



MEETING AGENDA

Public Transportation Advisory Committee

Tuesday, May 26, 2015 | 1:00 P.M.
3712 Jackson Ave, Bldg. 6, Room 324
Austin, TX 78731

1.	Call to Order.
2.	Safety Briefing.
3.	Approval of minutes from March 31, 2015 meeting. (Action)
4.	Selection of a new chairperson and vice chairperson (Action)
5.	TxDOT's Public Transportation Division Director's report to the committee regarding public transportation matters.
6.	Update on federal authorization and the revised GROW AMERICA Act proposal. (Action)
7.	Discussion on the scope and timing of TxDOT's look at the impact of growth and urbanization on public transportation in Texas. (Action)
8.	Discussion of how to track the progress of TxDOT's long-range transportation plan, Texas Transportation Plan 2040. (Action)
9.	Public Comment – Public comment will only be accepted in person. The public is invited to attend the meeting in person or listen by phone at a listen-in toll-free number: 1-866-637-1408 [US] with conference code: 897 305 0787. An audio recording of the meeting will be placed on the Internet following the meeting.
10.	Propose and discuss agenda items for next meeting; confirm date of next meeting. (Action)
11.	Adjourn. (Action)

I certify that I have reviewed this document and that it conforms to all applicable Texas Register filing requirements.

CERTIFYING OFFICIAL: Joanne Wright, Deputy General Counsel, (512) 463-8630.

AGENDA ITEM 3

MINUTES FOR ADOPTION

Public Transportation Advisory Committee – Teleconference Meeting
3712 Jackson Ave., Bldg. 6, Room 324, Austin, Texas
March 31, 2015

Committee Members Present and Participating:

Michelle Bloomer, Chair
J.R. Salazar, Vice Chair
Glenn Gadbois
Rob Stephens
John McBeth

Committee Members Participating via Teleconference:

Christina Melton Crain

TxDOT Present and Participating:

Eric Gleason, Director, Public Transportation Division (PTN)
Kris Dudley, Program Manager, PTN
Josh Ribakove, Communications Manager, PTN
Ryan Granger, Federal Relations Representative, Federal Affairs Office (FED)

AGENDA ITEM 1: Call to Order.

Michelle Bloomer called the meeting to order at 1:00 P.M.

AGENDA ITEM 2: Safety Briefing.

Josh Ribakove gave a safety briefing for attendees at 1:00 P.M.

AGENDA ITEM 3: Approval of minutes from November 22, 2014 meeting.

MOTION Christina Melton Crain moved to approve the January 22, 2015 meeting minutes.

SECOND J.R. Salazar seconded the motion.

The motion passed unanimously at 1:01 P.M.

AGENDA ITEM 4: TxDOT's Public Transportation Division Director's report to the committee regarding public transportation matters.

Eric Gleason spoke about items of concern, including actions taken at February's meeting of the Texas Transportation Commission; updates on discretionary programs (calls for projects); and bills before the state legislature, beginning at 1:02 P.M.

Comments and questions from John McBeth, J.R. Salazar and Rob Stephens, addressed by Eric Gleason.

AGENDA ITEM 5: Briefing and discussion of federal funding authorization efforts (Action).

Eric Gleason introduced Ryan Granger from TxDOT's Federal Affairs Office, who gave his briefing at 1:11 P.M. They led the subsequent discussion together.

Comments and discussion among Kris Dudley, Glenn Gadbois, Ryan Granger and Eric Gleason.

No action taken.

AGENDA ITEM 6: Discussion and development of Public Transportation Advisory Committee (PTAC) Work Plan, based on PTAC's guiding principles and comments made at the January 22, 2015 meeting (Action).

Eric Gleason led this discussion, which began at 1:39 P.M.

Comments and discussion among Michelle Bloomer, Glenn Gadbois, John McBeth, J.R. Salazar, Rob Stephens and Eric Gleason

It was suggested by John McBeth at 1:45 P.M. that the Texas Transportation Institute (TTI) be asked to conduct new research into the transit needs of communities transitioning in designation from rural to small urban.

No action taken.

AGENDA ITEM 7: Public Comment.

There were no public comments at this meeting.

AGENDA ITEM 8: Propose and Discuss Agenda Items for Next Meeting; Confirm Date of Next Meeting

Discussion began at 2:26 P.M.

No items were proposed. The committee decided to hold its next meeting on the already scheduled date of Tuesday, May 26, 2015 at TxDOT's Camp Hubbard Campus.

AGENDA ITEM 9: Adjourn

Meeting adjourned at 2:29 P.M.

Prepared by:

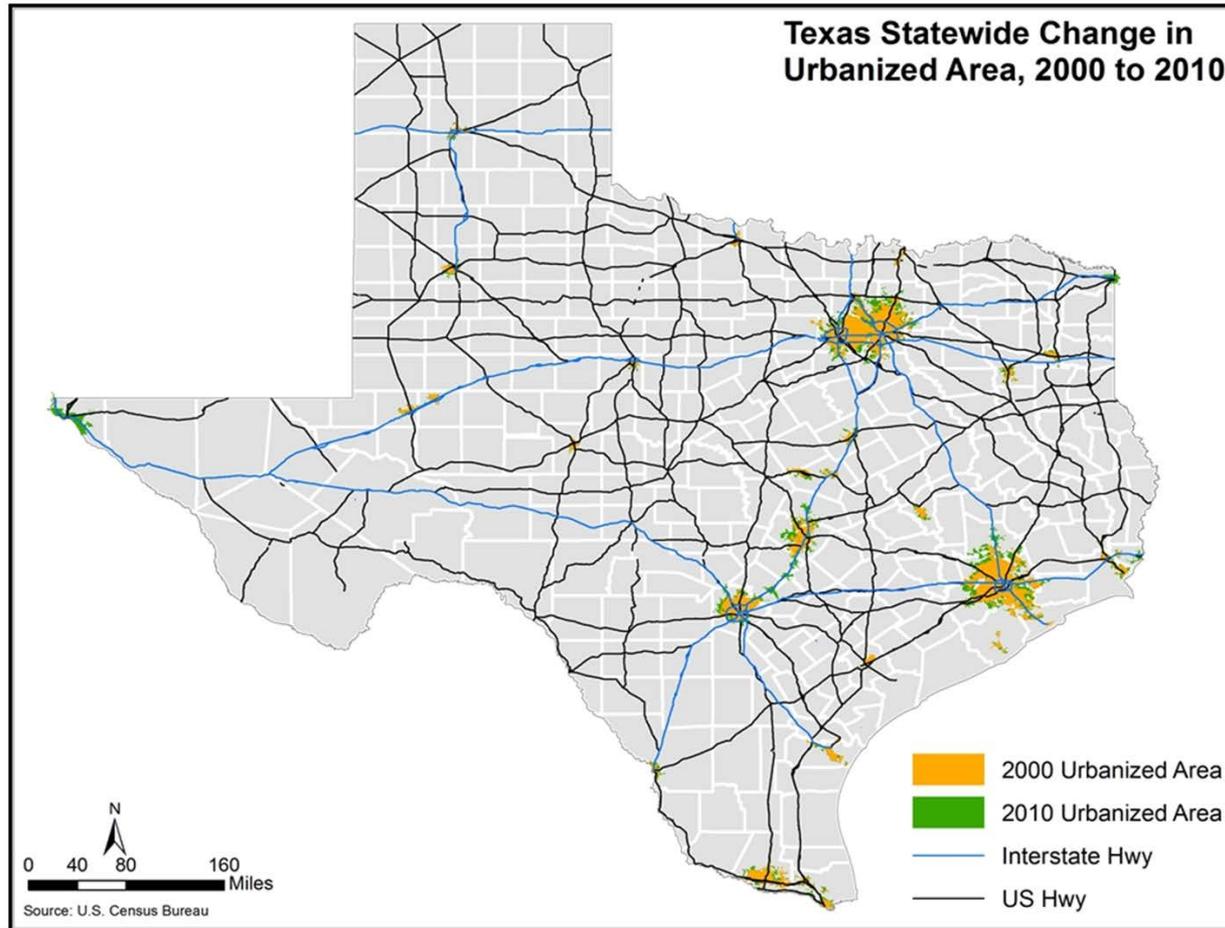
Approved by:

Josh Ribakove
Public Transportation Division

Michelle Bloomer, Chair
Public Transportation Advisory Committee

AGENDA ITEM 7

Impact of Growth and Urbanization on Public Transportation in Texas



Population Growth 2000 to 2010

Increased Urbanization

	2000	2010	Growth	% Growth
TEXAS Population	20,851,820	25,145,561	4,293,741	21%
Urbanized Population	15,085,079	18,947,957	3,862,878	26%
Percent Urbanized	72%	75%	90%	

Impact of Growth and Urbanization on Public Transportation in Texas

- Types of Changes 2010
 - Small Urban to Rural
 - Rural Area to Urban
 - Rural Area to Small Urban
 - Rural Area to Large Urban
 - Rural Area (expecting Small Urban) to Large Urban
 - Small Urban to Large Urban
 - Urban Gaps Increase

Impact of Growth and Urbanization on Public Transportation in Texas

- Impacts Due to Census Changes
 - Change in funding sources
 - Change in eligible uses of funding
 - Change in designated recipient and change in status direct vs. subrecipient
 - Change in planning processes/funding approvals (role of the MPO)

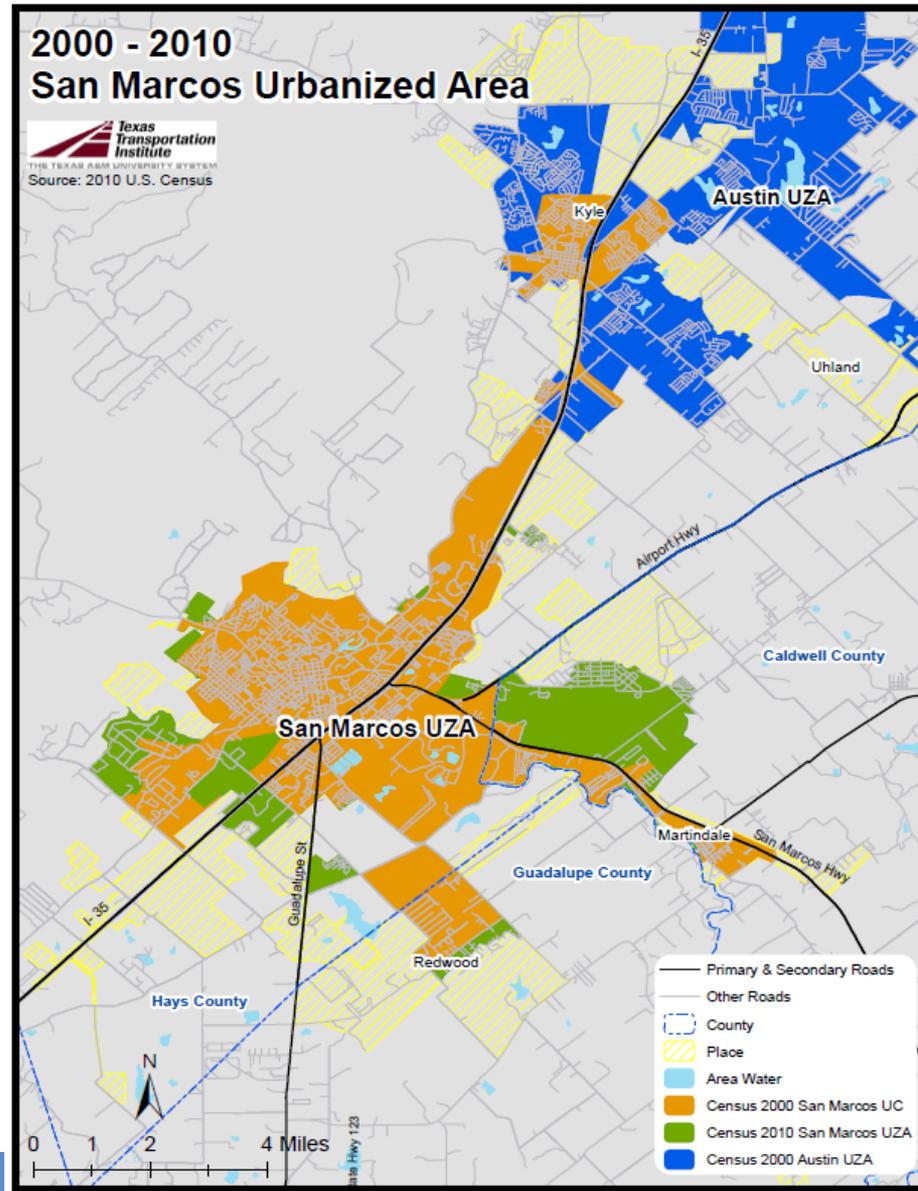
Impact of Growth and Urbanization on Public Transportation in Texas

- FTA Federal Formula Funding Sources Referenced
 - Section 5307—Urbanized Area Formula Program
 - Section 5311—Non-urbanized Area (Rural) Formula Program
 - Section 5310—Enhanced Mobility of Seniors and Individuals with Disabilities
 - Section 5339—Bus and Bus Facilities Program
 - Section 5340—Growing States and High-Density States Formula Program apportions additional funds by formula to Section 5307 and Section 5311

Small Urban to Rural

- Example: Galveston
- Change in funding sources
 - From Section 5307 to Section 5311
 - Reduced funding
- Change in recipient status
 - Change from direct recipient to TxDOT subrecipient
- Change in funding approvals
 - Change in local government - Rural transit district

Rural Area to Small Urban

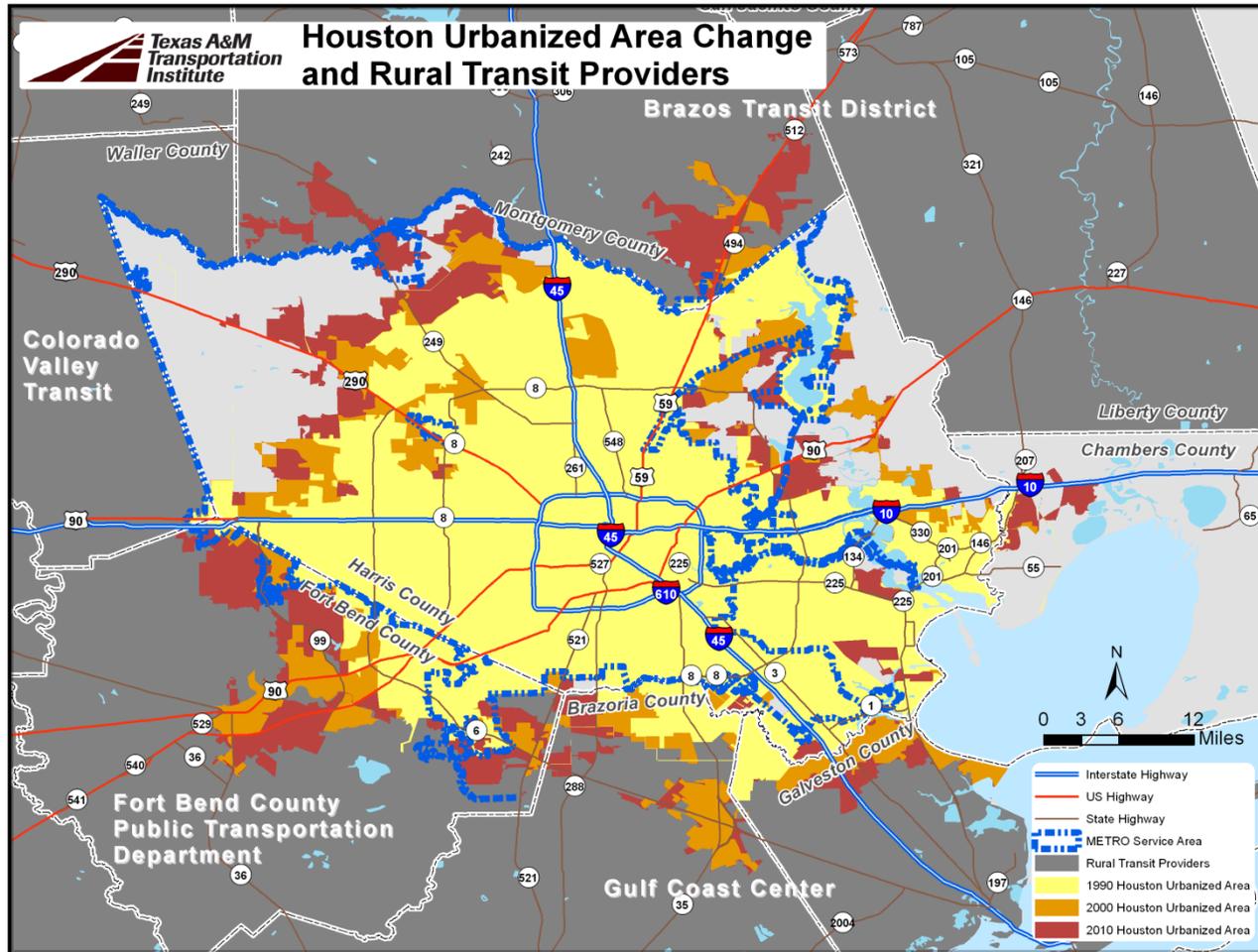


Rural Area to Small Urban

- Example: San Marcos
- Change in funding sources
 - From Section 5311 to Section 5307/ increased funding
 - Still a part of State Apportionment Section 5339/5310
- Change in recipient status
 - Change from TxDOT subrecipient to FTA direct recipient
- Change in funding approvals
 - Change in local government - Urban transit district
 - Role as member of Capital Area MPO

