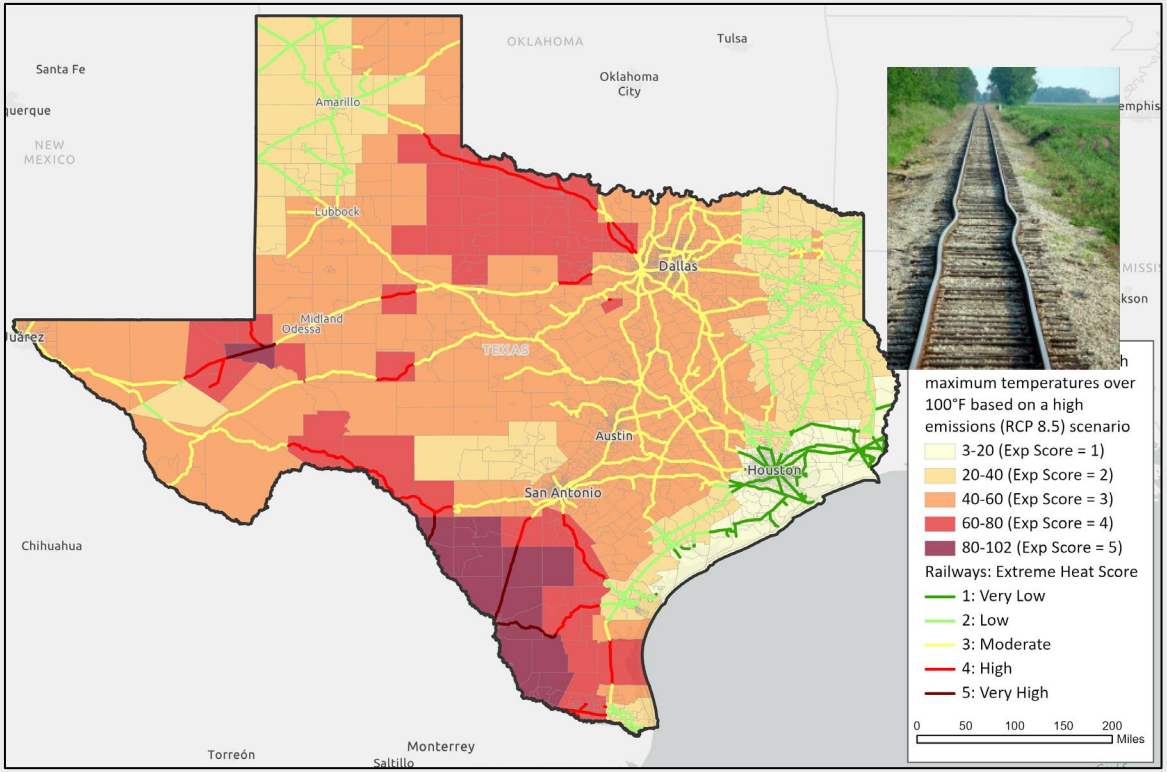
CRITICALITY: Measure of asset importance to the system



Vulnerability Scoring Example

Asset	Coastal Flooding	Heat	Wildfire	Cold	Inland Flooding	Hurricanes	Drought	
I-35 Segment	HIGH (3)	LOW (1)	MODERATE (2)	LOW(1)	HIGH (3)	MODERATE (2)	MODERATE (2)	Sensitivity Scores
I-35 Segment	VERY HIGH (5)	MODERATE (3)	MODERATE (3)	HIGH (4)	LOW (1)	MODERATE (2)	HIGH (5)	Exposure Scores
I-35 Segment	15	3	6	4	3	4	10	Vulnerability Scores
I-35 Segment	HIGH	LOW	MODERATE	LOW	LOW	LOW	HIGH	Vulnerability Ratings

