

NCTCOG PRESENTATION

INTEGRATING REGIONAL TRANSPORTATION ISSUES AND OPPORTUNITIES

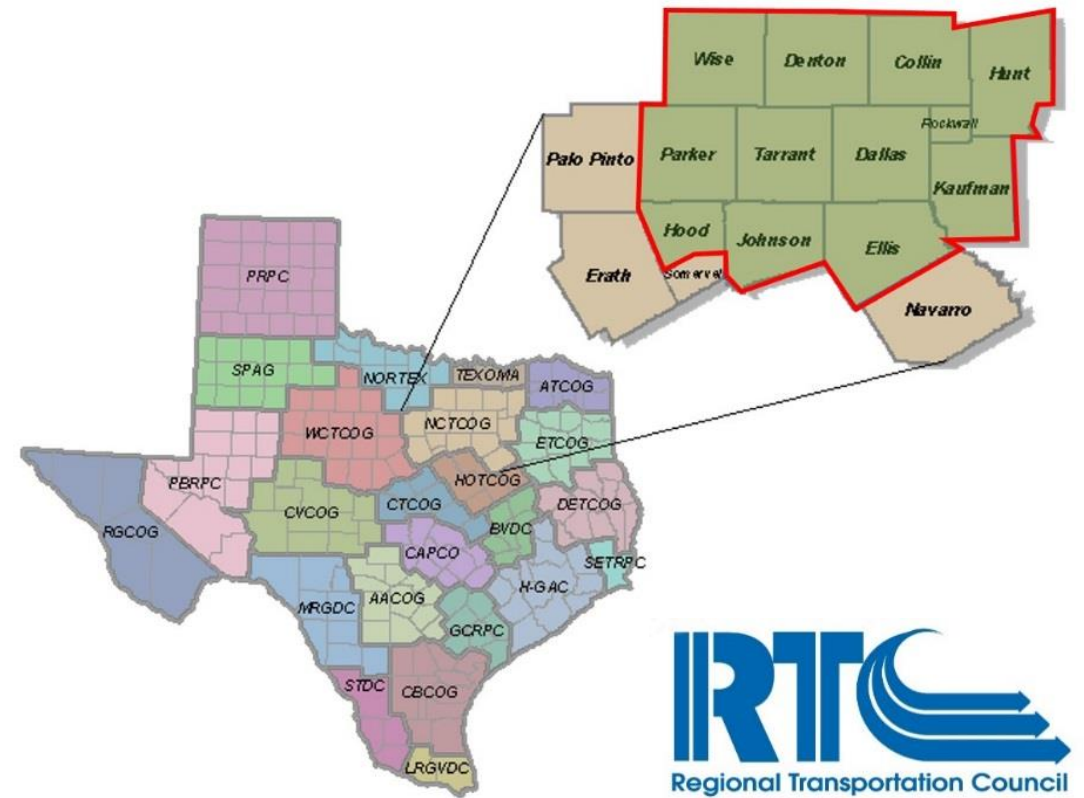
**JEFFREY C. NEAL – SENIOR PROGRAM MANAGER
TRANSPORTATION – STREAMLINED PROJECT DELIVERY**

**SOCIETY OF AMERICAN MILITARY ENGINEERS (SAME):
INFRASTRUCTURE & AI: INNOVATION AT THE CROSSROADS**

University of Texas at Arlington (UTA) – February 9, 2024

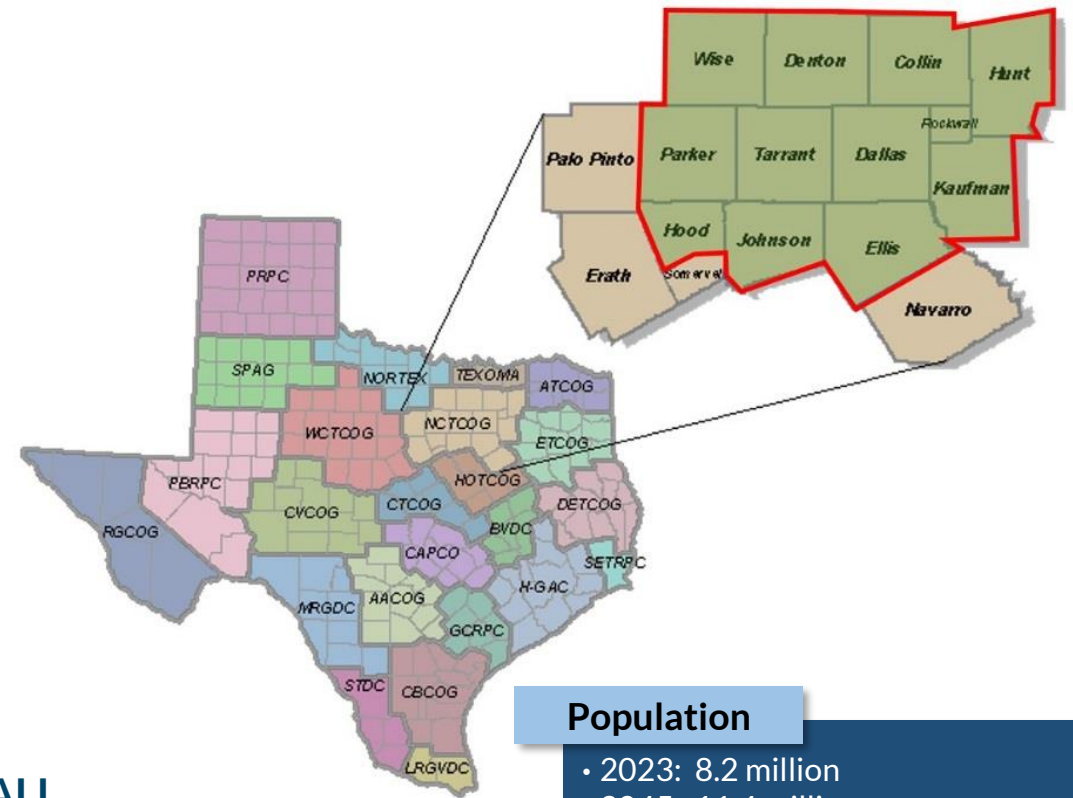
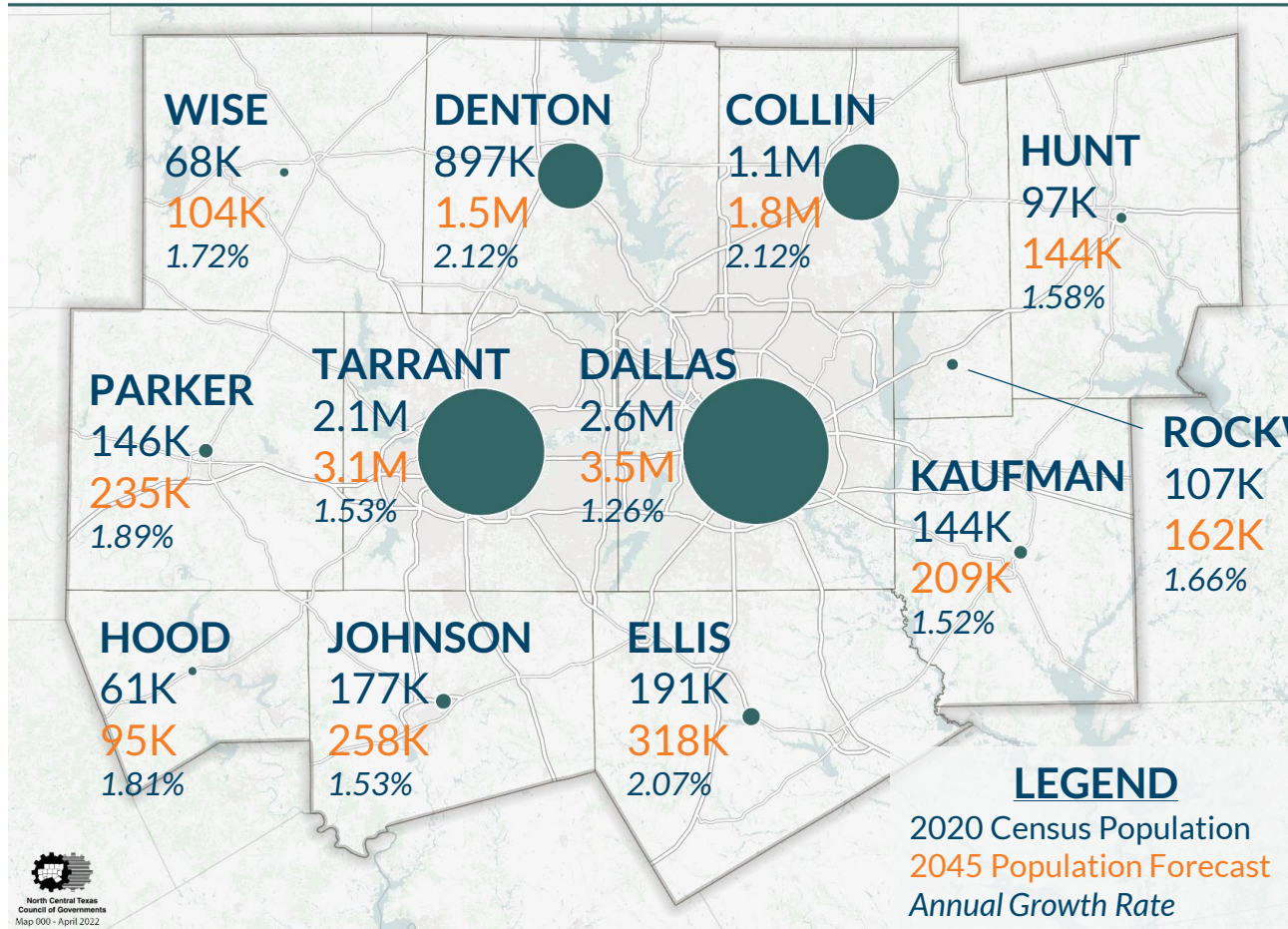
NCTCOG: DESCRIPTION AND PURPOSE