Rural Area to Large Urban

Example: Fort Bend County

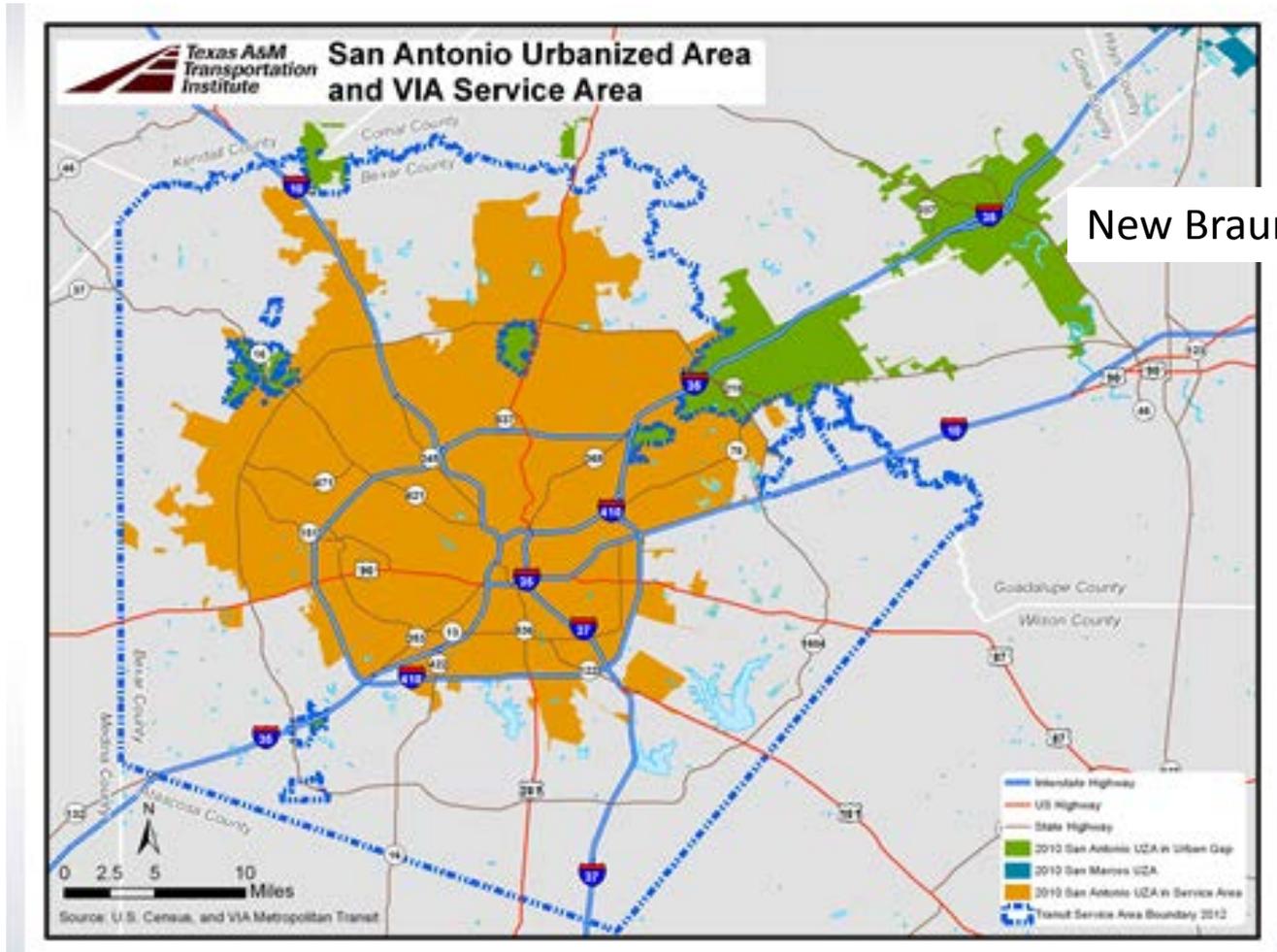


Rural Area to Large Urban

- Example: Fort Bend County
- Change in funding sources
 - From Section 5311 to Section 5307 Large Urban
- Change in Eligible Uses of Funds
 - Section 5307 Large Urban use of funds for Capital
 - “Special” 100 Bus use of funds for Operating
 - Section 5339 and Section 5310 Large Urban
- Change in recipient status
 - Change from TxDOT subrecipient to designated recipient (Houston METRO) and status as direct recipient
- Change in funding approvals
 - Role as member of Houston Galveston Area MPO