Vulnerability Mapping Example



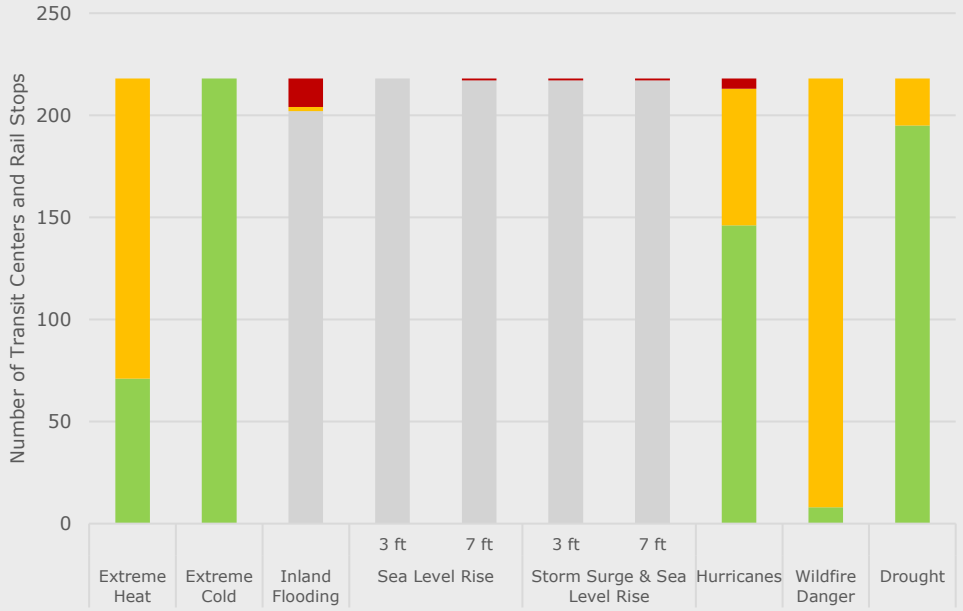
Sensitivity Scoring

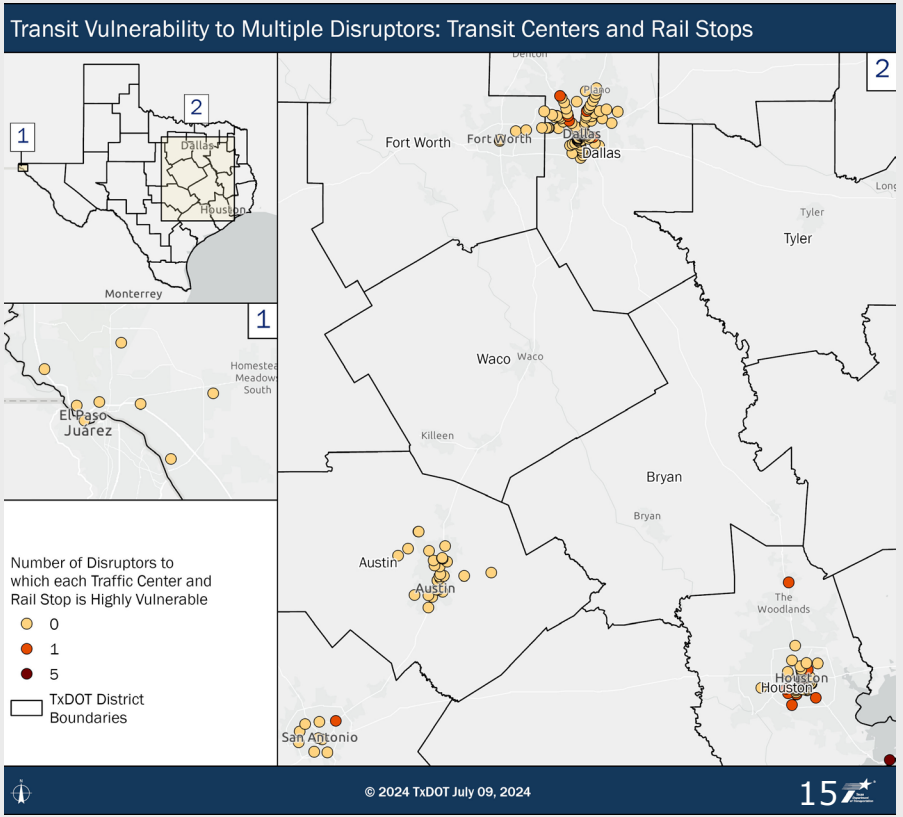
	EXTREME HEAT
ASSET GROUP	**SENSITIVITY**
Roadways	Moderate
Transit	Low
Railways	High
Bridges	Moderate
Maritime	Low
Airports	Low

Data Overview

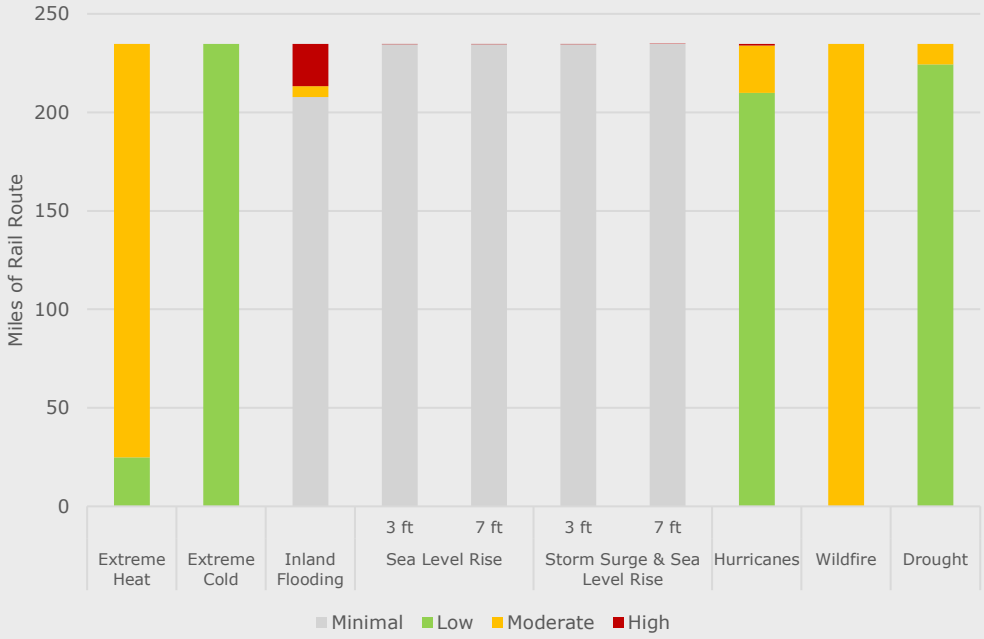
Asset Type	Name	Source	Description
Transit	• Transit centers & Rail (passenger) stops • Transit rail (passenger) routes	Various	Acquired from major transit districts: • Bexar County (bus routes and stops) • Dallas County (rail routes, rail stations, bus routes, and bus stops) • Harris County (rail routes, rail stations, bus routes, bus stops, and transit centers) • Travis County (bus routes, bus stops, and transit centers) • El Paso County (bus routes, bus stops, and transit centers)
Bike and Pedestrian	Existing/ Planned Bikeways, Trails, and Paths	TxDOT	• Bikeway network data collected for district bike plans • TxDOT Comprehensive Accessibility Program (TCAP)

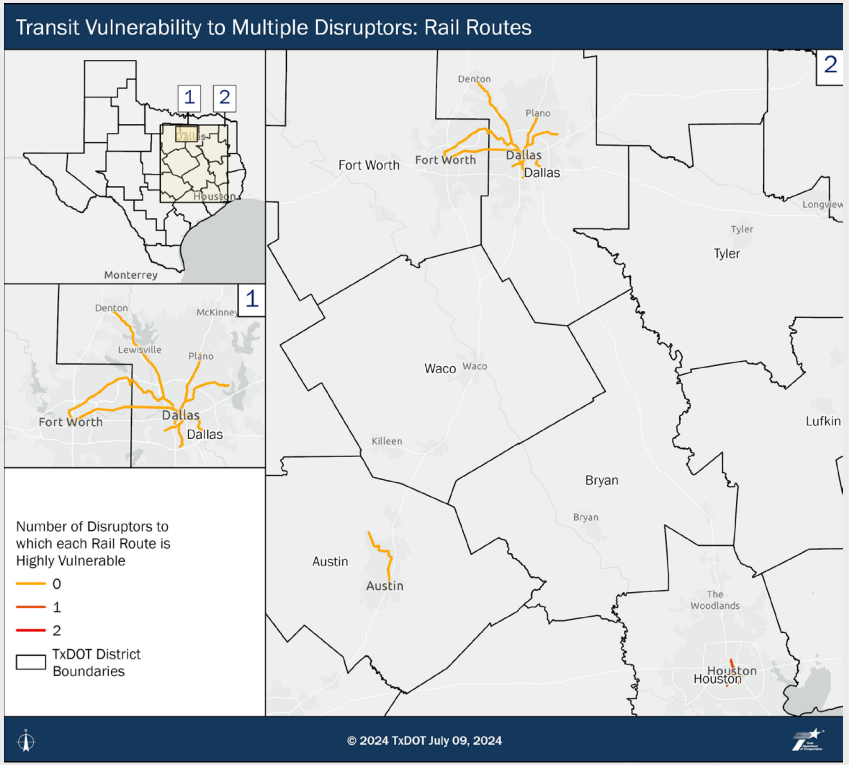
Transit Centers and Rail Stops Vulnerability