- Established in 1966 as a voluntary association assisting local governments in the North Central Texas region:
 - ▣ PLANNING for common needs, COOPERATING for mutual benefit, and COORDINATING for sound regional development
 - ▣ 238 Members – 16 Counties, 169 Cities, 22 School Districts, and 31 Special Districts
- NCTCOG Departments:
 - ▣ Transportation
 - ▣ Workforce Development
 - ▣ Public Affairs
 - ▣ Administration
 - ▣ Emergency Preparedness
 - ▣ Community Services
 - ▣ Research and Information
 - ▣ Environment and Development
 - ▣ Regional Training Center
 - ▣ Executive Director's Office
- Federally designated as the region's **Metropolitan Planning Organization (MPO)** in 1974:
 - ▣ **Regional Transportation Council (RTC) – Policy Authority** (45 members – 37 elected officials and 8 transportation providers)
 - ▣ **Executive Board – Fiduciary Agent** (13 members – elected officials)



NCTCOG: REGIONAL PERSPECTIVE

POPULATION FORECAST BY COUNTY



Population

- 2023: 8.2 million
- 2045: 11.4 million
- 4th largest in U.S. by population

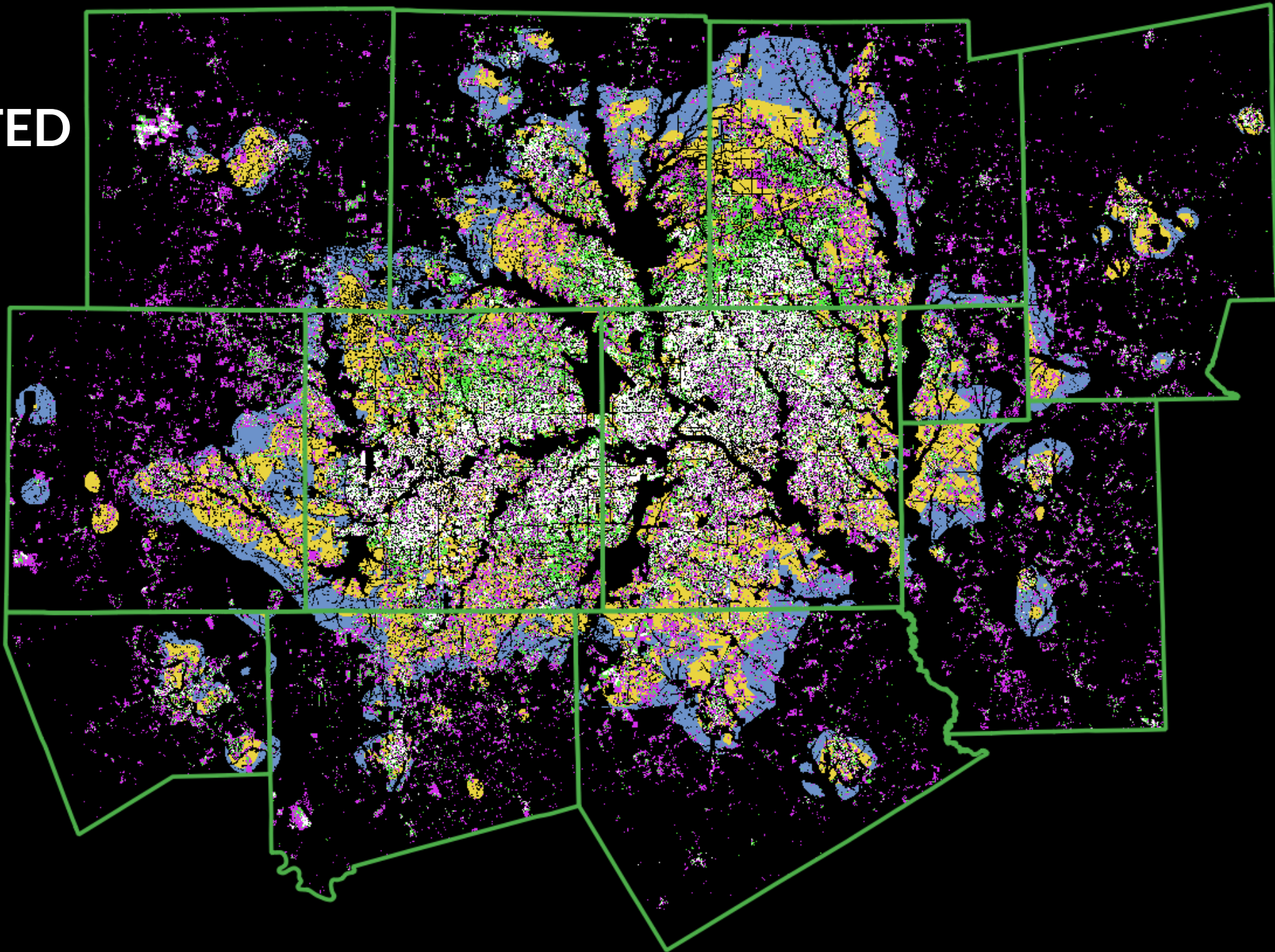
Area

- 12 counties
- 9,448 square miles
- 2nd largest U.S. metropolitan planning region by land area

Economy

- Home to 24 Fortune 500 firms
- Projected to be ranked 12th globally in metro area GDP
- Represents 32% of Texas economy