Rural Area to Large Urban

Example: New Braunfels



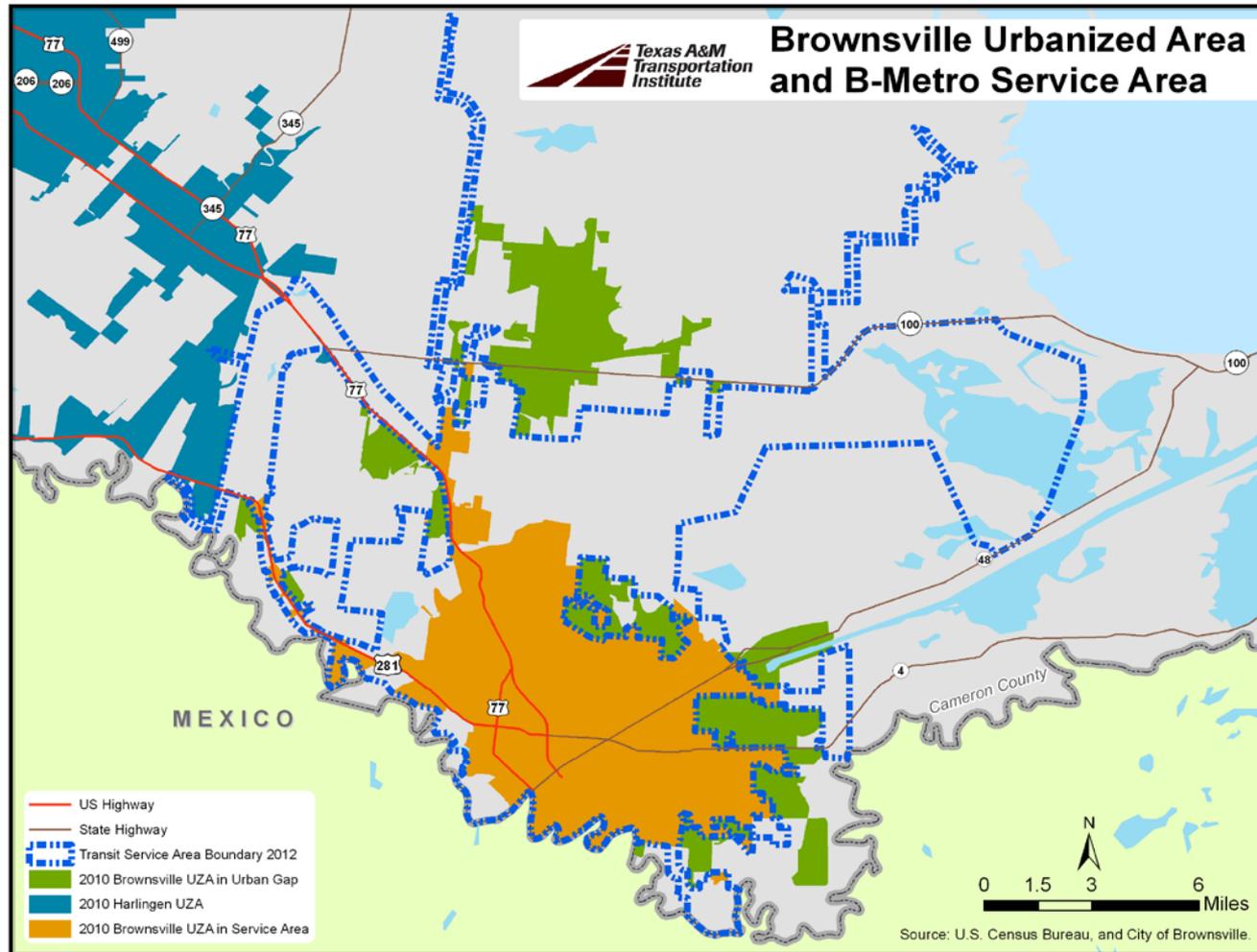
New Braunfels

Rural Area to Large Urban

Expecting to be Small Urban Area

- Example: New Braunfels
- Change in funding sources
 - From Section 5311 to Section 5307 Large Urban
 - Are no longer eligible State Rural Funds
- Change in Eligible Uses of Funds
 - Section 5307 Large Urban use of funds for Capital
 - Section 5310 and 5339 Large Urban
- Change in recipient status
 - Change from TxDOT subrecipient to designated recipient (San Antonio VIA) subrecipient
- Change in funding approvals
 - Role as member of ~~San Antonio-Bexar County MPO~~
Alamo Area MPO

Small Urban to Large Urban



Small Urban to Large Urban

- Example: Brownsville over 200,000 population
- Change in funding sources
 - From Section 5307 Small Urban to Section 5307 Large Urban
 - Eligible for Funds Section 5310 and Section 5339
 - State Urban Funding formula limited to population cap 199,999 for population (50% of funding formula)
 - No local sales tax dedicated to transit (for local share)
- Change in Eligible Uses of Funds
 - Section 5307 Large Urban use of funds for Capital
- Change in recipient status
 - Change from TxDOT direct recipient to FTA designated recipient



Urban Gaps

- Transit service area boundaries do not always match UZA boundaries.
- Compared maps for 2000, 2010 UZAs with transit service area boundaries for each of the UZAs in Texas
- Portions of the UZAs outside of the transit service area boundaries identified “urban gaps” (UG) in service

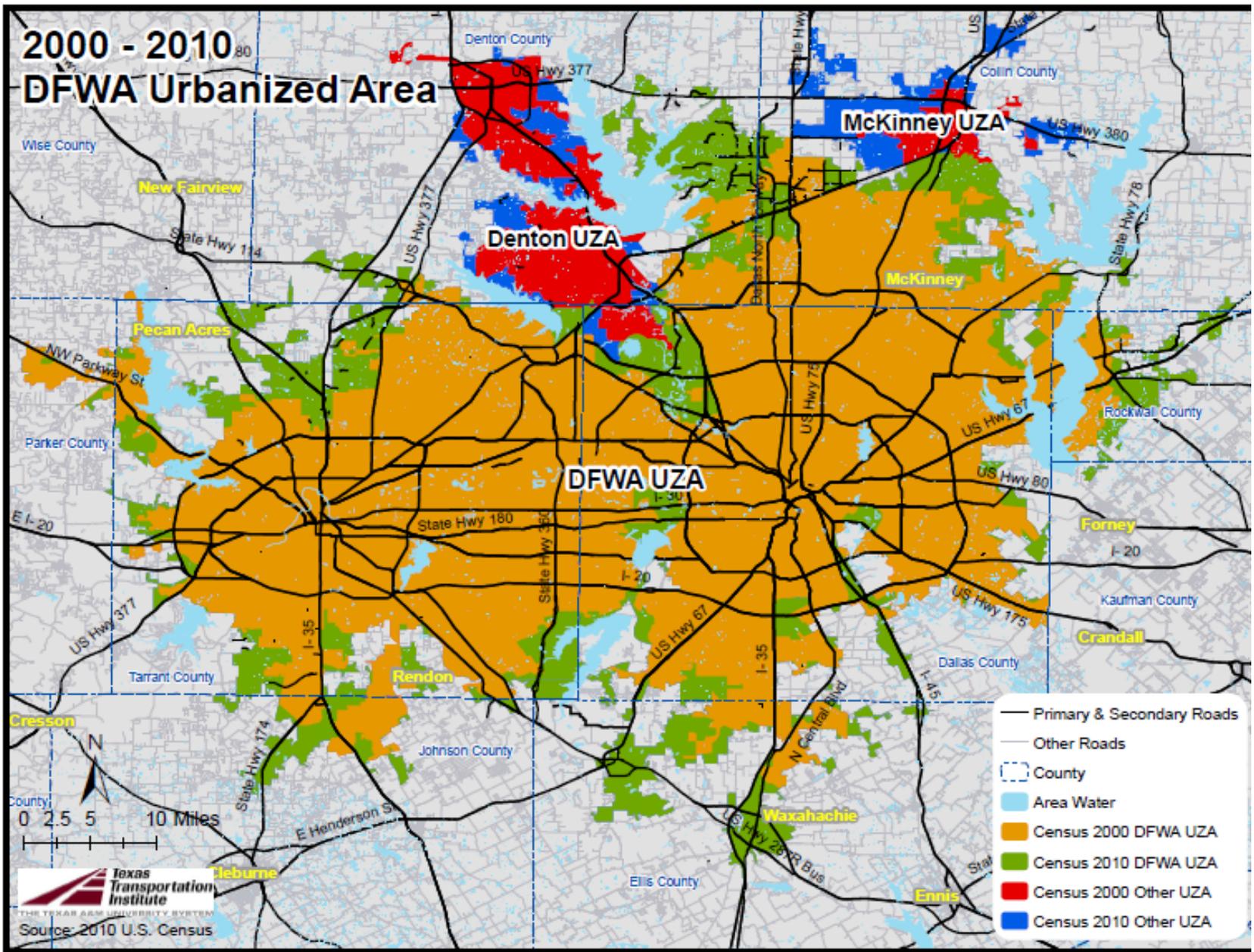
Urban Gaps in Texas

Urban gaps were identified in the following urbanized areas:

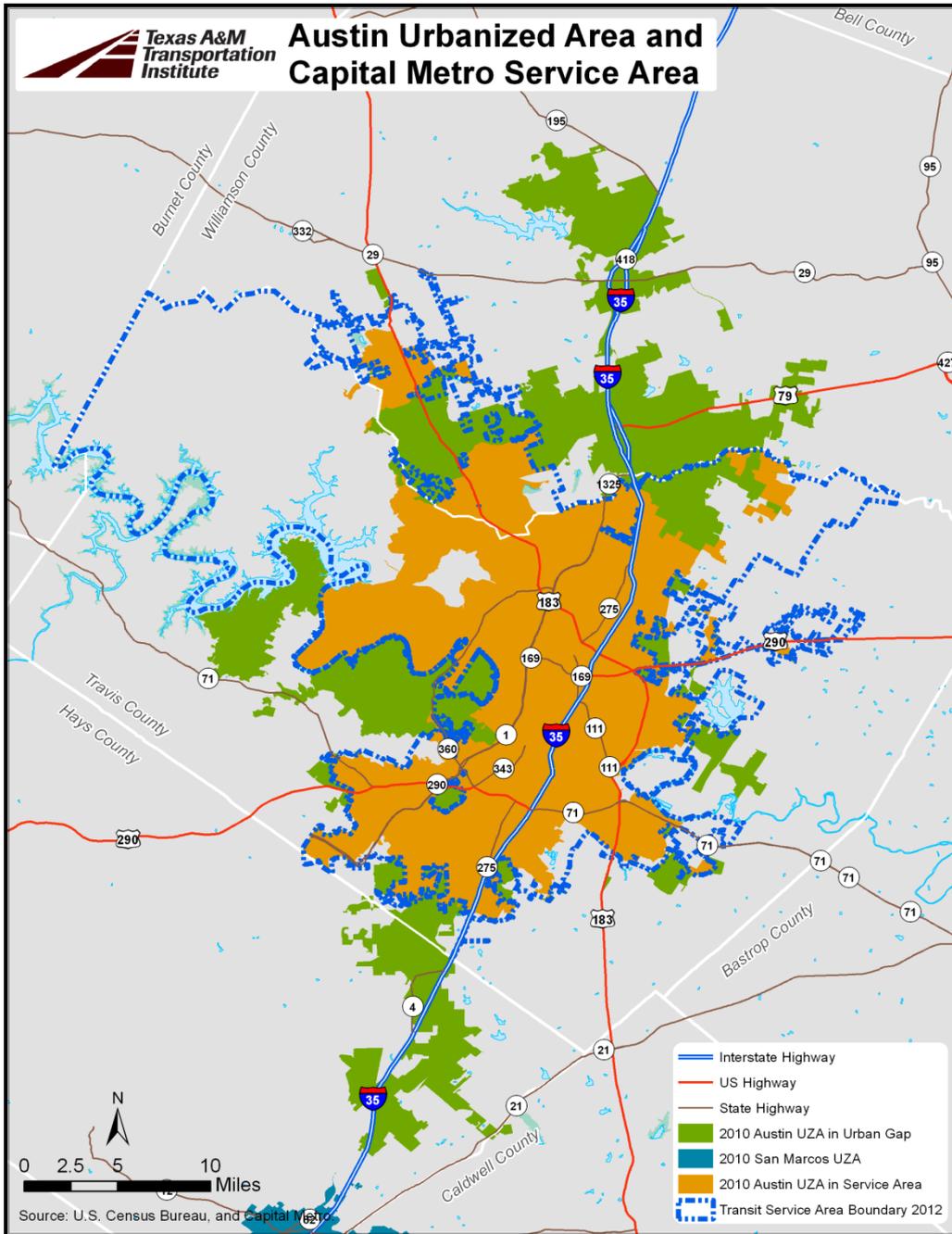
- Abilene
- Amarillo
- Austin
- Beaumont
- Brownsville
- College Station – Bryan
- Conroe – The Woodlands
- Corpus Christi
- Dallas – Fort Worth – Arlington
- Denton – Lewisville
- El Paso
- Houston
- Killeen
- Laredo
- Longview
- Lubbock
- McAllen
- Midland
- Odessa
- Port Arthur
- San Antonio
- Temple
- Texarkana
- Tyler
- Victoria
- Waco
- Wichita Falls

2000 - 2010⁸⁰

DFWA Urbanized Area



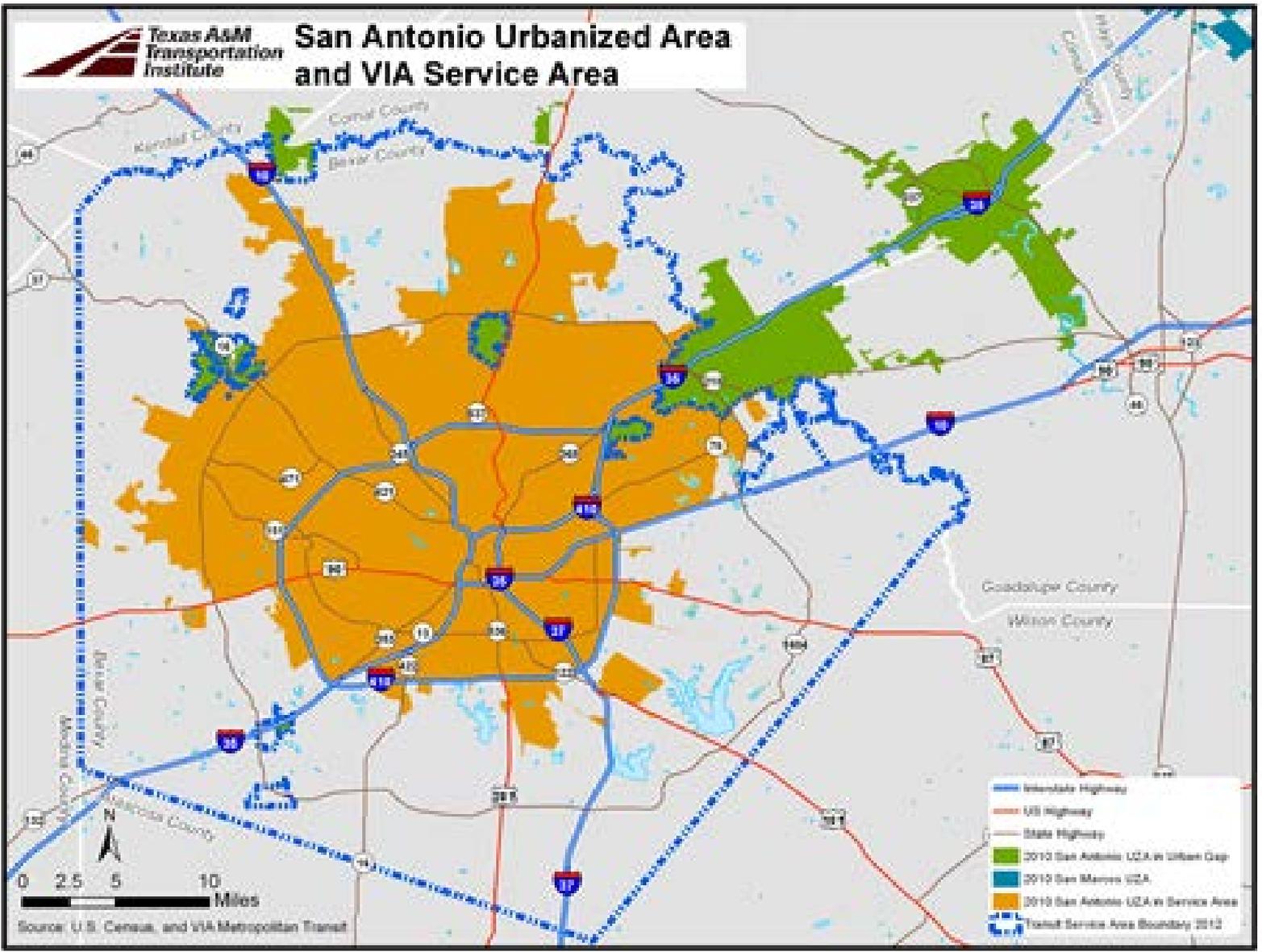
Austin Urbanized Area and Capital Metro Service Area