Transit Rail Track Vulnerability

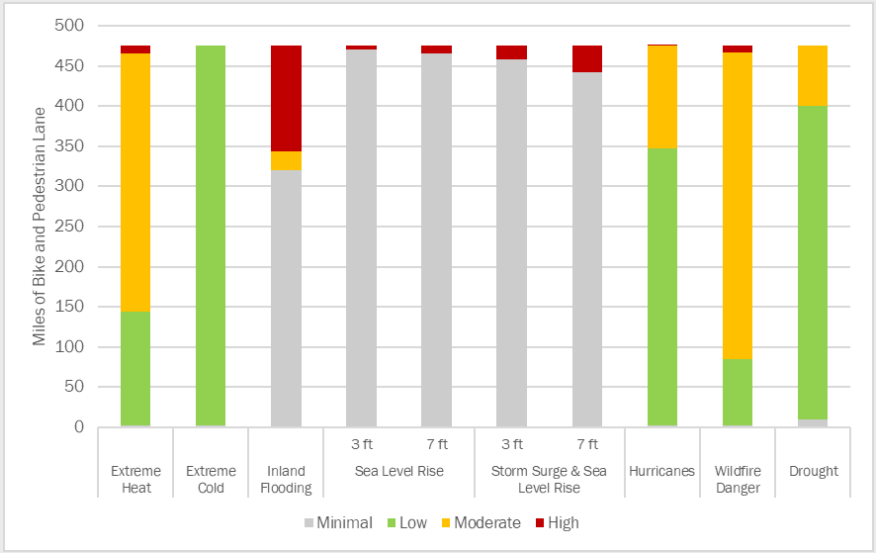


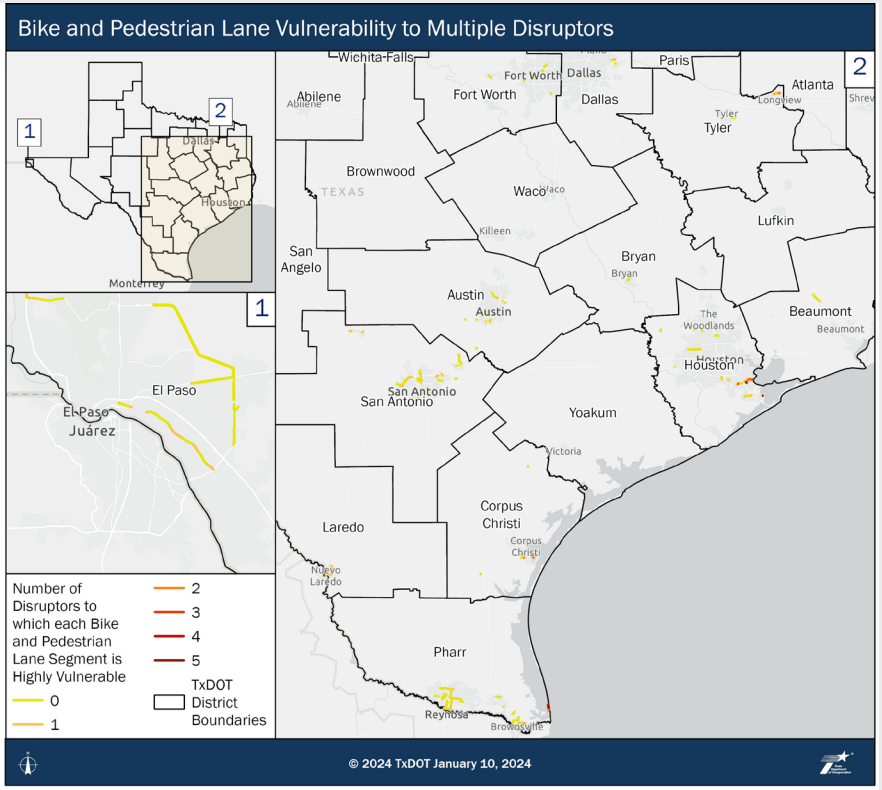


Transit-Key Vulnerabilities

- Five transit centers and light rail stops and one mile of light rail route have high vulnerability to hurricanes, all in the Houston District.
- Six transit centers and light rail stops and 17 miles of light rail route in the Dallas District.
- Six transit centers and light rail stops and one mile of light rail route in the Houston District have high vulnerability to inland flooding.

Lanes & Bike/Pedestrian Pathways





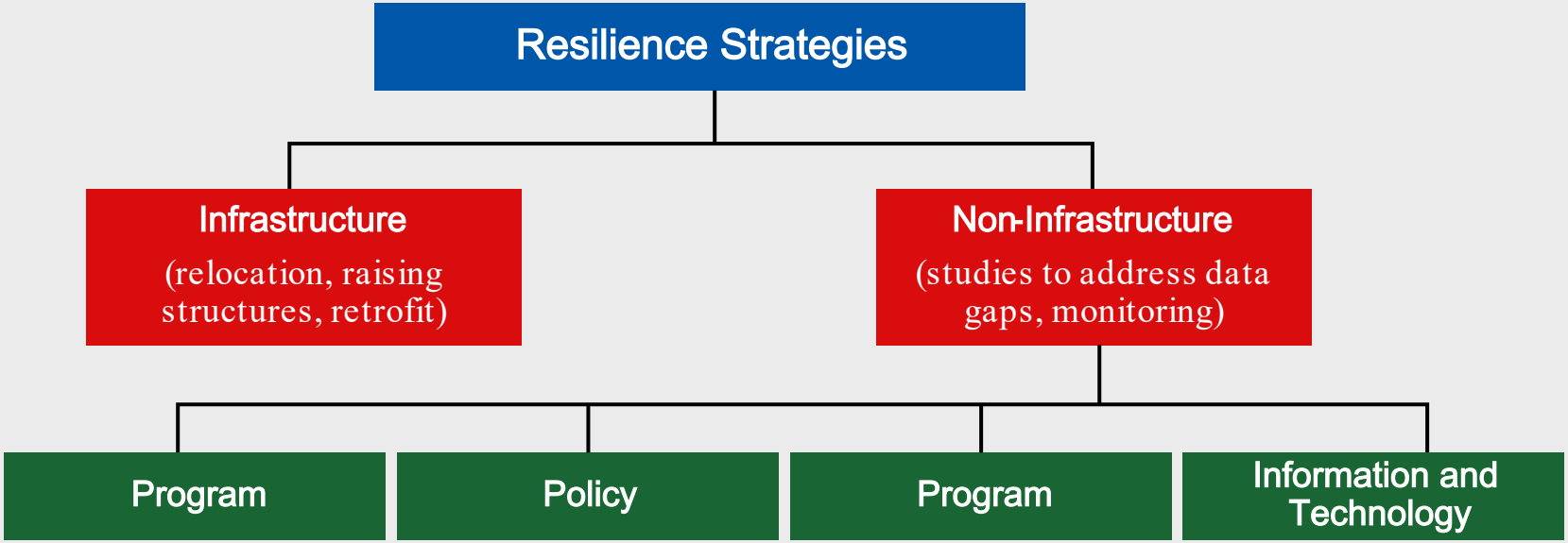
Bike and Pedestrian Pathway Key Vulnerabilities

- Nine miles (2%) of bike and pedestrian lanes in this study have high vulnerability to extreme heat.
- A total of 132 miles (28%) of bike and pedestrian lanes in this study have high vulnerability to inland flooding.