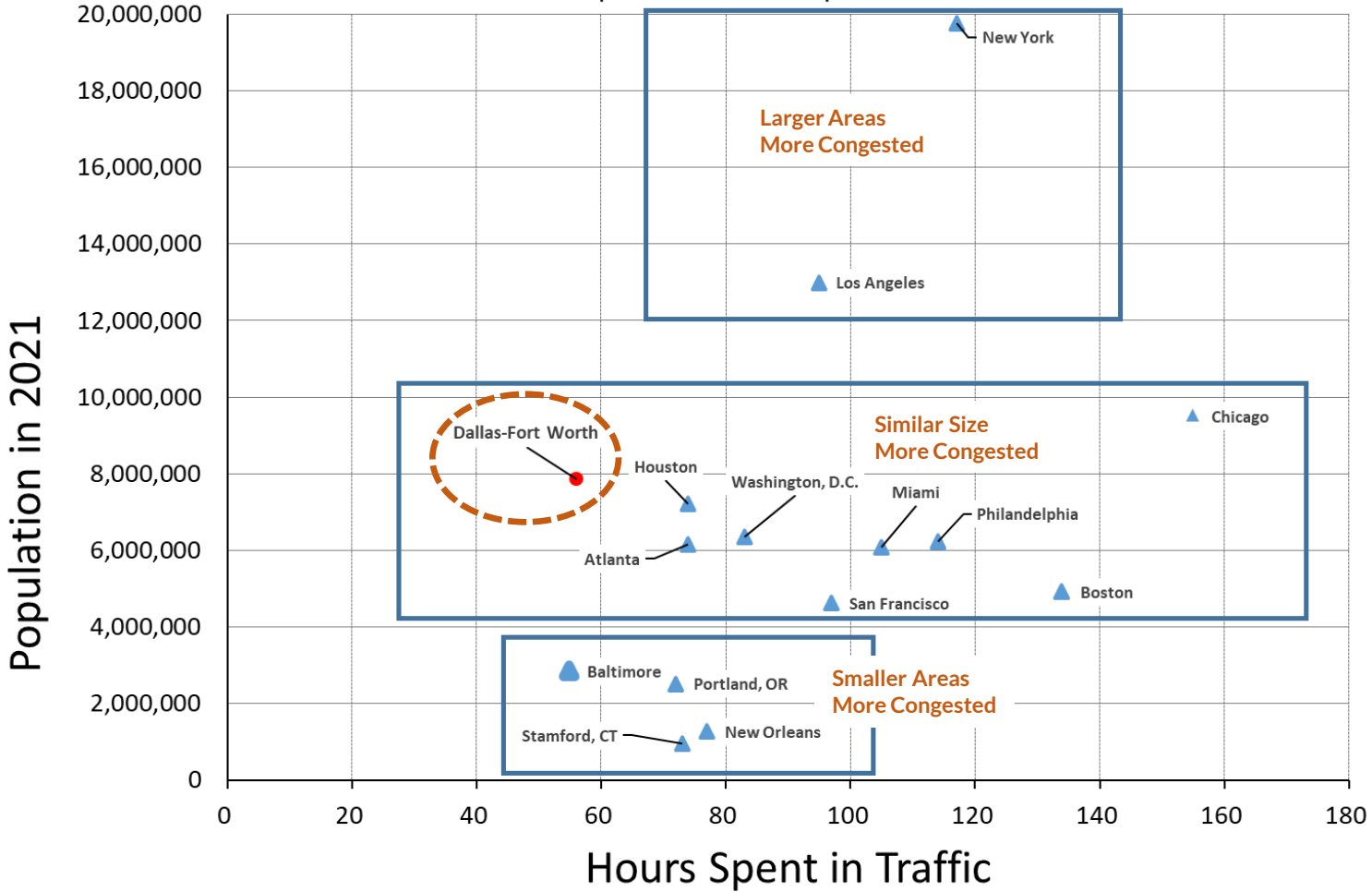
2045: PREDICTED BUILD AREA



- 1986
- 2000
- 2015
- 2030
- 2045

DALLAS – FORT WORTH: CONGESTION LEVELS VS. POPULATION

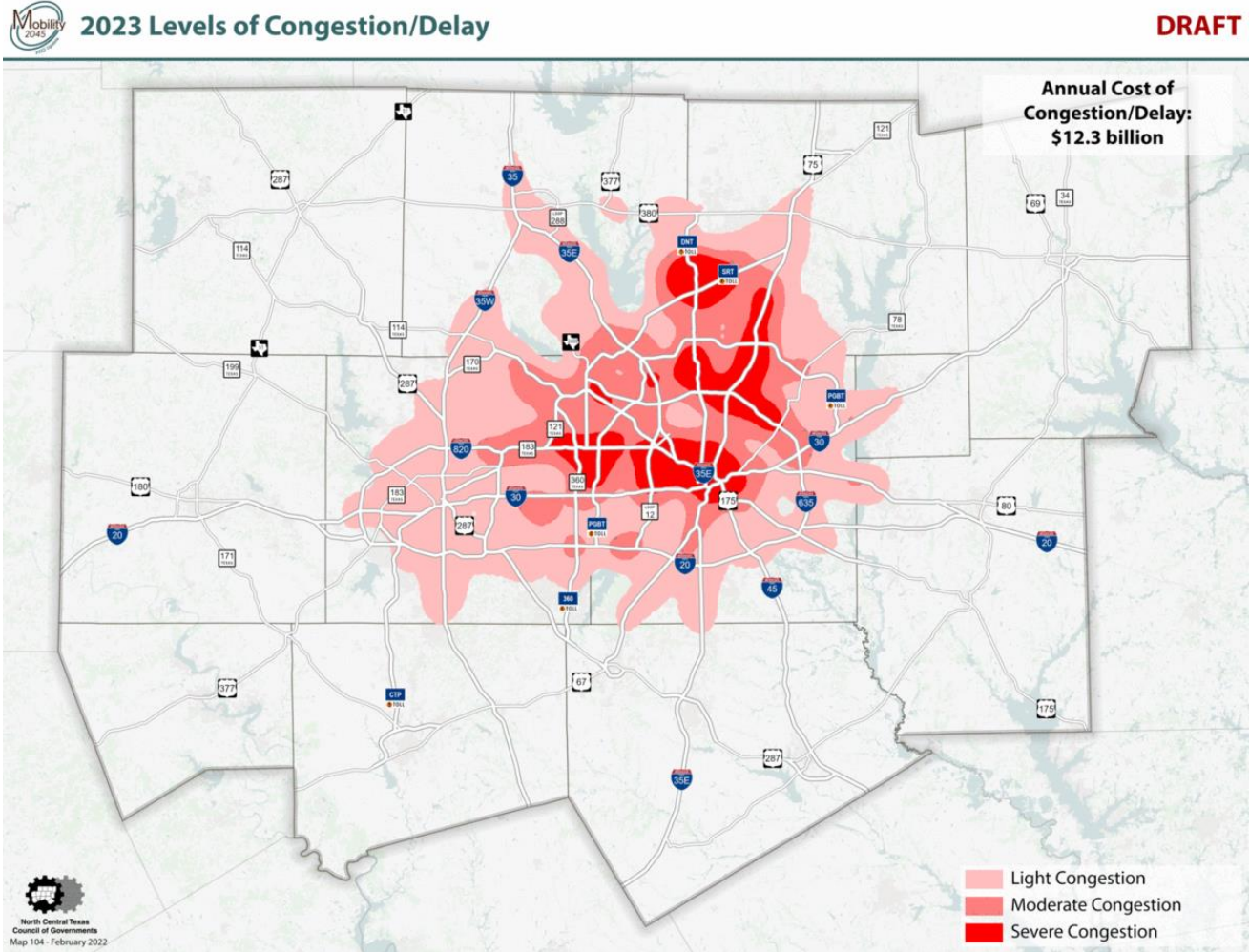
15 Most Congested Regions
Comparison of Hours Spent in Traffic and
Population of Metropolitan Areas



SOURCES:
INRIX 2022 Data, U.S. Census 2021 Estimates, &
North Central Texas Council of Governments