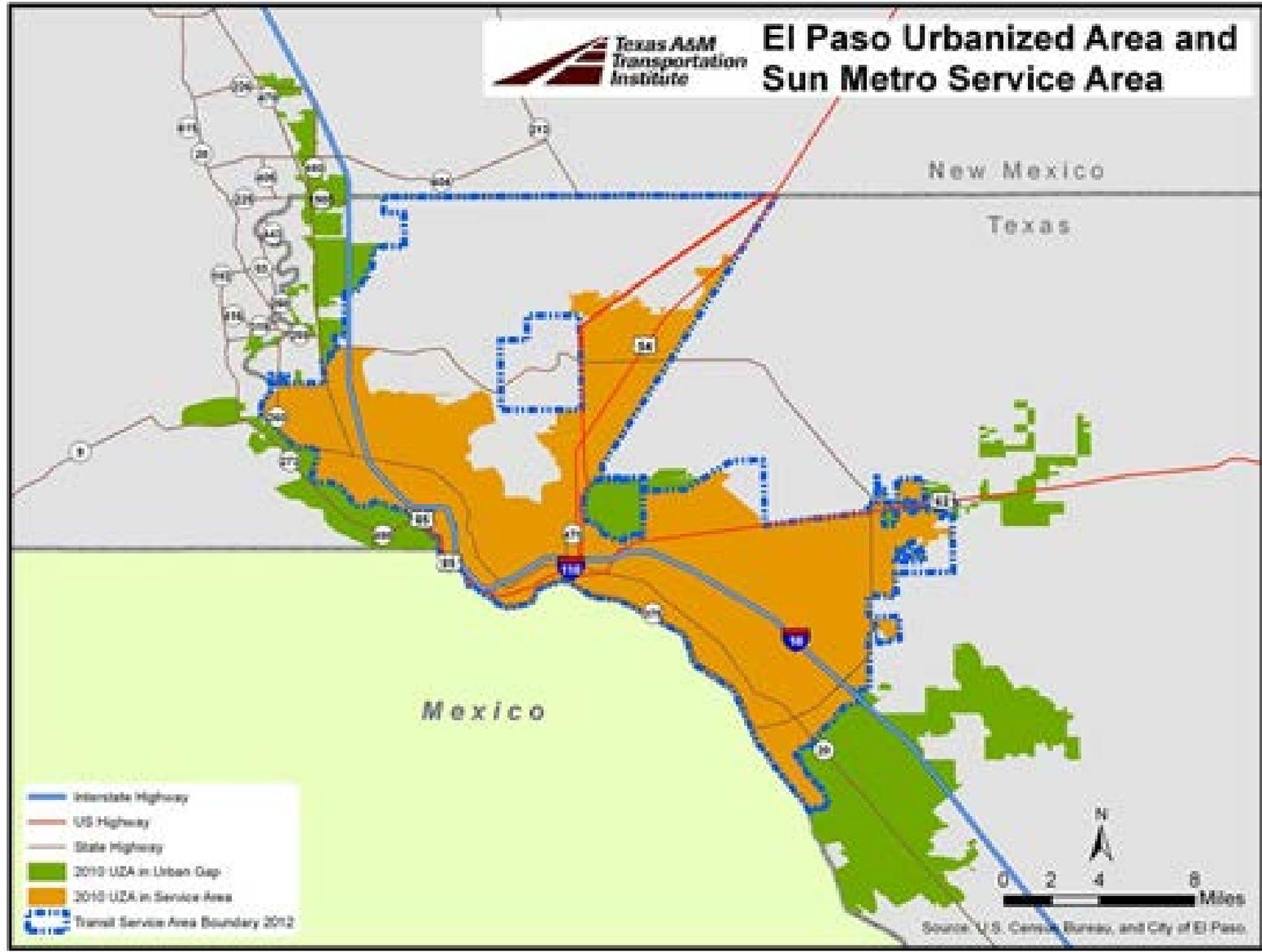
Source: U.S. Census Bureau, and Capital Metro

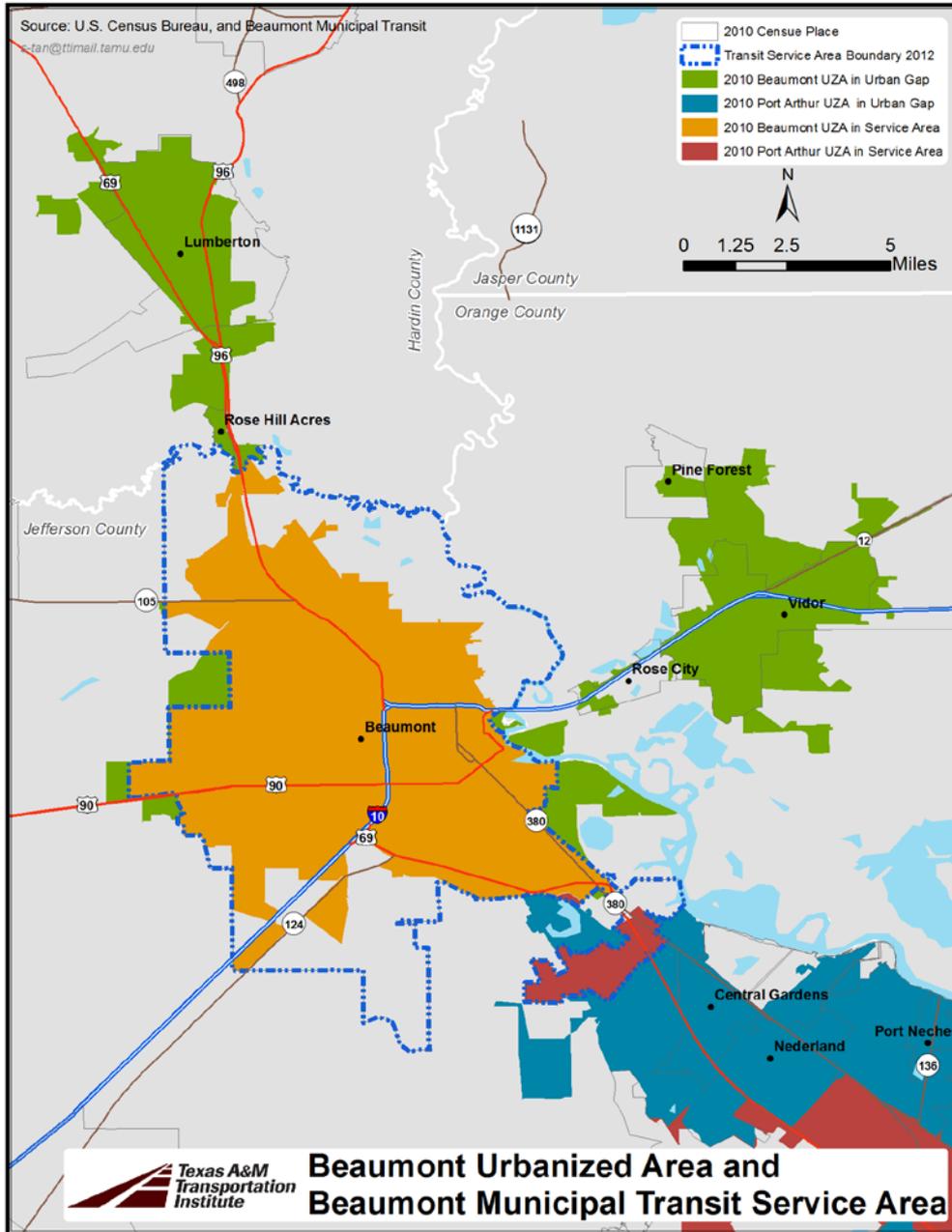
- Interstate Highway
- US Highway
- State Highway
- 2010 Austin UZA in Urban Gap
- 2010 San Marcos UZA
- 2010 Austin UZA in Service Area
- Transit Service Area Boundary 2012

San Antonio Urbanized Area and VIA Service Area



El Paso Urbanized Area and Sun Metro Service Area







Thank you

Linda Cherrington

Texas A&M Transportation Institute

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713-613-9240

AGENDA ITEM 8



TEXAS TRANSPORTATION PLAN 2040

Implementation Phase – PTAC Meeting
May 26, 2015

Implementation Tasks

- Task 1 – Project management plan
- Task 2 – Implementation criteria
- Task 3 – Project-level data analysis
- Task 4 – Budgeting analysis
- Task 5 – Findings and recommendations