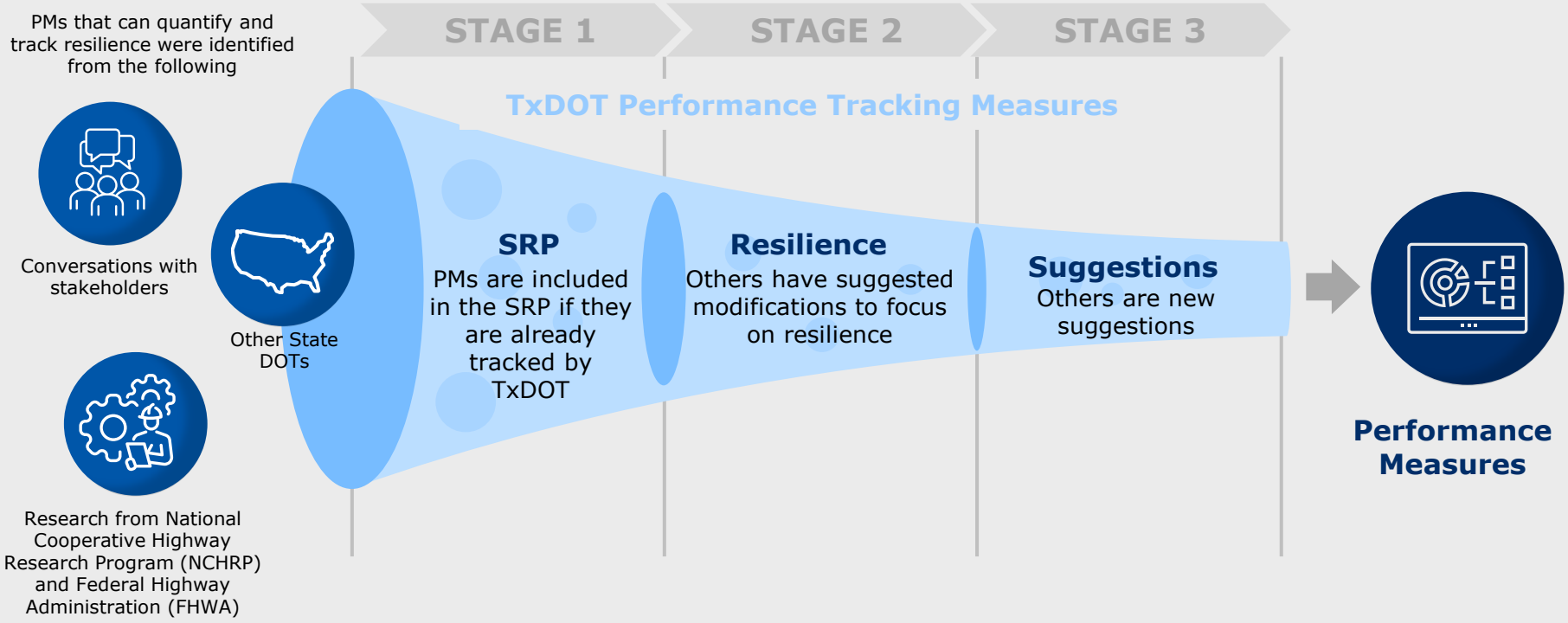
Review Existing Project Needs

- ✓ Leverages existing planned projects
- ✓ Identifies projects increasing TxDOT resilience
- ✓ Identifies potential modifications to increase resilience of planned projects
- ✓ Forms basis of recommended resilience strategies

Develop Resilience Strategies



Performance Measure (PM) Development



Stakeholder Engagement

Agency and Stakeholder Engagement

Resiliency Steering Committee (RSC)

- TxDOT District Representatives
- TxDOT Division Representatives

Internal and External Stakeholders

- TxDOT Districts & Divisions
- Metropolitan Planning Organizations
- Cities/Counties
- Academics
- State Government Agencies
- Federal Agencies
- Trucking and Industrial Associates
- Transportation Industry Stakeholders
- Non-Profits and NGOs
- Other DOTs

Coordination with Other Planning Efforts

- Statewide Long-Range Transportation Plan
- Statewide Active Transportation Plan
- Statewide Multimodal Transit Plan
- Statewide Freight Resiliency Plan
- Corridor Studies

Internal and External Stakeholder Engagement

Resiliency Steering Committee

- **5** RSC meetings
- Deliverables Review

Internal and External Stakeholders

- **40+** Interviews
- **10** Workshops
- Data collection
- Final draft review

Coordination with Other Planning Efforts

- **10+** Coordination meetings
- **10+** Data collection outreach meetings

How stakeholder input was used

- Identifying resilience challenges across the state
- Ground-truthing vulnerability assessment
- Developing resilience strategies and measures