DALLAS – FORT WORTH: SIMULATED ROADWAY CONGESTION

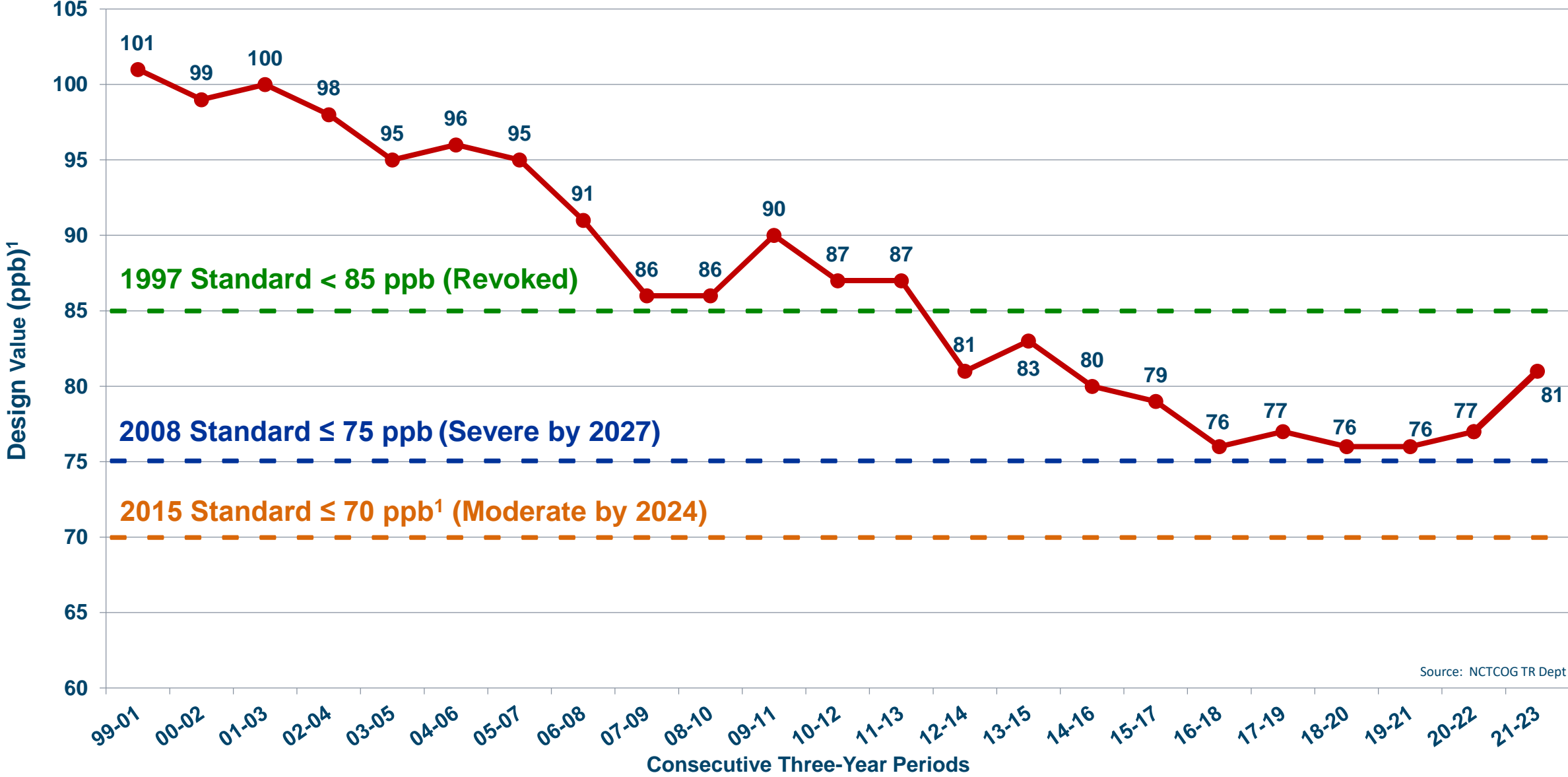


Annual Cost of Congestion

CURRENT Conditions	\$12.3 Billion
2045 BUILD Conditions	\$32.1 Billion
2045 NO-BUILD Conditions	\$60.8 Billion



OZONE DESIGN VALUE TREND - 2023



Source: NCTCOG TR Dept

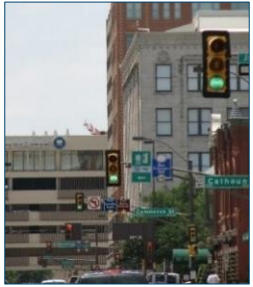
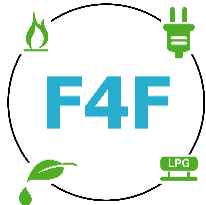
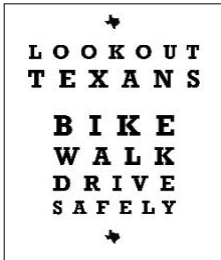


¹ Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the *Design Value* (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

SAMPLE OF AIR QUALITY INITIATIVES



Rideshare. Record. Reward.



MOBILITY 2045 UPDATE: FUTURE DALLAS-FORT WORTH PLANNING



Adopted by the Regional
Transportation Council (RTC)
on June 9, 2022



Represents a blueprint for the region's multimodal transportation system for all users.



Covers at least a 20-year timeframe.



Responds to region's goals.



Identifies policies, programs, & projects for continued development consistent with Federal/State air quality goals.



Guides the expenditure of Federal and State funds, demonstrates financial constraint.



MOBILITY 2045 UPDATE: FINANCIAL PLAN EXPENDITURES

MAXIMIZE EXISTING SYSTEM

 Infrastructure Maintenance Maintain and operate existing transit and roadway facilities	\$ 42.8B
 Management and Operations Improve efficiency and remove trips from system	\$ 9.6B
 Growth, Development, and Land Use Strategies Improve transportation and land use balance	\$ 1.5B

STRATEGIC INFRASTRUCTURE INVESTMENT

 Rail and Bus Encourage switch to transit	\$ 44.9B
 HOV/Managed Lanes Increase auto occupancy	\$ 49.5B
Freeways/Tollways and Arterials Add vehicle capacity	

