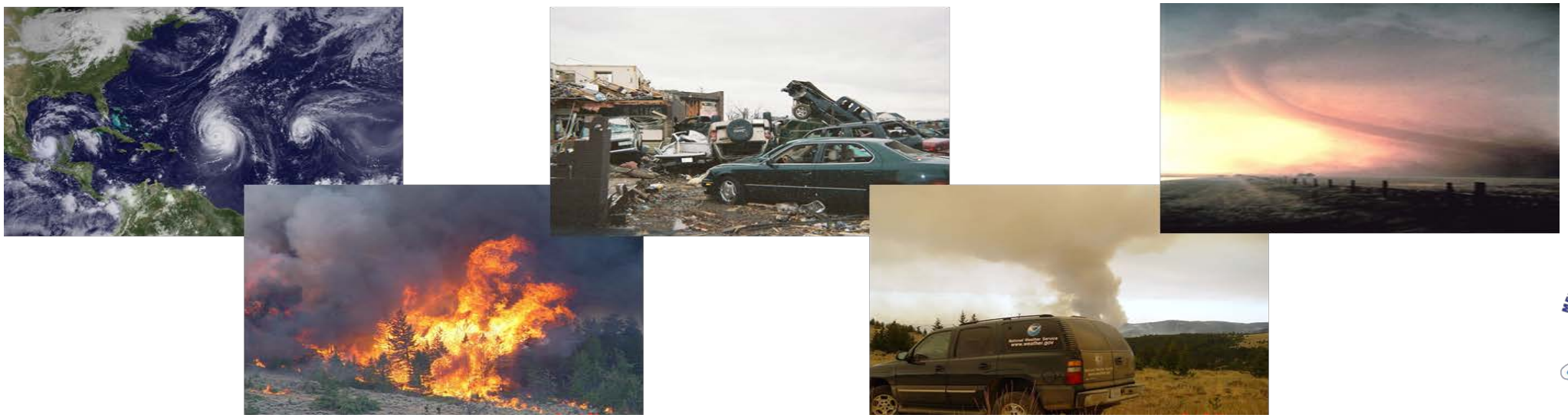
# Texarkana MPO

## Integrating Resilience into MTP Development

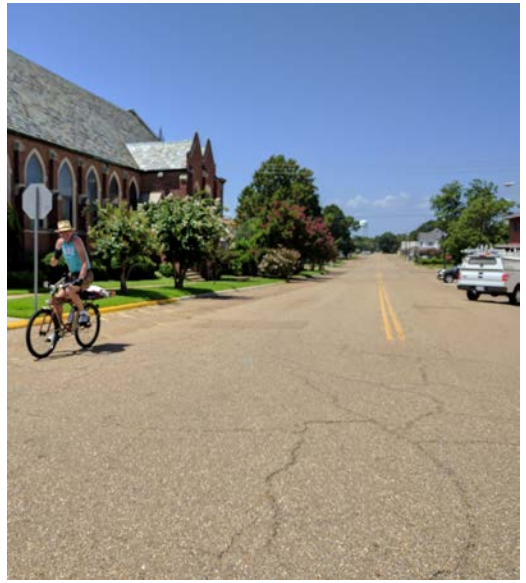
June 26th, 2019

# What is Resilience?

- *Reducing vulnerability to chronic and acute stressors by ensuring redundancy and reliability to meet essential travel needs*
- *Implementing a resilient transportation system that can quickly respond to unexpected conditions and return to a sustainable state of performance*