Project Schedule

DECEMBER 2022
Statewide Resiliency Plan Kickoff

EARLY 2023
Build asset inventory, map current & future disruptors

EARLY FALL 2023
Complete vulnerability assessment

SPRING 2024
Incorporate findings into SLRTP

SPRING 2023
Begin stakeholder engagement

FALL 2023
Review existing planned projects

EARLY 2024
Develop resilience strategies

SUMMER 2024
Finalize Statewide Resiliency Plan

WE ARE HERE

Statewide Resiliency Plan Implementation

Question and Discussion

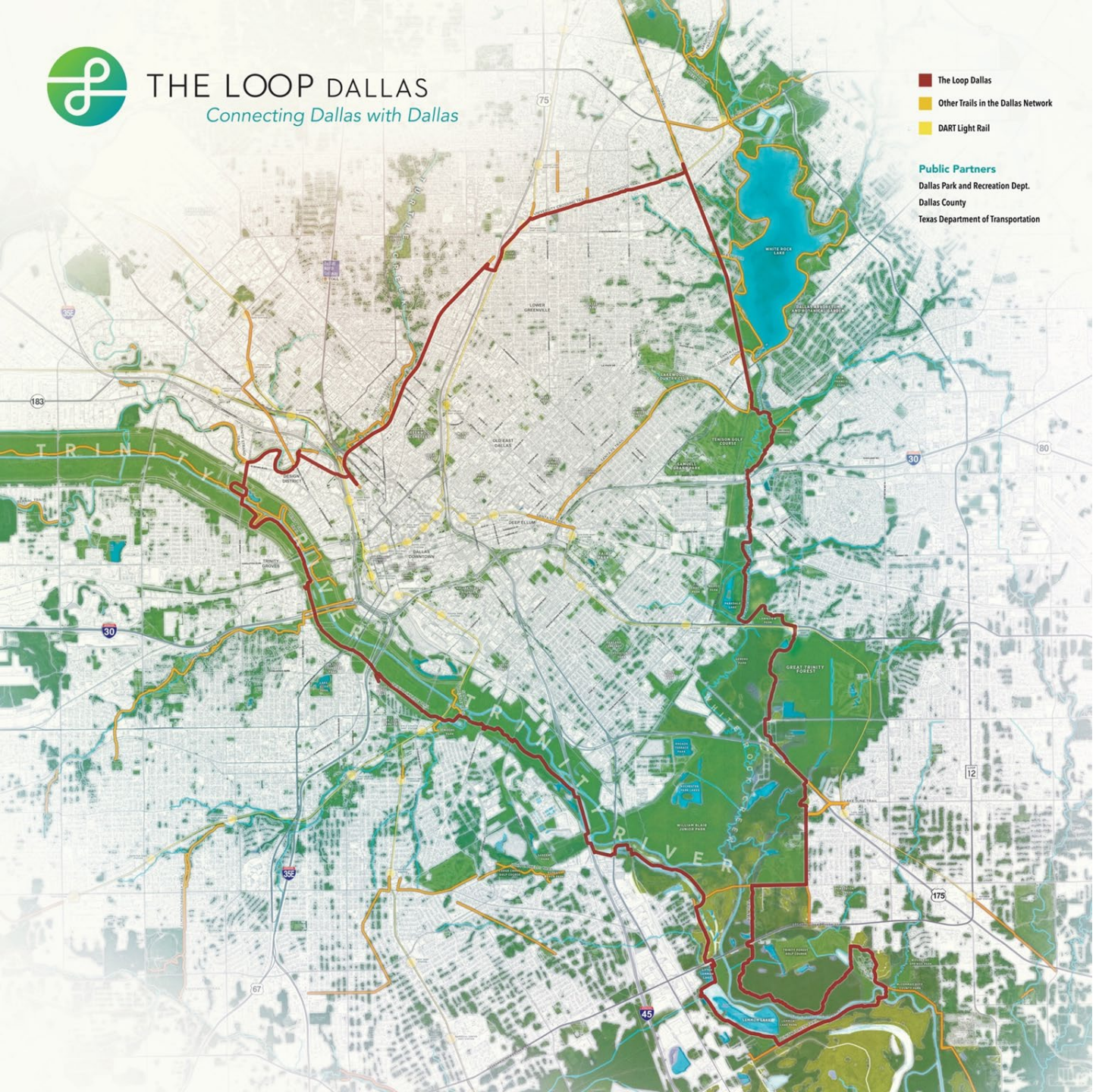
Comments or Questions

SHIRLEY LI, Project Manager
Shirley.Li@txdot.gov

GIACOMO YAQUINTO, Statewide Planning Branch Manager
Giacomo.Yaquinto@txdot.gov

CASEY WELLS, Systems Planning Section Director
Casey.Wells@txdot.gov

THE LOOP
DALLAS



The Loop Dallas

For the first time in its history, Dallas will connect north, south, east, and west with a shared trail system, providing equitable access to green space and an urban forest previously inaccessible to the public.

The Loop Dallas has leveraged the original $10M investment from private donors 8:1, securing a over $80M in public funds.

All projects needed to complete The Loop Dallas are in the design or construction phase and are on track to be completed by 2028.

City-wide Connectivity

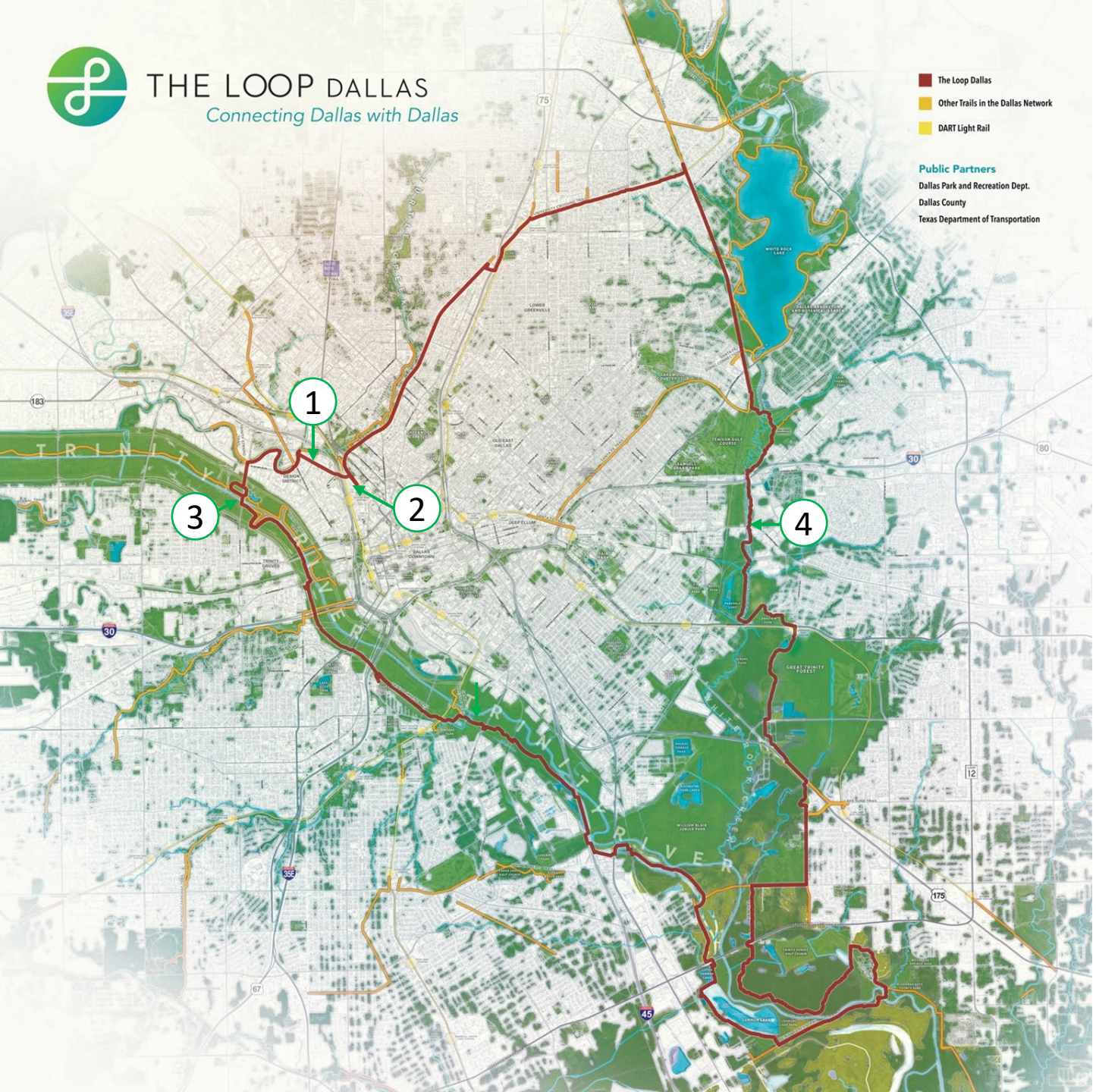
The Loop Dallas is building a 50-mile circuit trail by the same name that will encircle the core of the city.

By connecting 39 miles of existing trails in Dallas with 11 miles of newly built trails, The Loop Dallas will increase access to public transportation and green space, ensuring residents can access these resources across the city to commute, for recreation, and wellness.