TOTAL \$ 148.3B

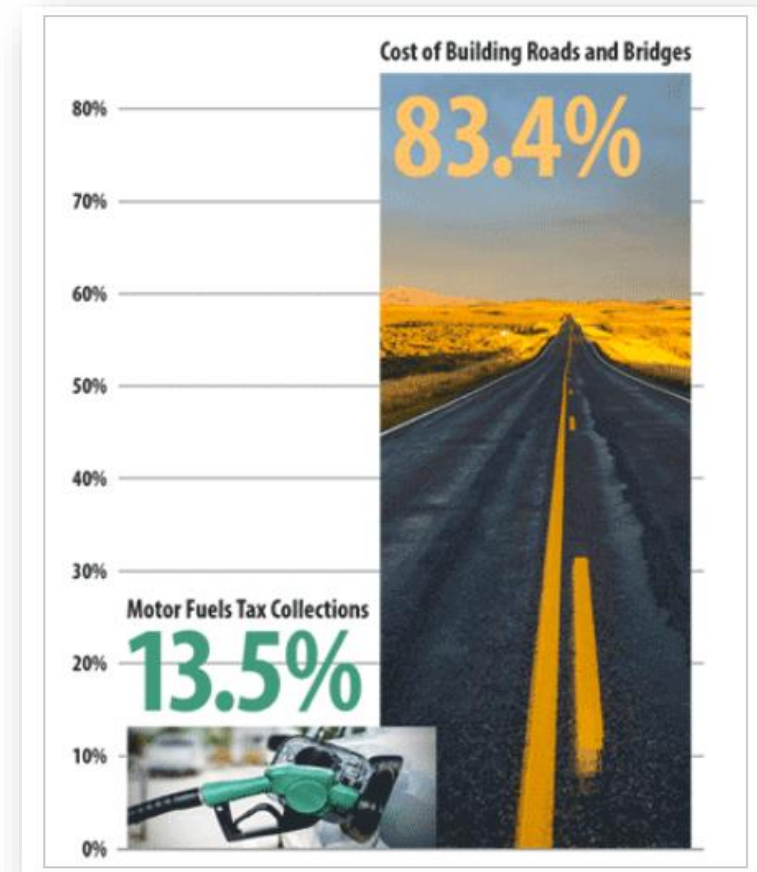
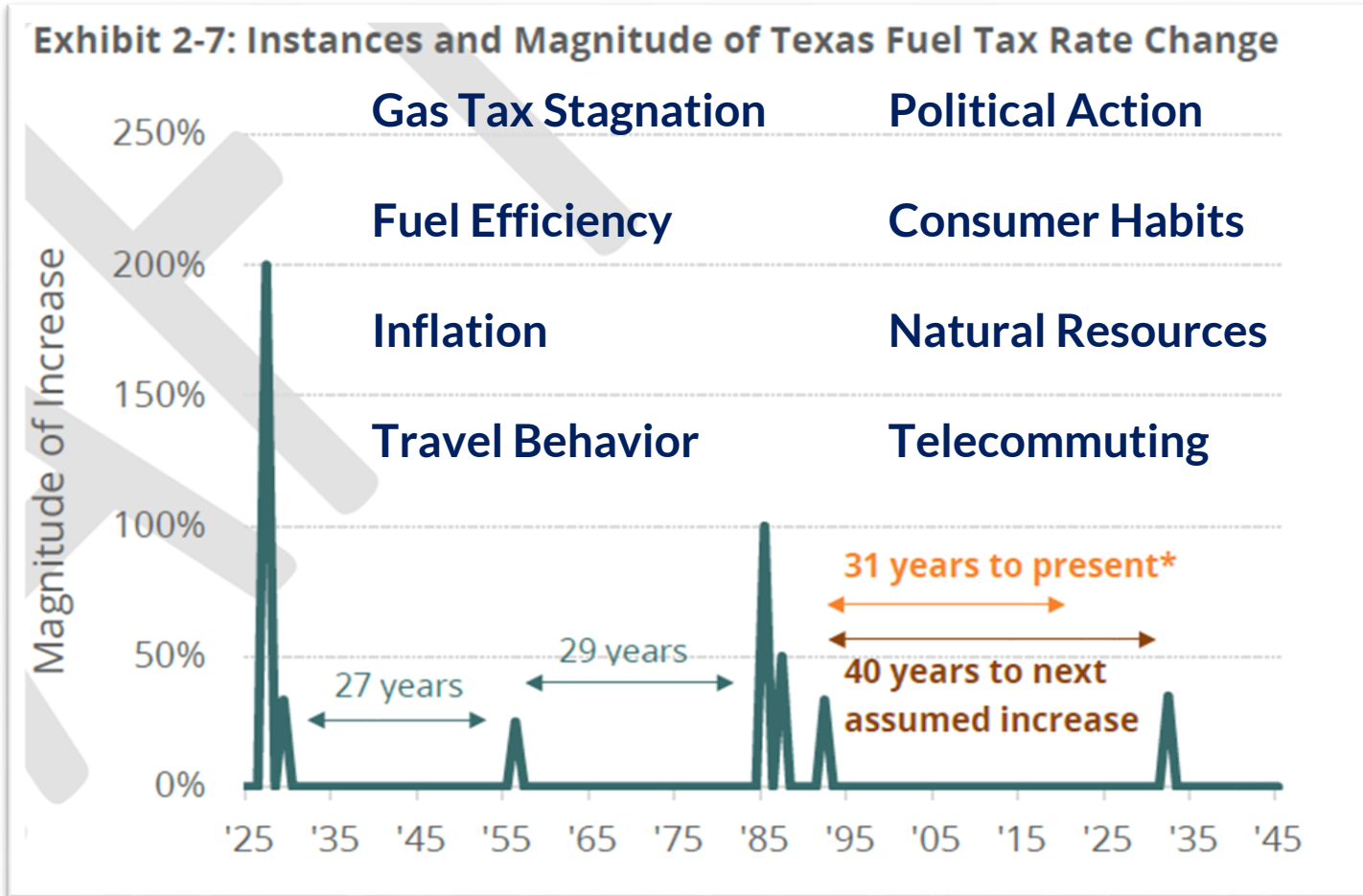


Financial Requirements

- Financial constraint
- Reasonably expected sources of revenue
- Year-of-expenditure dollars
- Balance priorities with available revenues



MOBILITY 2045 UPDATE: FINANCIAL CHALLENGES



Revenue vs. Cost
(TxDOT: 2003-2023)



MOBILITY 2045 UPDATE: REVENUE SOURCES

Baseline Revenue

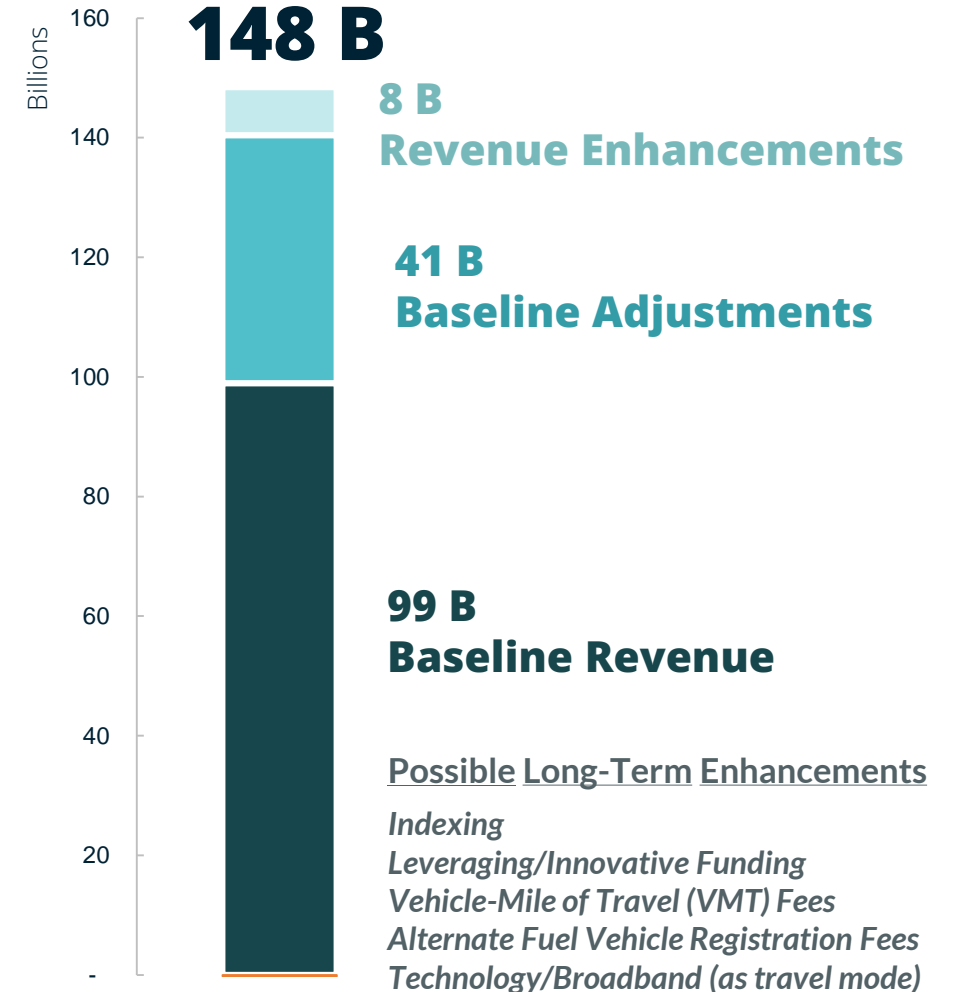
- Funds flowing through State Highway Fund & TxDOT Unified Transportation Program (UTP) Category 1 – 12 funds
- System revenue
- Transit revenue (sales tax, Federal, local, etc.)
- Local funds/local match