# Resilience in the Texarkana MPO 2045 MTP



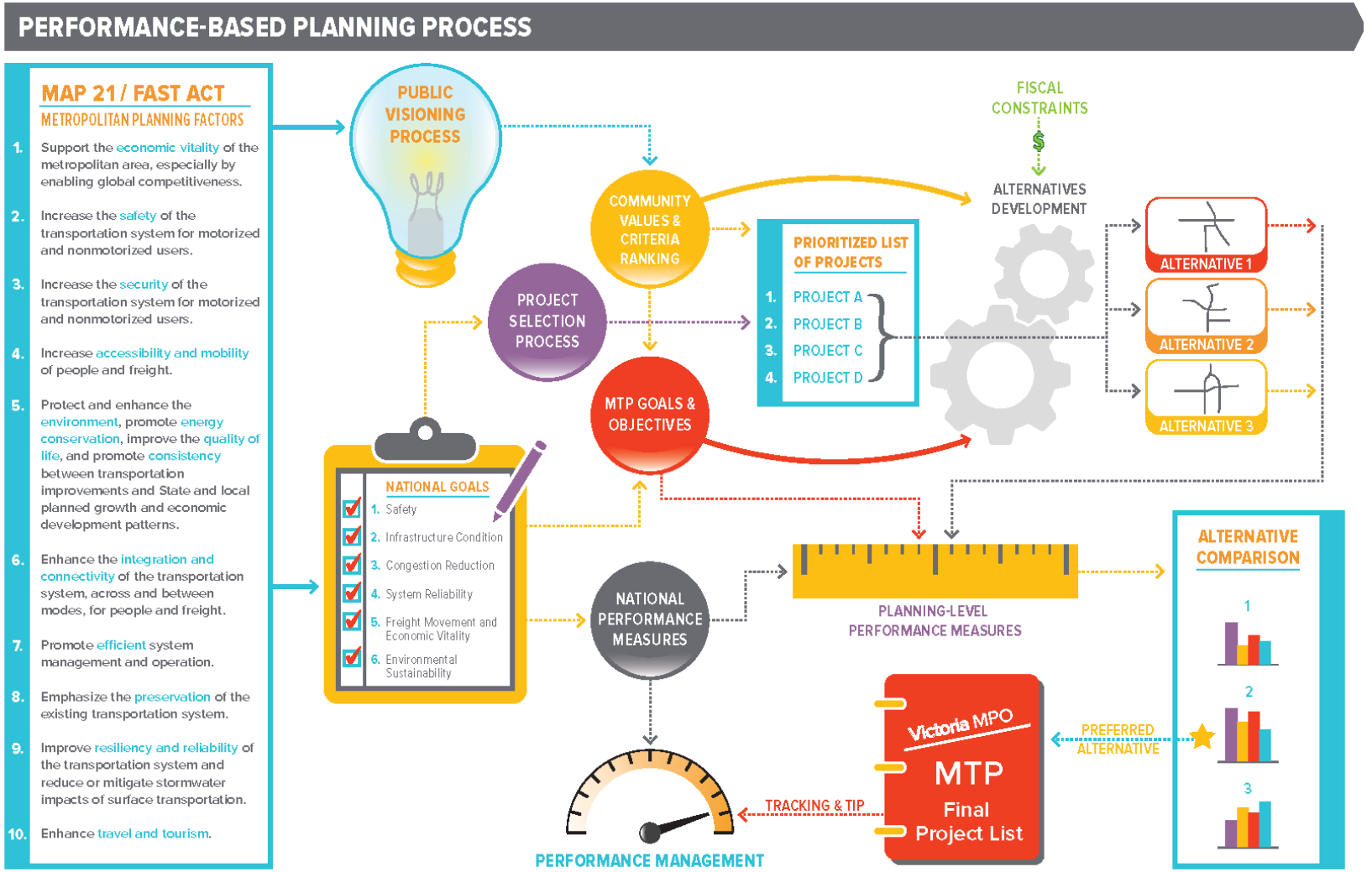
# Resilience in the Texarkana MPO 2045 MTP