11 Miles Connect 39 Miles, Creating a 50-Mile Loop

The Loop Dallas Connects:

- **9 City Council Districts** in the center of Dallas
- **5 DART Light Rail Stations** and is within ½ miles of an additional 4 stations
- **Over 150 Miles** of the completed linear trail system
- **The Trinity River** and the **Fort Worth to Dallas Trail** to the metroplex

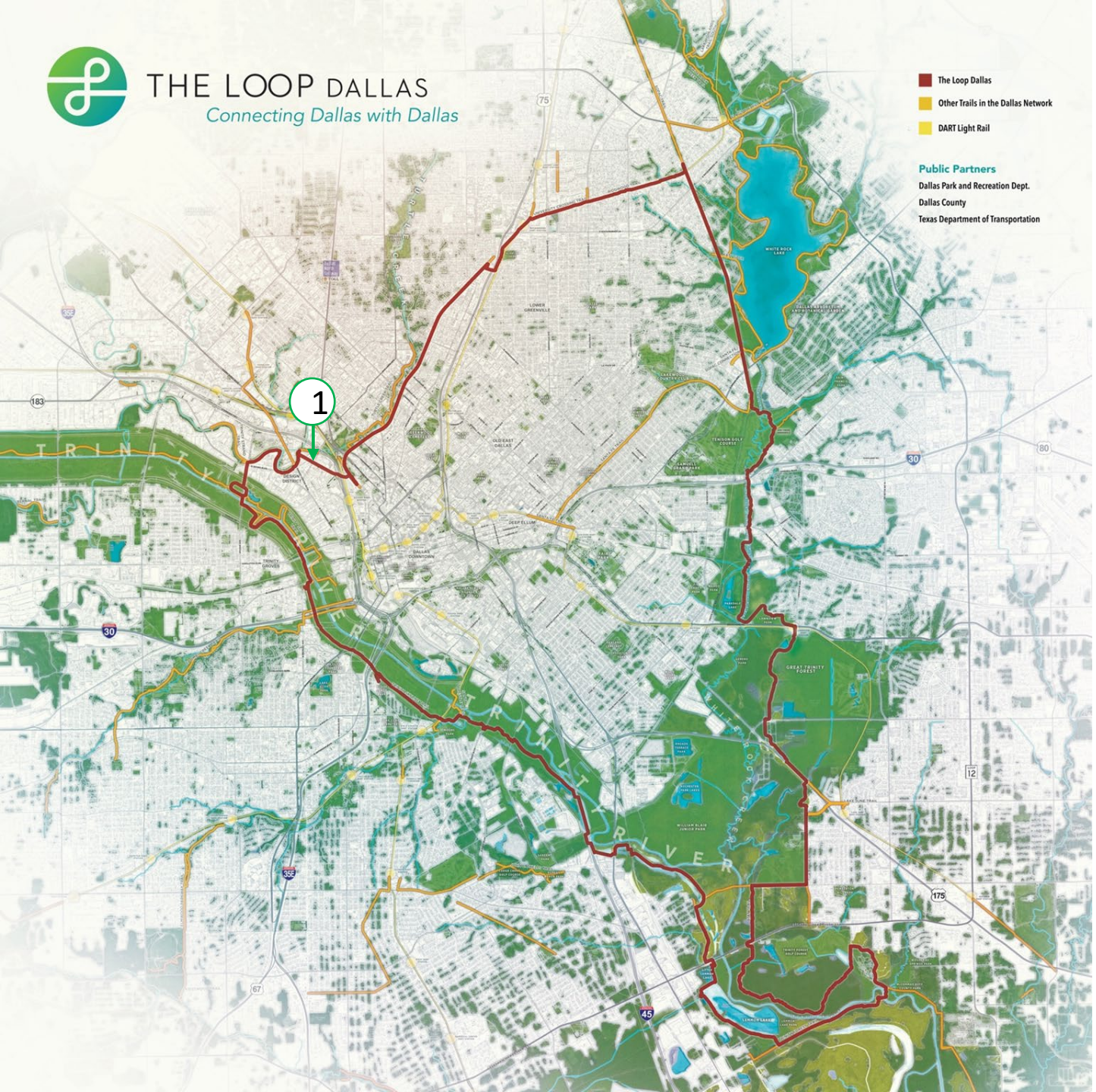


Four New Projects

1. Hi Line Connector
2. The Loop Plaza
3. Discovery Gateway
4. Trinity Forest Spine Trail

All other trails in The Loop Dallas are existing or currently in delivery:

- AT&T Trail
- Katy Trail
- Santa Fe Trail
- Santa Fe Trestle Trail
- Skyline Trail
- SoPac Trail
- Trinity Forest Trail
- Trinity Strand Trail
- University Crossing & Ridgewood Trail



Hi Line Connector

Lead Designer:

swa

An Active Transportation Corridor

Project Limits: 1 mile – Katy Trail to Trinity Strand Trail

Connects the iconic Katy Trail in Uptown Dallas to the burgeoning Design District