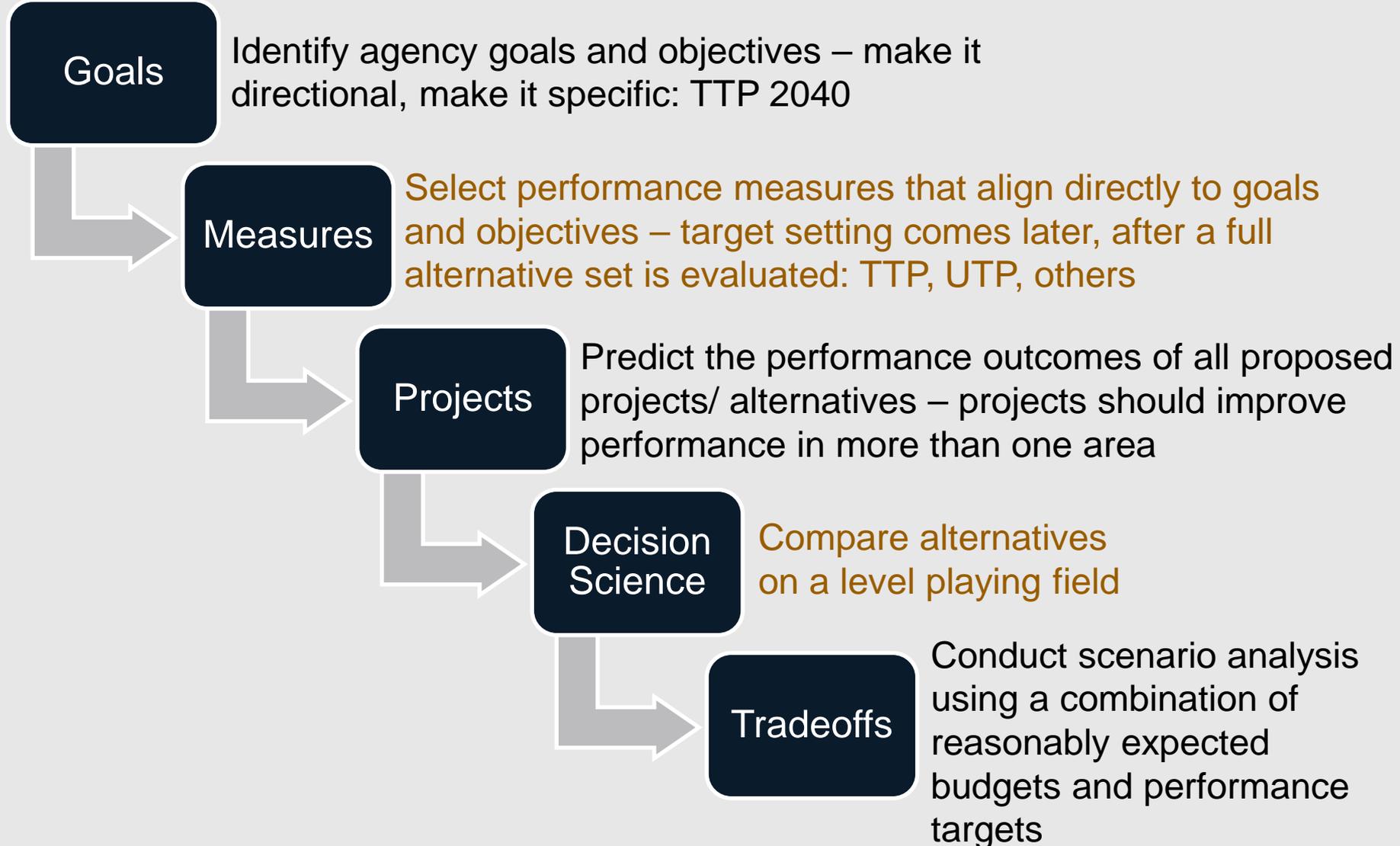
Key Products

- Milestone-based deliverables and project-level priorities
- Updates/ revisions to the TTP 2040

Performance-based Planning



Resource Allocation – How it All Fits (NCHRP 806)



Implementation Methodology

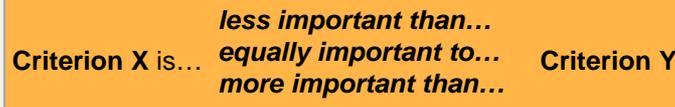
1. Calculate project impacts across all performance areas.

Silo	Project	Cost	Safety ¹		Condition ²		...
			Before	After	Before	After	
Bridge	Replacement	\$90M	12.5	10.5	4	9	...
Pavement	Minor Rehab	\$10k	8.6	8.5	80	20	...
Safety	Increase shoulder	\$2M	20.2	10.5	20	20	...
Mobility	Modify signal timing	\$5k	10.4	12.6	20	20	...

¹Crash Rate, ²Bridge Rating/IRI/RSL, ...

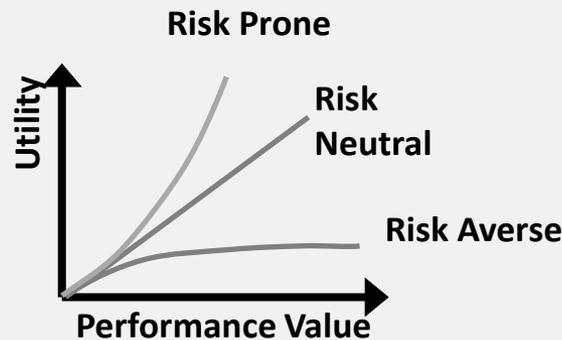
2. Assign relative importance of performance metrics.

AHP used to generate weights from a series of pairwise comparisons:



3. Compare dissimilar performance metrics on a level-playing field.

Utility curves can be used to express preference for performance values on a 0 (worst) – 1 (best) scale

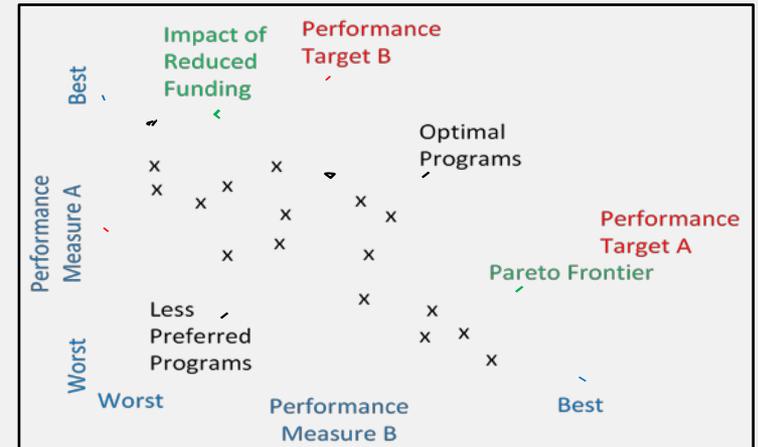


4. Score and prioritize projects.

Combine weights and scaled values to score projects. Projects can then be ranked by the project score to cost ratio.

5. Optimize project selection and evaluate tradeoffs.

Maximize program value by taking into account score to cost ratios.