# Performance Based Planning Process

Goals

Measures

Targets



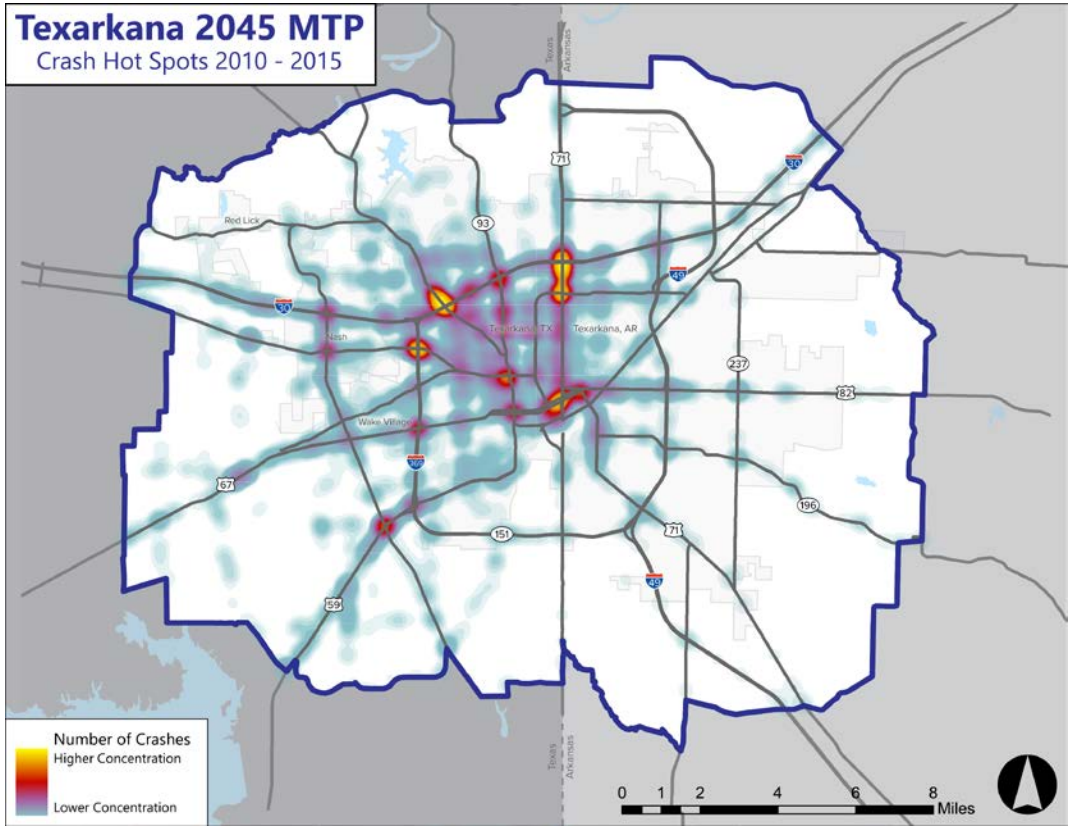
# Plan Review and Needs Assessment

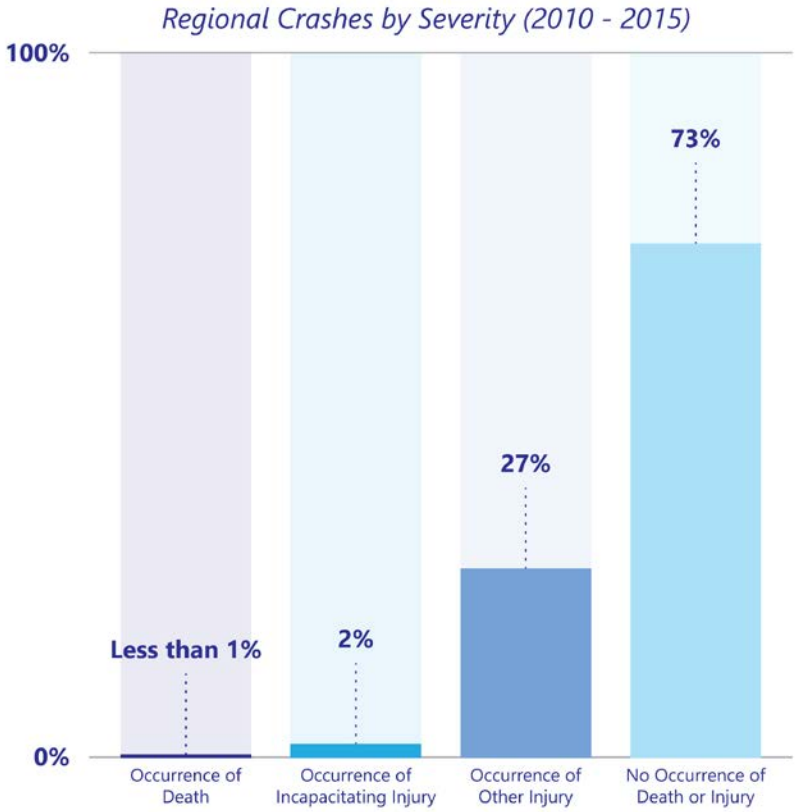
Identify known acute stressors from historical events:

- Floods
- Tornadoes
- Earthquakes
- Fires
- Major transportation incidents, e.g., crashes and spills
- Other transportation related events

Consider predicted acute stressor changes in the future environment based on published research, e.g. climate change