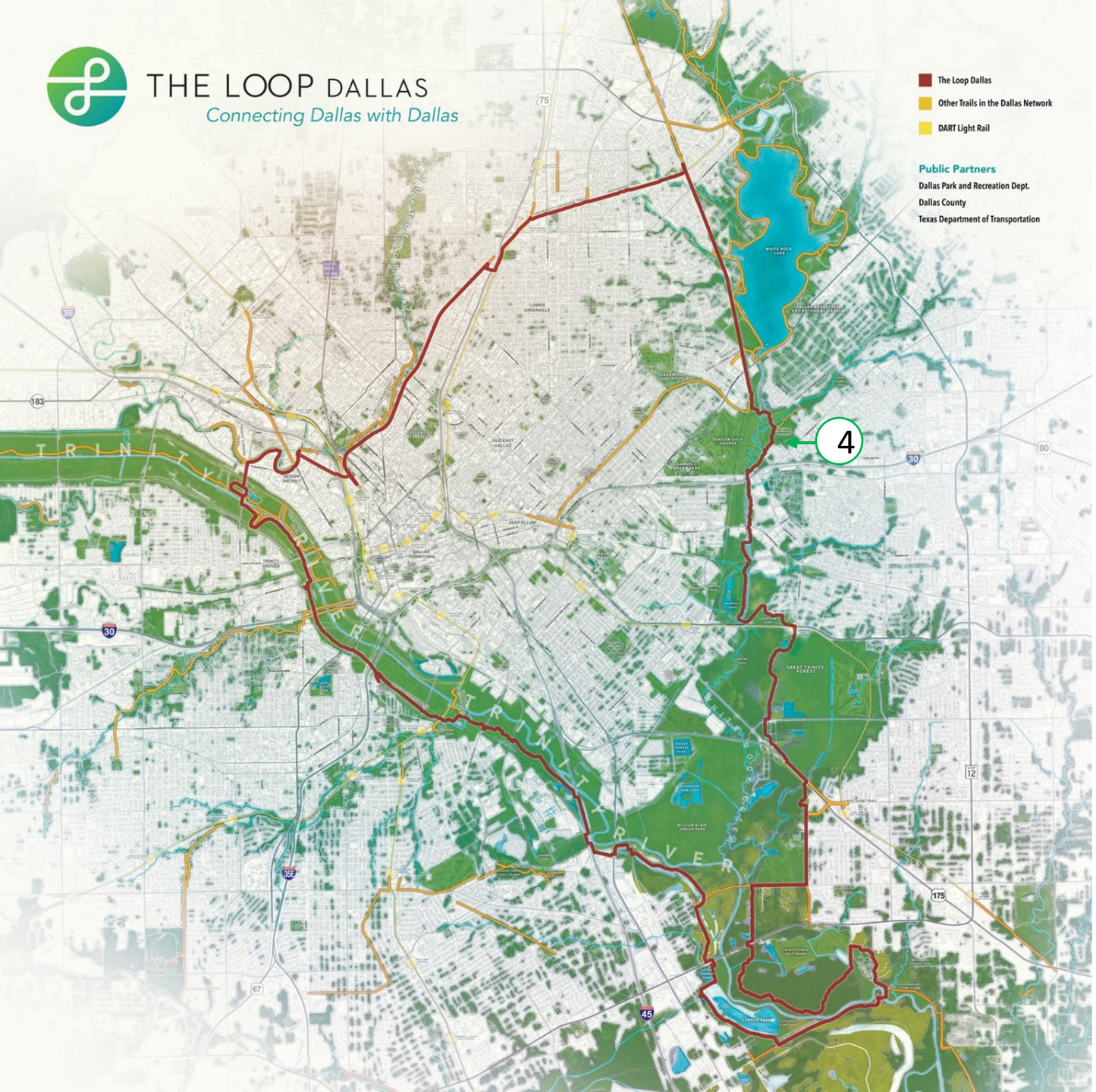
Adjacent to the American Airlines Center (sports arena for the Dallas Mavericks, Dallas Stars, and other events)

Overcomes the barrier created by I-35E and a commuter rail line

When complete, it will be the most advanced active transportation corridor in North Texas