Adjusted Baseline

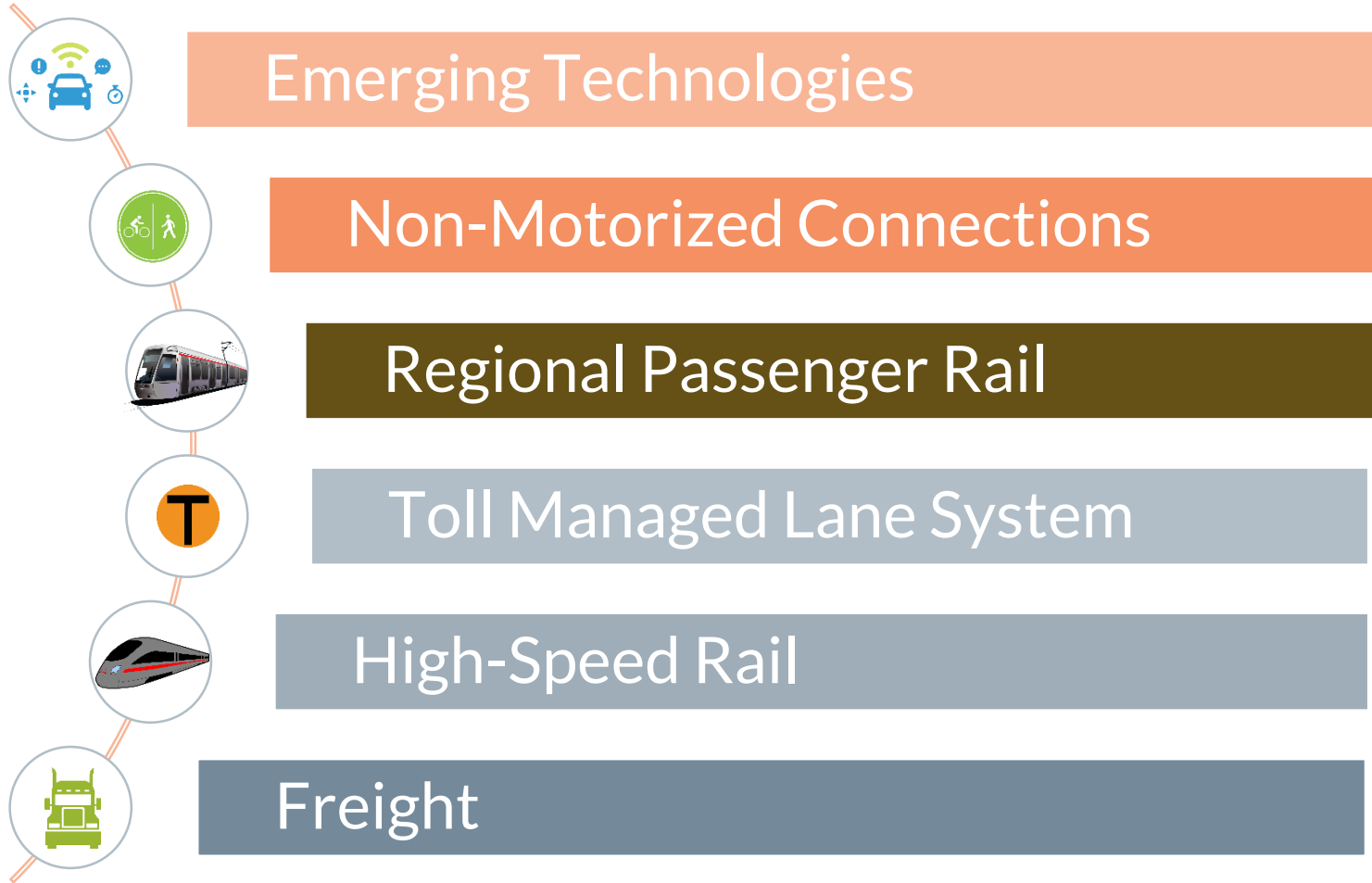
- New State and Federal funds expected to start flowing through State Highway Fund
- New Federal funds for transit (Bipartisan Infrastructure Law)
- Private and local funds for transit

Revenue Enhancements

- Reasonably anticipated future revenue, equivalent of increases in gas tax & vehicle registration fees
- Local option vehicle registration fees
- Federal Discretionary Grant Programs