# Plan Review and Needs Assessment



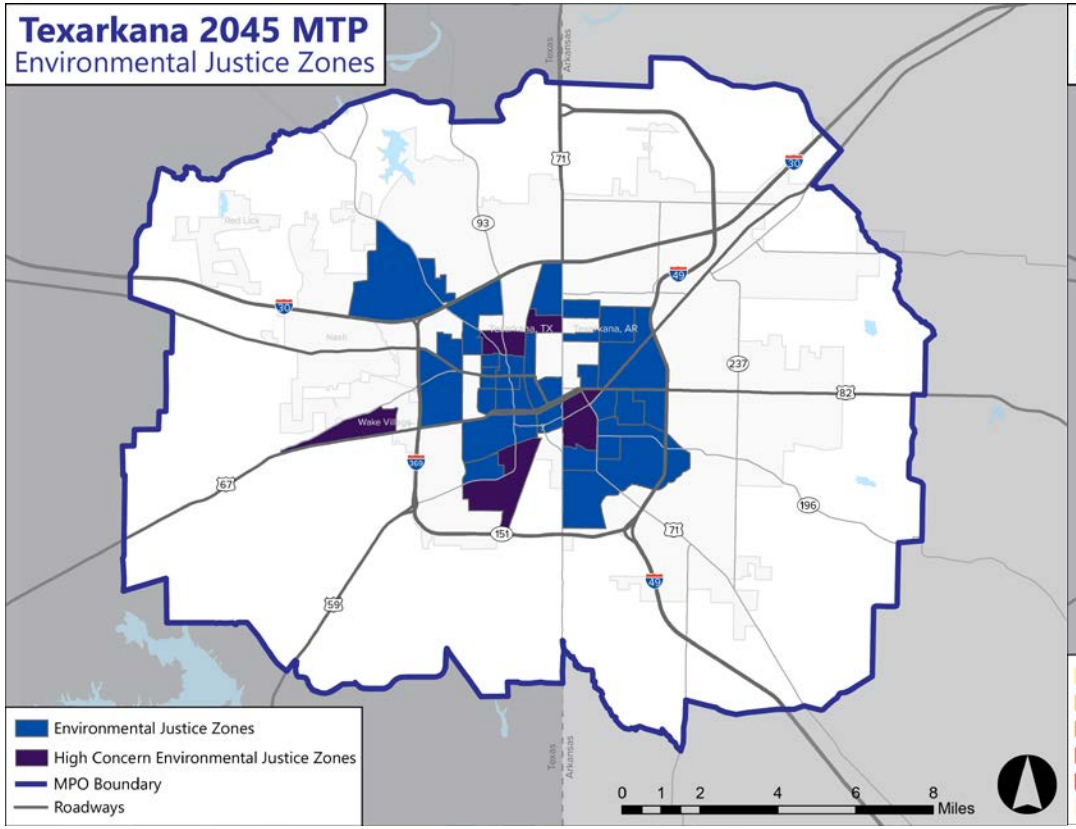



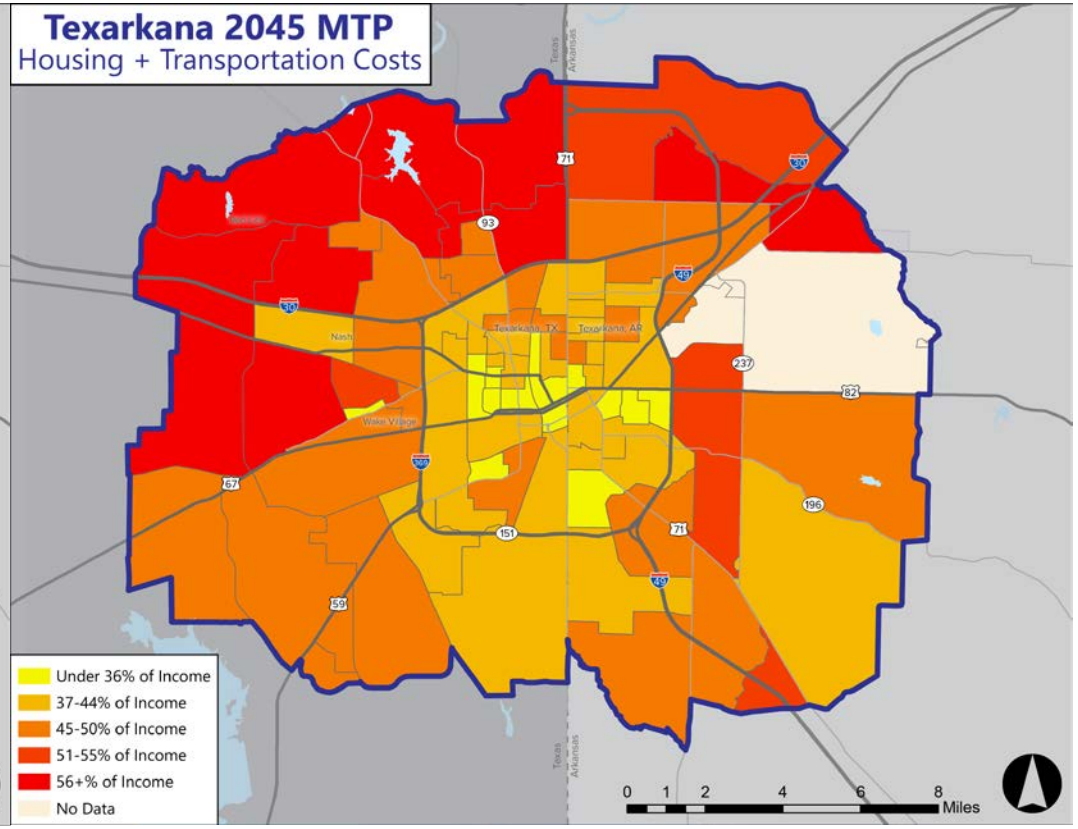
# Plan Review and Needs Assessment

Identify Chronic Stressors discovered through the components of the multimodal needs analysis:

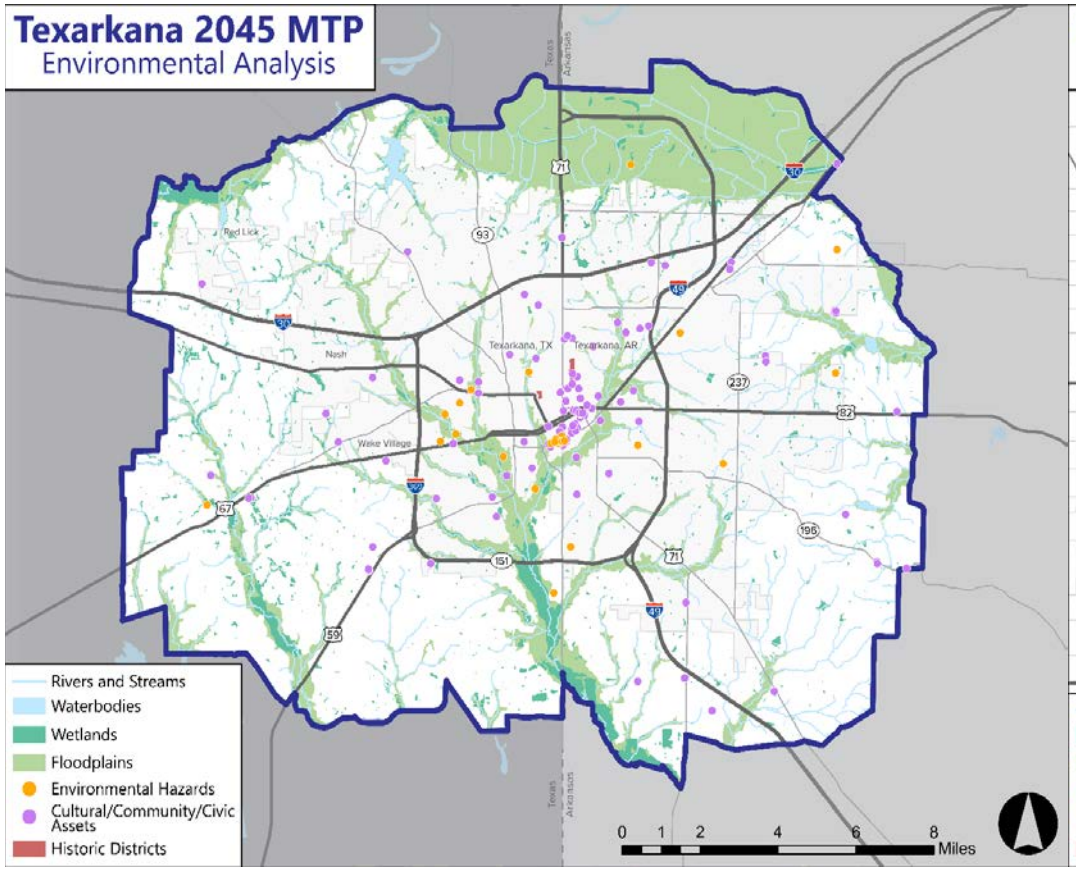
- Growth Pattern and Population Changes
- Challenges faced by Environmental Justice Communities
- Housing and Transportation Costs
- Chronic and Incident Related Congestion
- Poor Level of Travel Time Reliability
- Environmental Factors (soil conditions, heat, rain/drought cycle)
- Increasing Maintenance Needs
- Funding (or the lack thereof)