Hi Line Avenue

Eastbound

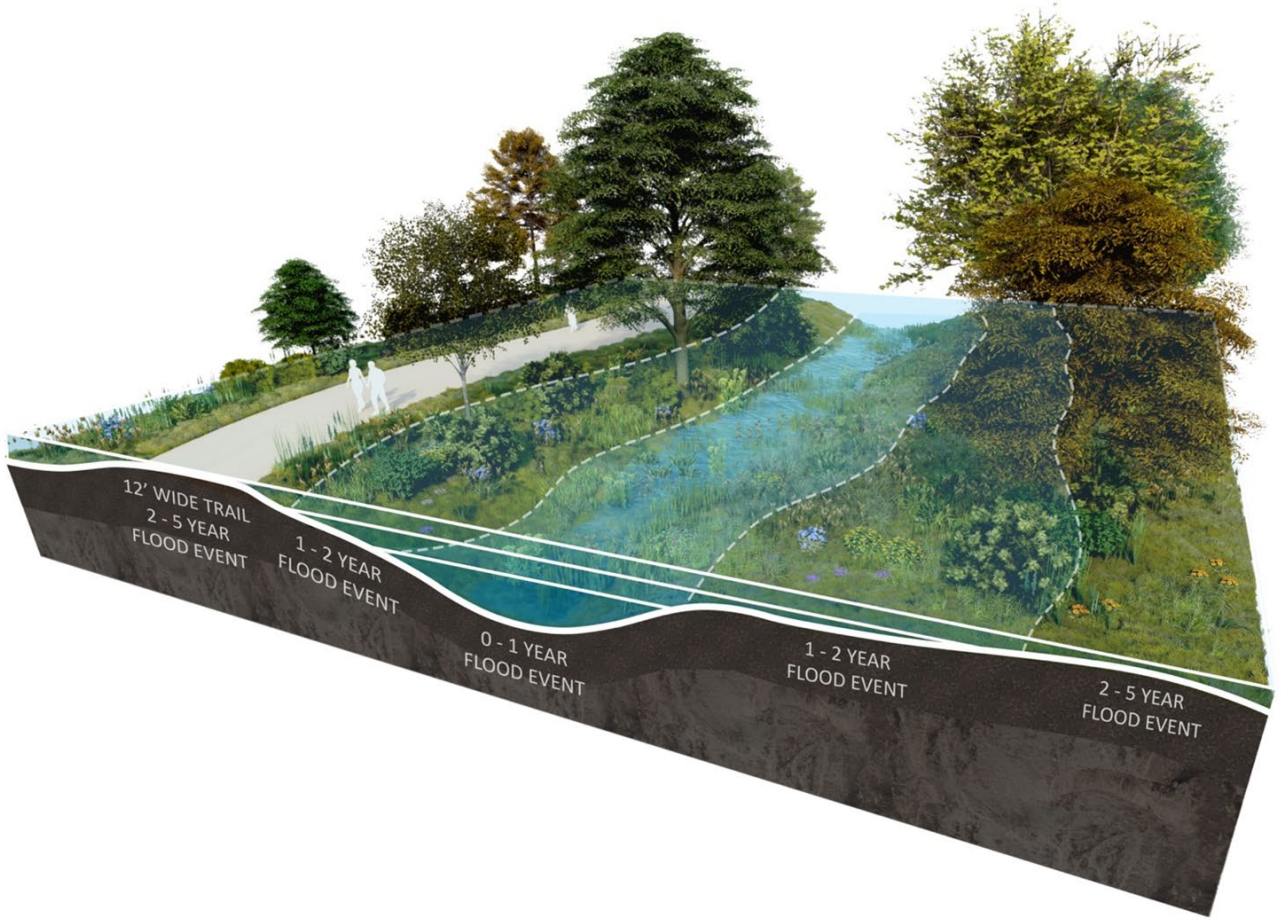


Trinity Forest Spine Trail

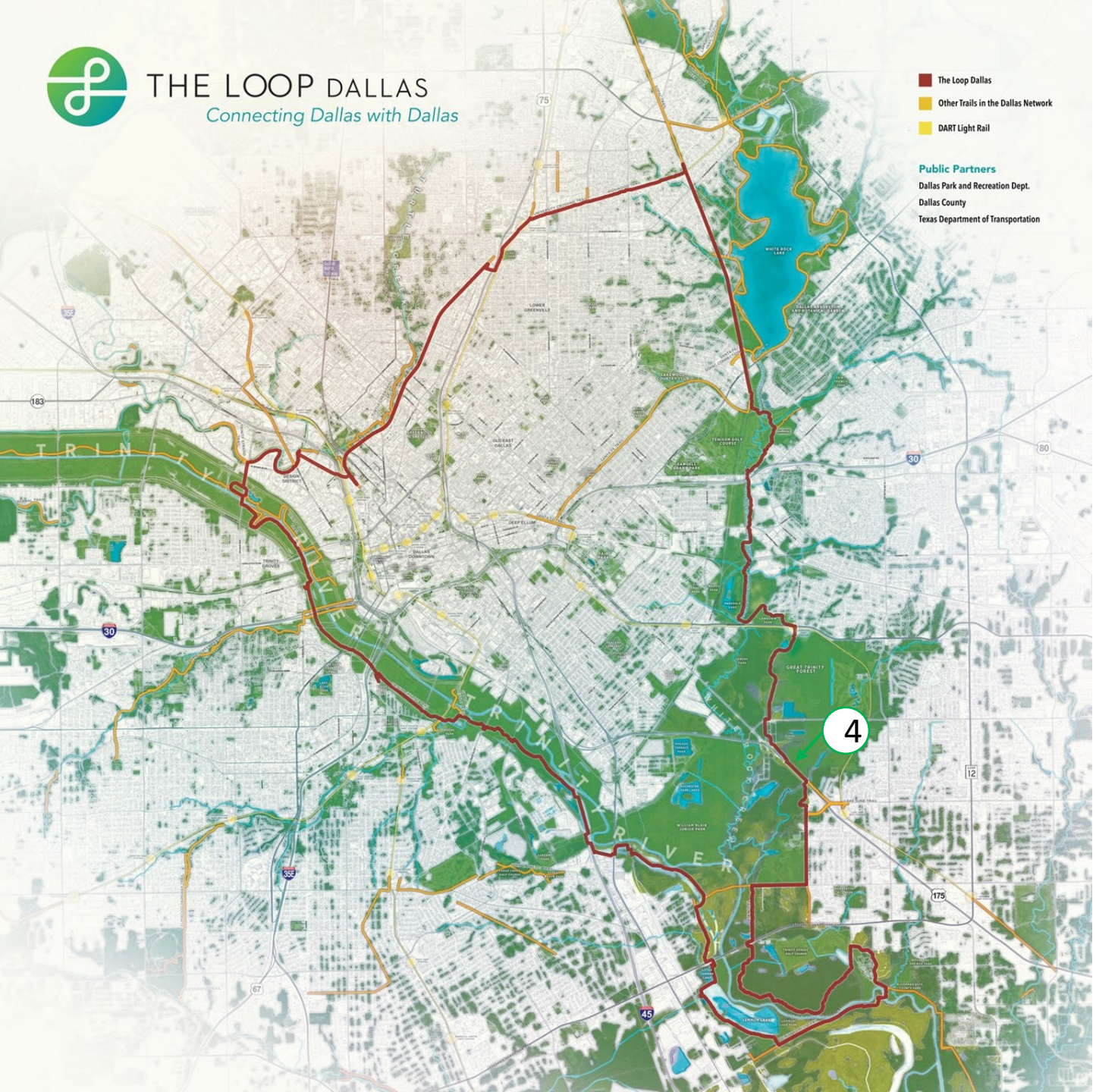
North phase I – Santa Fe Trail to Samuell Blvd

Completed Fall 2023

Environmental Factors



- 12’ Wide Concrete Trail
- Elevated berms, boardwalks, and bridges to increase accessibility
  - Less flooding
  - Less maintenance for faster return to usability
- Landscaping
  - Clearing Underbrush
  - Revegetation plan with native and adaptive species



Trinity Forest Spine Trail

South phase – US175 to Lake June Blvd

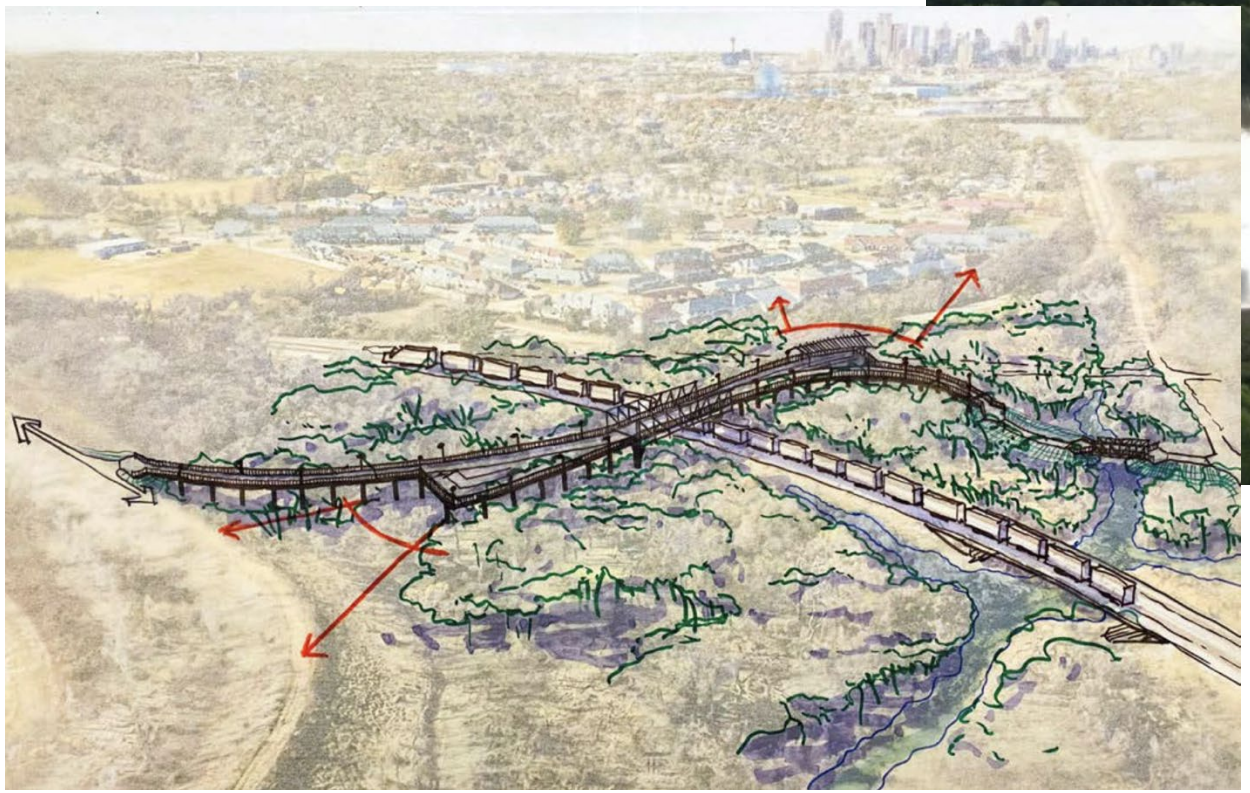
Construction Started Spring 2024

The Loop Dallas

Pleasant Grove, Lake June Bridge over US 175

Elevated trail heading to Pleasant Grove along US 175

Trinity Forest Spine Trail – Bridge over UPRR



Installation of 190’ bridge over White Rock Creek on Trinity Forest Spine Trail