MOBILITY 2045 UPDATE: SYSTEM CONNECTIONS & RELIABILITY



Overlap modes to create options, reliability, & opportunities



Diversify & create fail-safes



Mitigate pressures: fuel cost, resource availability, grid capacity, & weather

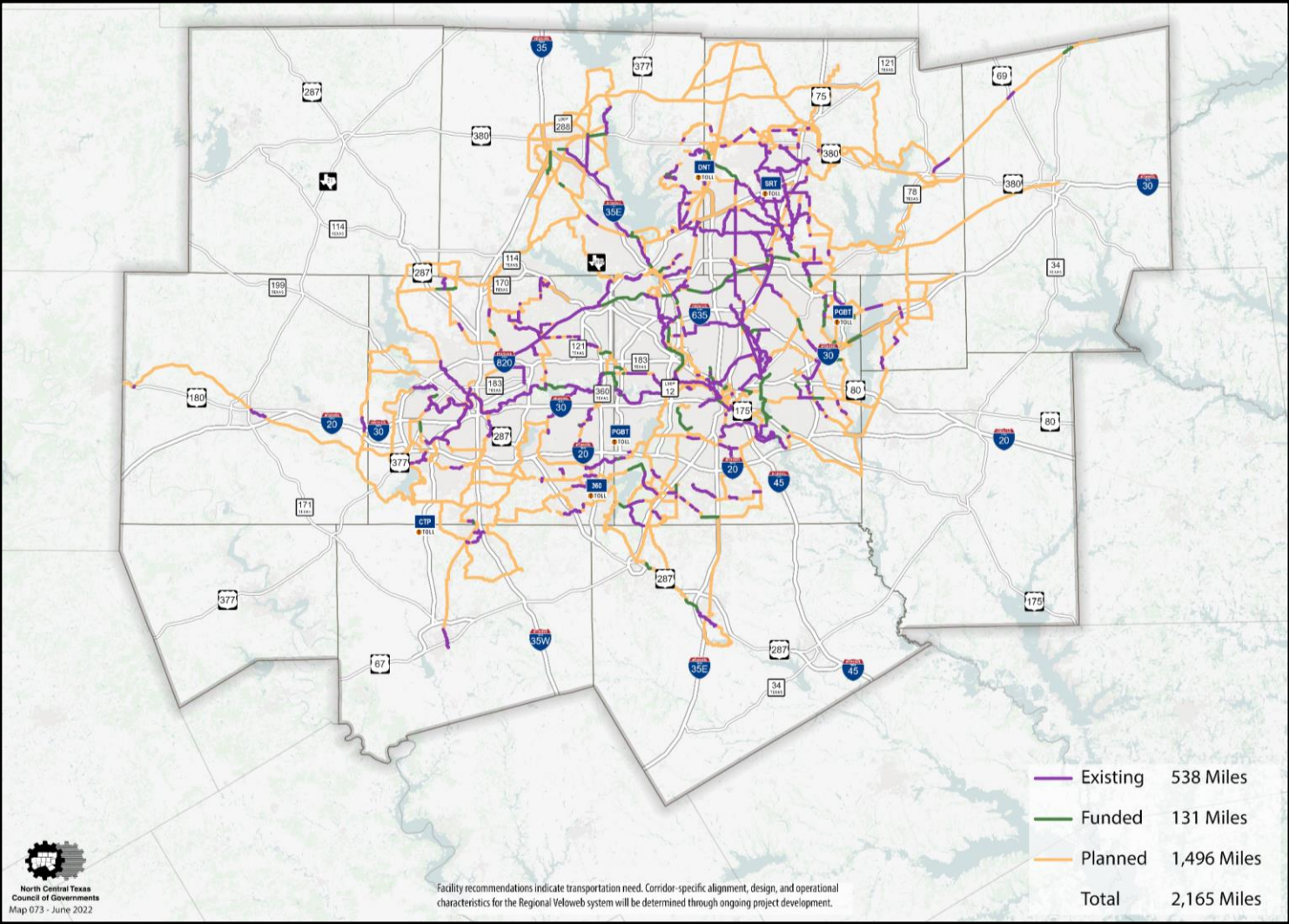
Reliability



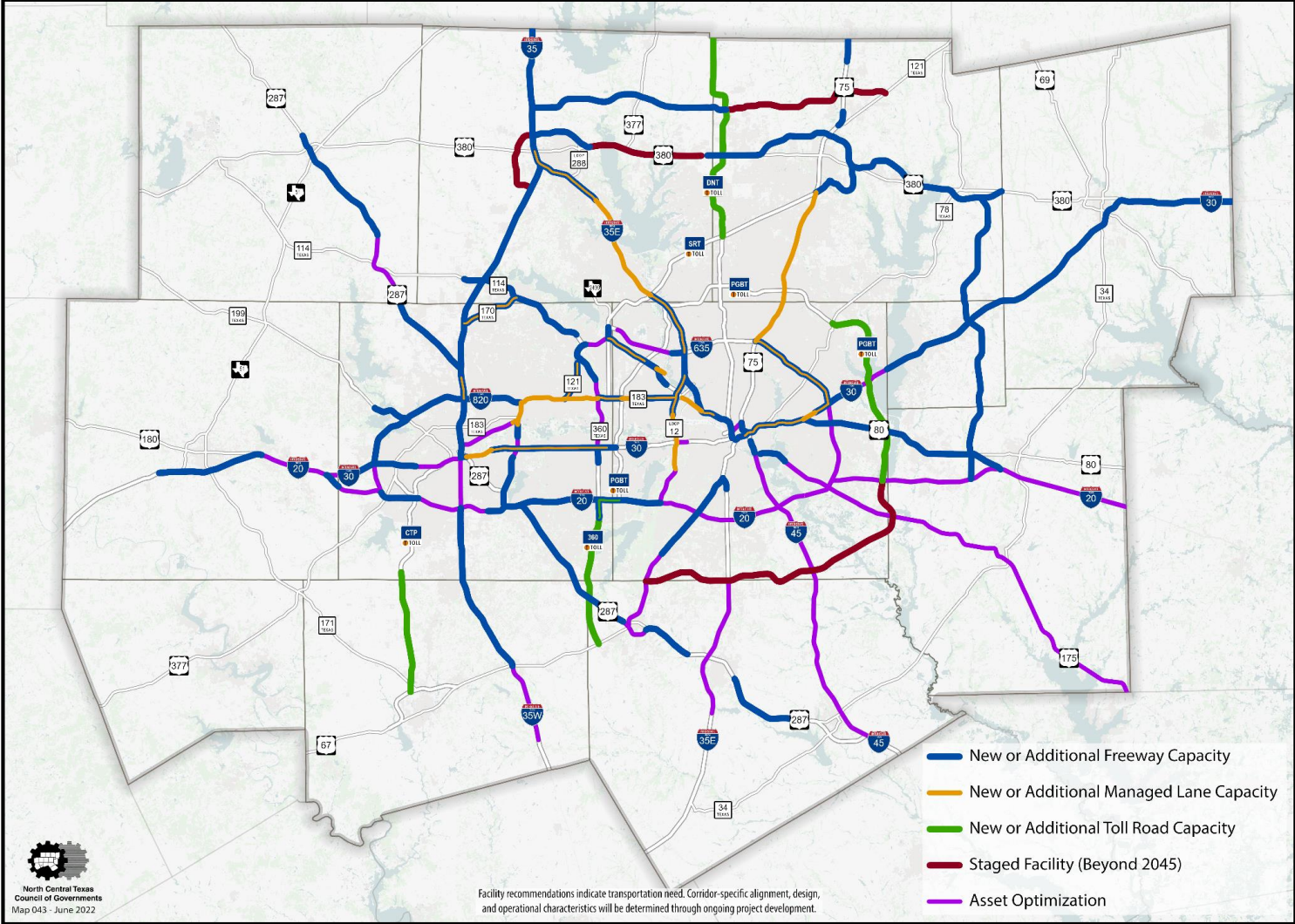
Resiliency



MOBILITY 2045 UPDATE: REGIONAL VELOWEB



MOBILITY 2045 UPDATE: MAJOR ROADWAY RECOMMENDATIONS



PLANNING FOR THE FUTURE OF TRANSPORTATION:

Scenario Planning Post-COVID 19

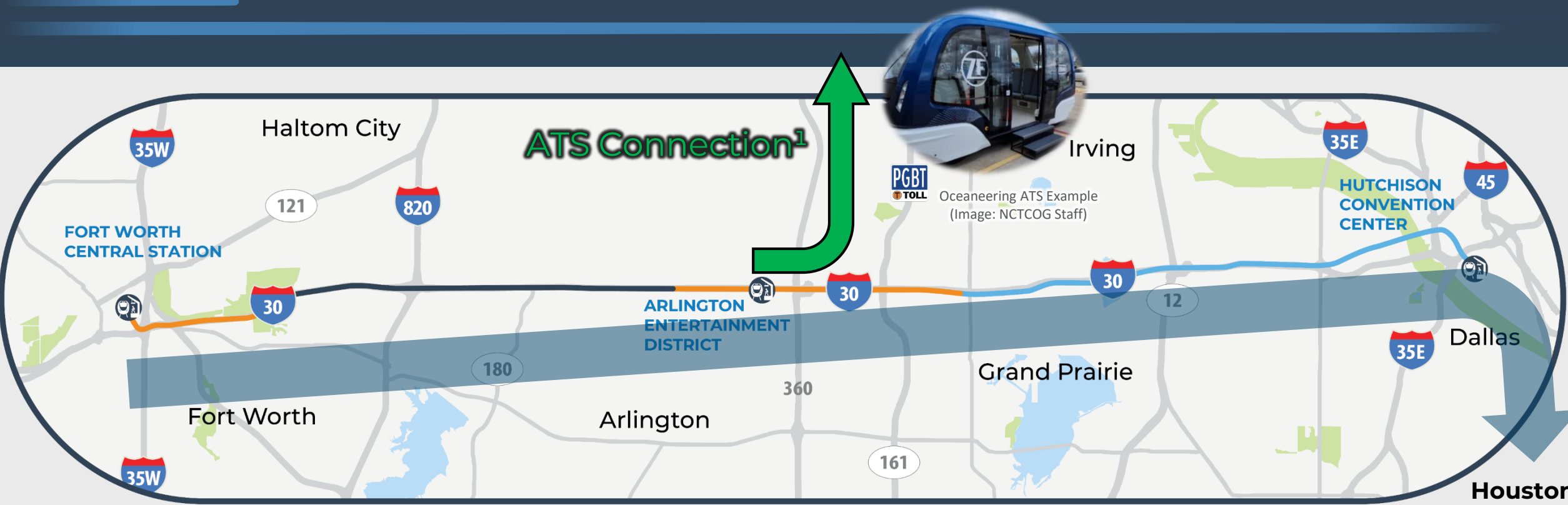
Automated/Connected Vehicles

Role(s) of Public Transit

Regional 20% Single Occupant Vehicle Reduction







DFW HIGH-SPEED RAIL (HSR) POTENTIAL STAGED APPROACH



¹Automated Transportation System (ATS) recommendation provides dedicated connectivity between proposed HSR Station, TRE Centerport Station, and DFW Airport.