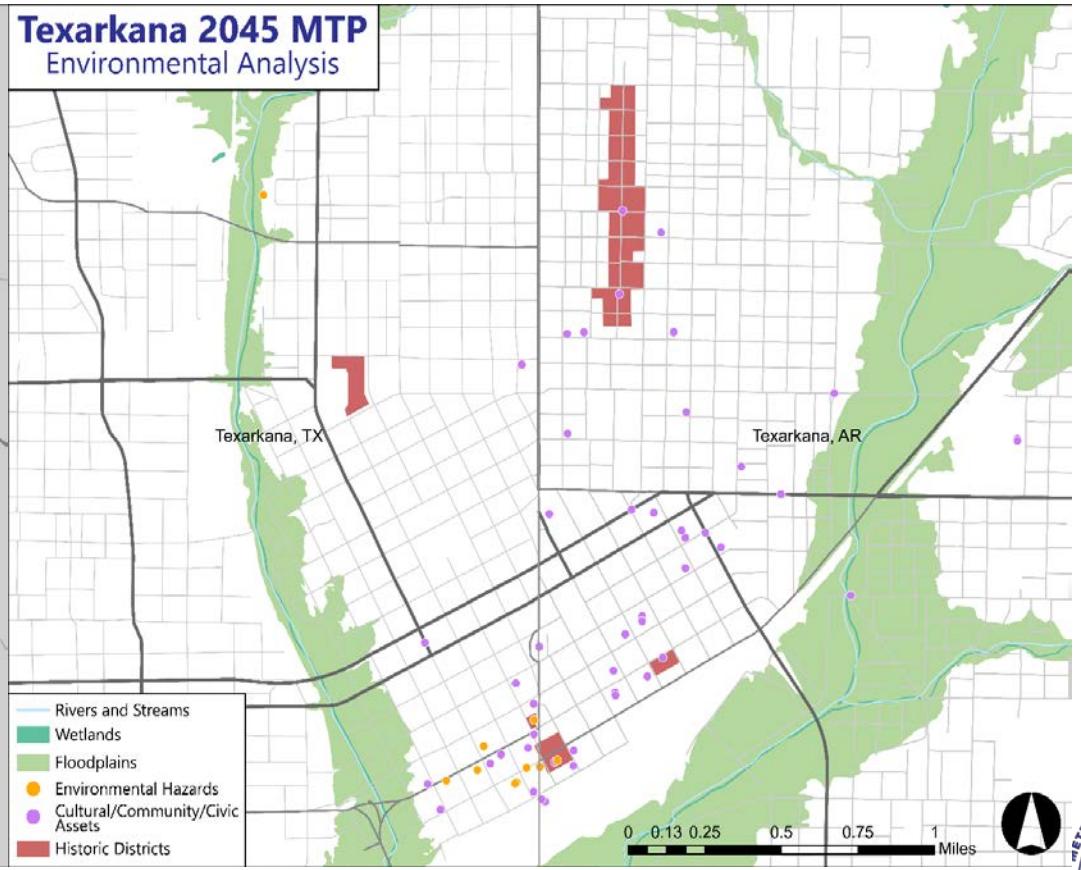
# Plan Review and Needs Assessment



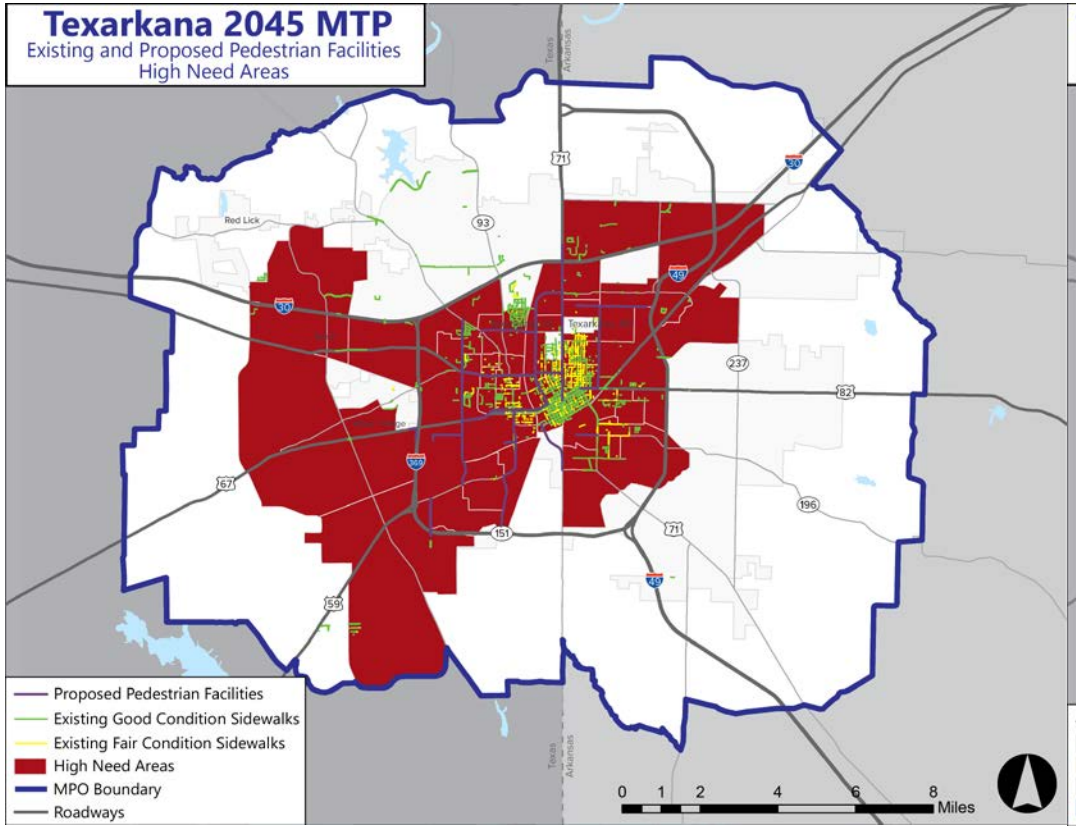



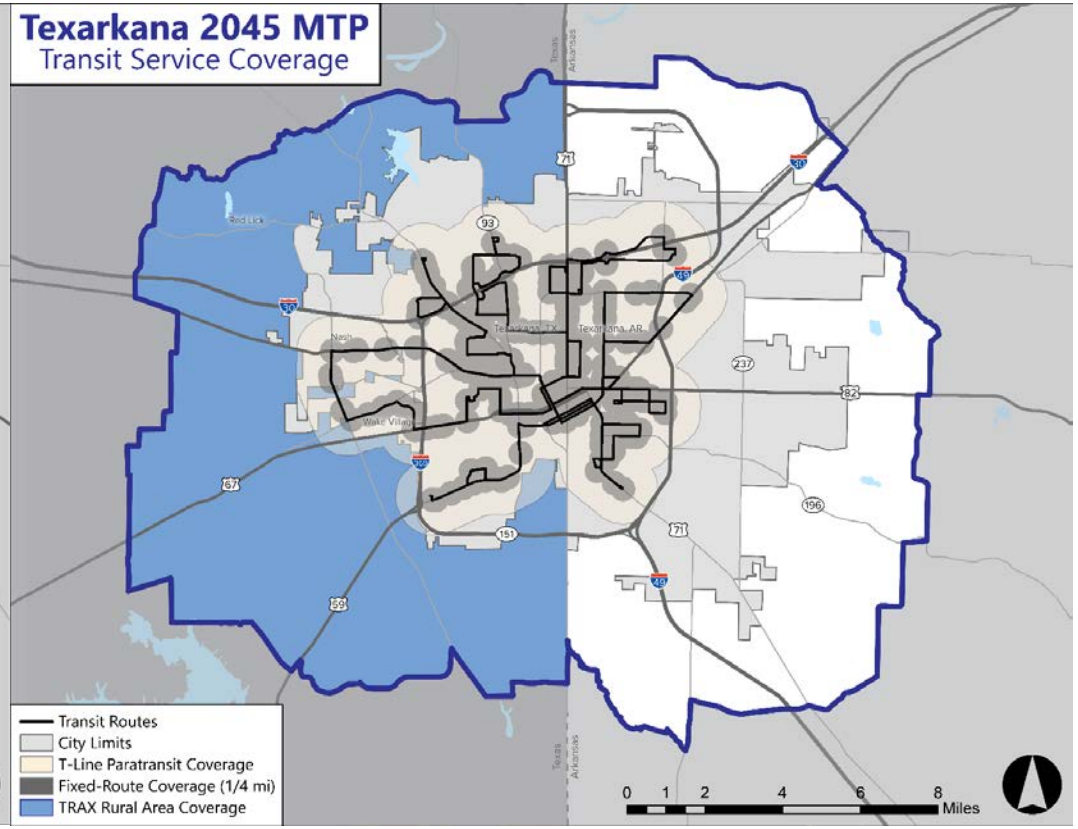
# Identify Vulnerabilities



# Identify Gaps in Accessibility



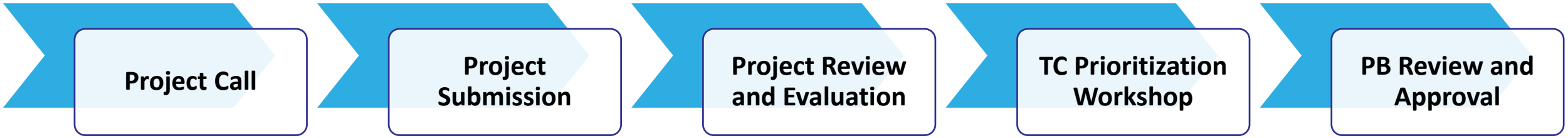
# Assets that Support Resilience

Identify existing assets that support resistance to chronic and acute stressors, such as:

- Diversified Economic Portfolio
- Diverse Existing Multimodal Options
- Implemented TSM&O Strategies
- Existing Maintenance Plans Addressing Road and Transit State-of-Good-Repair
- Comprehensive and Coordinated Planning Efforts
- Coordination and Planning for Both Short- and Long-term Recovery (e.g., Continuity of Operations Plans and Emergency Operations Plans) with the Regional Office of Emergency Preparedness

# Apply Resilience Assessment to Project Prioritization

- Texarkana Project Prioritization includes 12 Evaluation Criteria following the FAST Act Planning Factors
- The Texarkana process provides flexibility on scoring to account for local values (i.e., criteria weighting)



# Texarkana Project Prioritization – Evaluation Criteria

- Improve Safety and Security
- Improve Quality of Life
- Reduce Congestion
- Improve Multimodal Access
- Increase Multimodal Connections

# Project Prioritization – Evaluation Criteria

- Support Land Use and Economic Development Goals
- Promote Efficient System Management and Operation
- Preserve Rights-of-Way
- Protect the Environment
- Increase Multi-Modal Options and Energy Conservation
- Improve resilience and Reliability
- Enhance Travel and Tourism

# Texarkana Project Prioritization Workshop

To develop the Final List of Projects, Texarkana TC Members will participate in a Prioritization Workshop.

At the workshop, the members will receive Workbooks with:

- Project Maps
- Project Details
- Project Scoring Sheets
- Current Conditions Maps and Data

# Score Card and Evaluation Criteria

| TEXARKANA 2045 MTP PROJECT SCORING SHEET | | | |
|---|---|---|---|
| Project Name: | | | |
| Project Category: | | | |
| Project Sponsor: | | | |
| Amount STBG < 200K Funds Requested: | | | |
| Reviewer's Printed Name | | | |
| Reviewer's Initials: | | | |
| Evaluation Criteria | | Score Range | Your Score (whole numbers only) |
| **Improve Safety (0-10 Points)** | | | |
| Does this project address a high crash location, or a system wide safety condition? | | (0-5) | |
| Does this project address any of the SHSP's Emphasis areas? | | (0-5) | |
| **Improve Security (0-5 Points)** | | | |
| Does this project address or promote the reduction of the risk of individual acts of criminal behavior on a transit line, improvement in the emergency response capacity after an act of terrorism? | | (0-5) | |
| **Improve Quality of Life (0-10 Points)** | | | |
| Does this project improve quality of life? | | (0-5) | |
| Does this project enhance Travel and Tourism? | | (0-5) | |
| **Reduce Congestion (0-15 Points)** | | | |
| Does this project improve V/C of roadway or LOS of Intersections? | | (0-5) | |
| Can the project be expected to reduce congestion on the applicable corridors/region-wide? | | (0-5) | |
| Does this project include any TDM type strategies that reduce congestion? | | (0-5) | |
| **Improve Access and Connections (0-10 Points)** | | | |
| Will the project Improve mobility and accessibility without increasing VMT and ADT? | | (0-5) | |
| Does this project increase system connectivity and reduce travel times? | | (0-5) | |
| **Support Economic Development and Land Use Goals (0-10)** | | | |
| Does this project have positive impact on economic land use goals? | | (0-5) | |
| Is this project part of a regional program or economic development strategy? | | (0-5) | |
| **Promote Efficient System Management and Operation (0-5)** | | | |
| Does this project promote improved system management and reduction in costs? | | (0-5) | |
| **Preserve Right-of-Way (0-5)** | | | |
| Does this project include any Right-of-Way preservation? | | (0-5) | |
| **Protect the Environment (0-5)** | | | |
| Does this project significantly impact any wetlands, flood protection areas, or any culturally significant sites? (0 for direct impact, 5 for none) | | (0-5) | |
| **Increase Multi-Modal Options (0-15 Points)** | | | |
| Does this project facilitate the transfer of passengers and goods between different modes? | | (0-5) | |
| Does this project improve options for different modes of travel (i.e. single occupancy vehicle usage)? | | (0-5) | |
| Does this project improve access to existing/proposed transportation terminal facility? | | (0-5) | |
| **Conserve Energy (0-5 Points)** | | | |
| Will the project impact fuel consumption or reduce single occupancy vehicle usage? | | (0-5) | |
| **Cost Sharing (0-5)** | | | |
| Is the local match more than 30% of total project cost? (Yes = 5, No = 0) | | (0-5) | |
| **Project Readiness and Feasibility (0-10)** | | | |
| Does the project require Right-of-Way acquisition or Environmental Clearance? | | (0-5) | |
| Is the project ready to implement, or implementable within a reasonable timeframe? | | (0-5) | |

11. **Improve Resilience and Reliability of the Transportation System and Reduce or Mitigate Storm Water Impacts of Surface Transportation.** Examples of improvements to system resilience and reliability, as well as ways to reduce storm water impacts include the following:

- Increasing connections, especially for evacuation and recovery;
- Improvements in system condition (state of good repair).
- Projects with drainage design extending and incorporating outfall beyond the immediate right-of-way;
- Leveraging existing drainage infrastructure and discouraging growth into areas necessitating intensive drainage design.

# Texarkana MPO 2045 MTP

**Resilience is not just a condition it's a state of mind**

# Texarkana MPO

## Integrating Resilience into the 2045 MTP

*Thank You!*

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