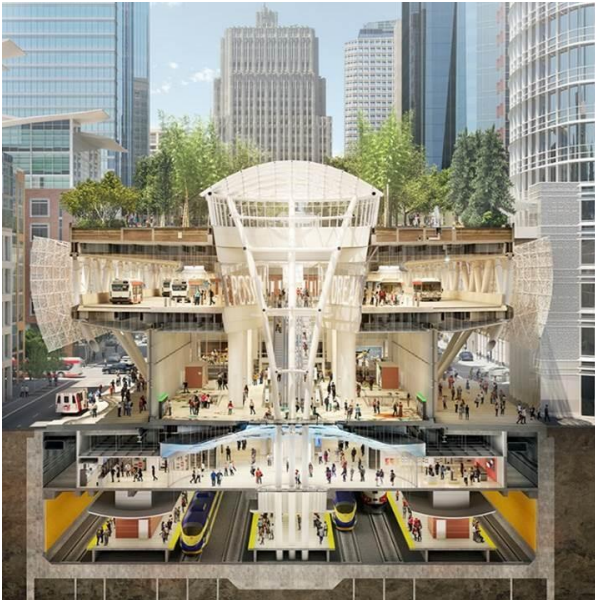


	PROPOSED STATIONS
	TUNNEL
	TRENCH / AT-GRADE
	ELEVATED

HIGH-SPEED RAIL PLANNING: STATION AREA DEVELOPMENT

- High-speed rail (HSR) stations typically much larger than commuter/light rail stations
 - ▣ Large economic development impact potential
 - ▣ High-density land uses surrounding stations
 - ▣ Serve as huge multimodal hubs for entire regions

San Francisco, CA – Salesforce Transit Center (California HSR)



Source: [Transbay Program media gallery, 2023](#)

Hong Kong, China – West Kowloon Station (China Railway High-Speed)



Source: [Mark Rowse, and Winson Wong, South China Morning post, 2019](#)



GUARANTEED TRANSIT: HIGH-INTENSITY BUS SERVICE

- High-End Motorcoaches: Premium vehicle/service characteristics along managed lane corridors
- Enhanced Amenities for Station Features: Coffee, dry cleaning services, WiFi, security, increased cleanliness, etc.
- Guaranteed Transit: Riders are reimbursed their fares for trips failing to arrive on-time



CERTIFYING EMERGING & RELIABLE TRANSPORTATION TECHNOLOGY

- **CERTT Program:** Provides transparent process for coordination with new technology providers by the Regional Transportation Council (RTC)
- Periodic solicitation/opportunity for new technology applications
- Ensure level playing field for providers and local governments
- Advance conversion of certification facility into a commercial application, meeting long-range transportation needs



CERTT PROGRAM: SWYFT CITIES



- **Personal rapid transit system using overhead fixed-cable gondola-like pods (6 passengers/pod)**
- Low-speed network running within existing public rights-of-way (ROW)
- Proof of concept in Christchurch, New Zealand
- Uses private funding & can support planning of special districts, public/private partnerships (P3s), etc.



YOU CAN STILL PROVIDE INPUT: MAP YOUR EXPERIENCE – OVERVIEW



- 📍 MYE is available online, anytime, in English and Spanish
- 📍 Mapping your travel experience helps us understand regional travel issues people are facing
- 📍 Comment on roadway, transit, bicycle and pedestrian topics, and more at:

Seek meaningful input earlier in the process

Ask the right people for the right information

Focus on problem-solving

www.nctcog.org/MapYourExperience



MAP YOUR EXPERIENCE: SUMMARY OF COMMENTS RECEIVED

KEY INSIGHTS



1

Accessibility issues of impedance, or barriers to traveling, are of greater concern for the bicycle/pedestrian mode than transit or roadway.

2

Key bicycle and pedestrian needs are:
**wider sidewalks | completion of sidewalks
protected bike lanes | safer speeds on non-arterial roads | crosswalks across arterials**

3

Key transit needs are:
**1) increased frequency and coverage in existing transit service areas
2) expansion of service to new areas**

4

For roadways, traffic and safety are the top comments, frequently showing up in areas with poor level of service.

5

In many cases, roadway comments are not concerned with speeds, but rather with the safety of merging onto a road, poor visibility, or blind spots.

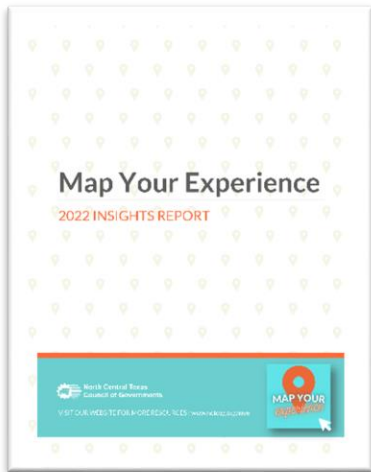


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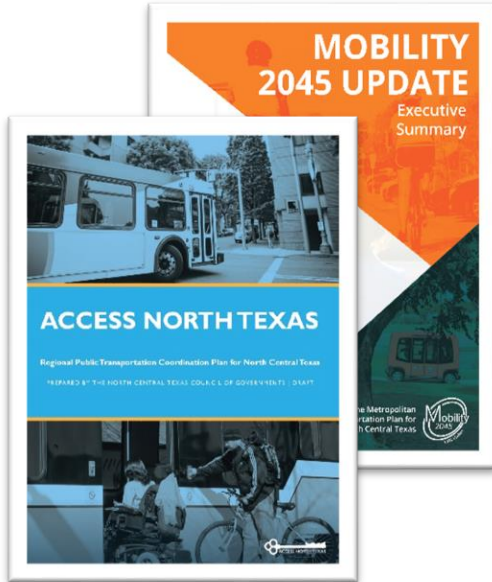
MAP YOUR EXPERIENCE: HOW NCTCOG IS USING THE DATA

1



Available for General Public

2



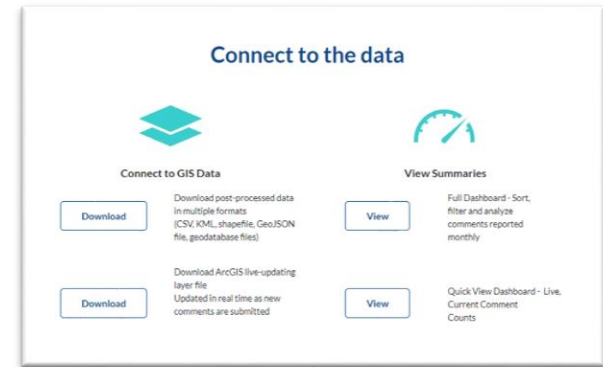
3

Comment ID	Language	Comment Type	Map	Comment	Parent Comment
000200	English	Original Comment	Blue-Red	Should be Safety	
000201	English	Original Comment	Blue-Red	Should be Safety	
000202	English	Original Comment	Blue-Red	Should be Safety	
000203	English	Original Comment	Blue-Red	Should be Safety	
000204	English	Original Comment	Blue-Red	Should be Safety	
000205	English	Original Comment	Blue-Red	Should be Safety	
000206	English	Original Comment	Blue-Red	Should be Safety	
000207	English	Original Comment	Blue-Red	Should be Safety	
000208	English	Original Comment	Blue-Red	Should be Safety	
000209	English	Original Comment	Blue-Red	Should be Safety	
000210	English	Original Comment	Blue-Red	Should be Safety	
000211	English	Original Comment	Blue-Red	Should be Safety	
000212	English	Original Comment	Blue-Red	Should be Safety	
000213	English	Original Comment	Blue-Red	Should be Safety	
000214	English	Original Comment	Blue-Red	Should be Safety	
000215	English	Original Comment	Blue-Red	Should be Safety	

To NCTCOG Staff

Incorporate into ongoing planning, project development, and programs

4



Available for Partners

Data available online in various GIS and tabular formats



CONTACT INFORMATION



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