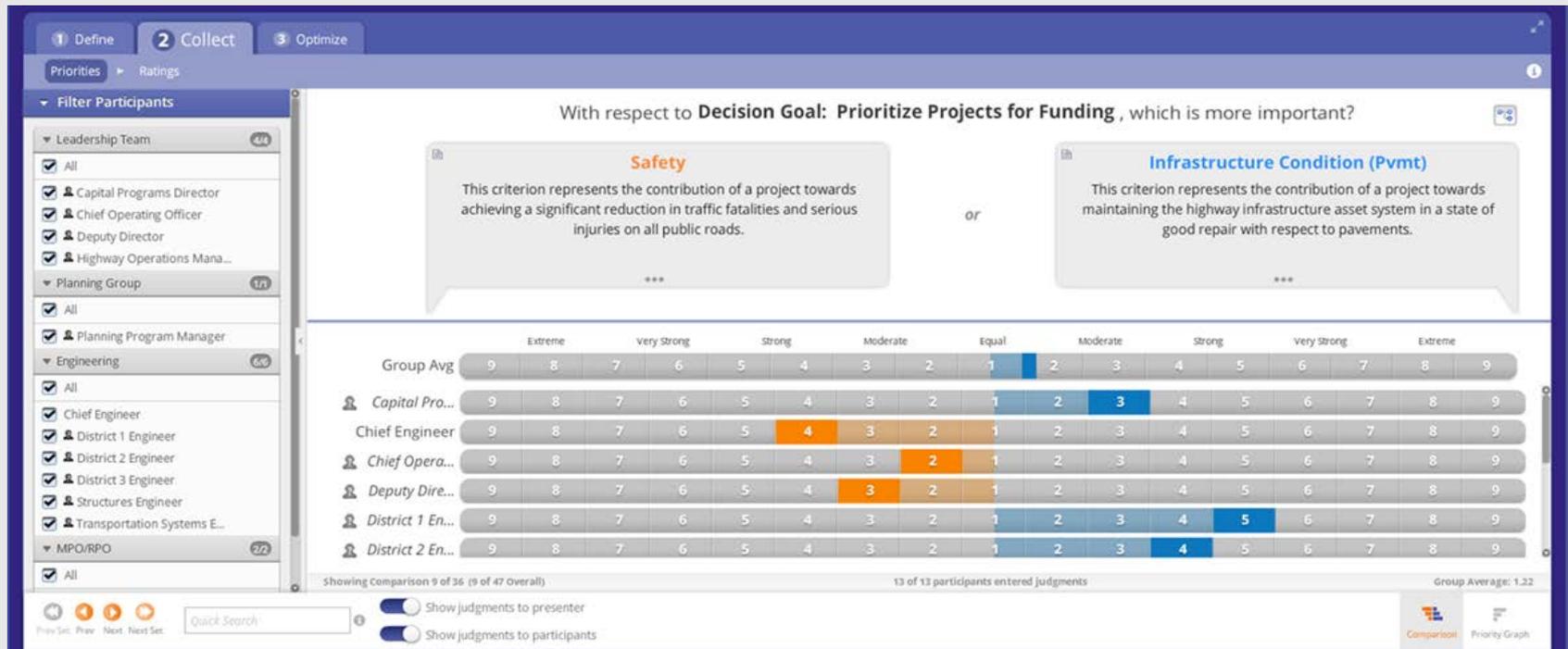


Approach supports minimum investment level analysis and scenario comparisons

→ **Optimal cross-asset resource allocation based on selected projects**

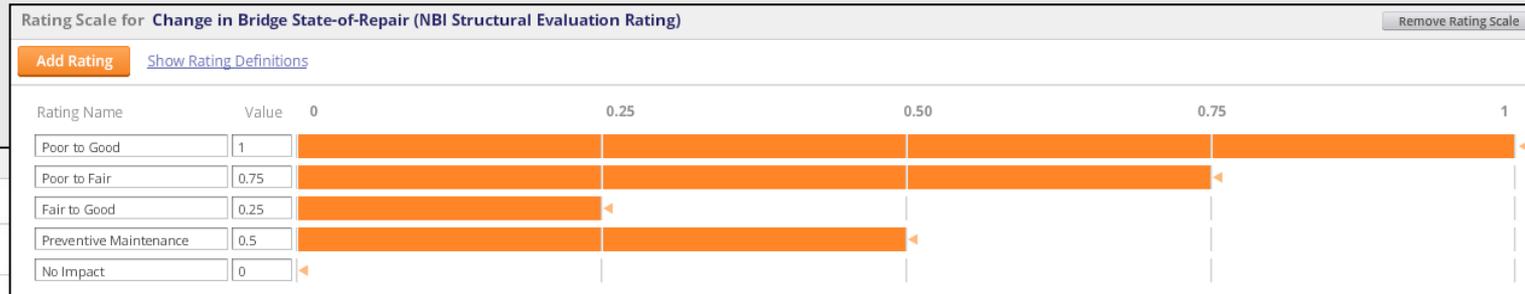
Technical Methodology – Weighting

- AHP elicits priorities through structured, repeatable, and collaborative pairwise comparative process
- Quantifies subjective opinions for various groupings of staff and facilitates discussions
- Particularly helpful when dealing with multiple performance criteria



Technical Methodology – Scaling

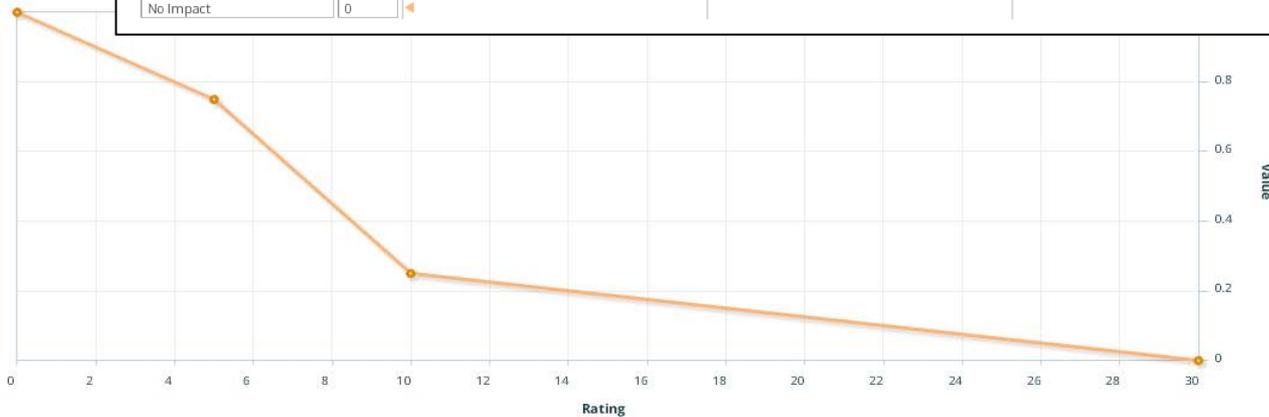
- Applies utility / value scaling to project attribute or impact
- Can accommodate data-driven or subjective ratings, as well as monetization on a normative 0 to 1 scale
- Supports varying risk tolerances and outcome preferences



Rating Scale for **Remaining Service Life**

[Add Rating](#) [Show Rating Definitions](#)

Rating	Value
0	1
5	0.75
10	0.25
30	0

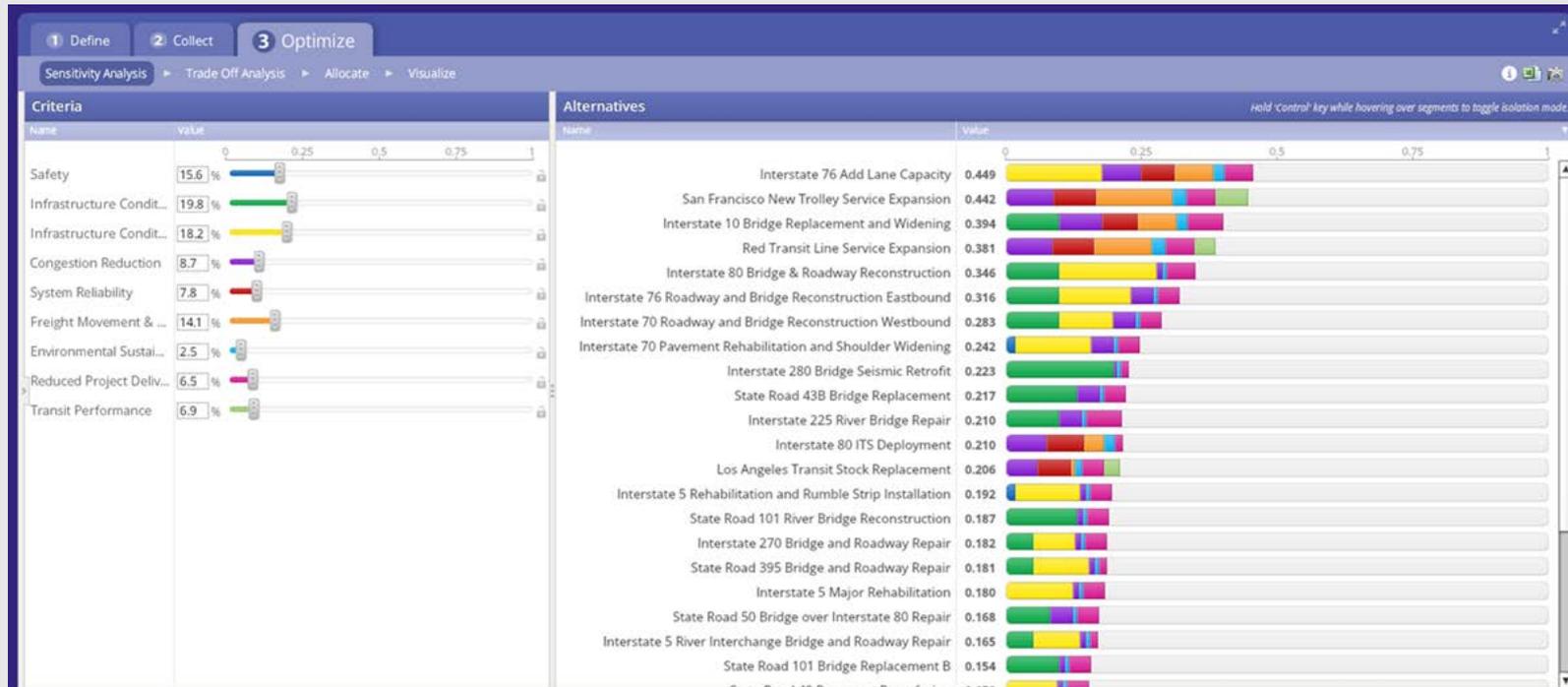


Sample Rating Scales

While holding the 'Control' key, hover over a sample rating scale to preview its corresponding scale



Technical Methodology – Scoring & Prioritizing



Weighted Performance Measures / Criteria

Prioritized List based on Score determined by Weighted Project Ratings

Technical Methodology – Optimizing

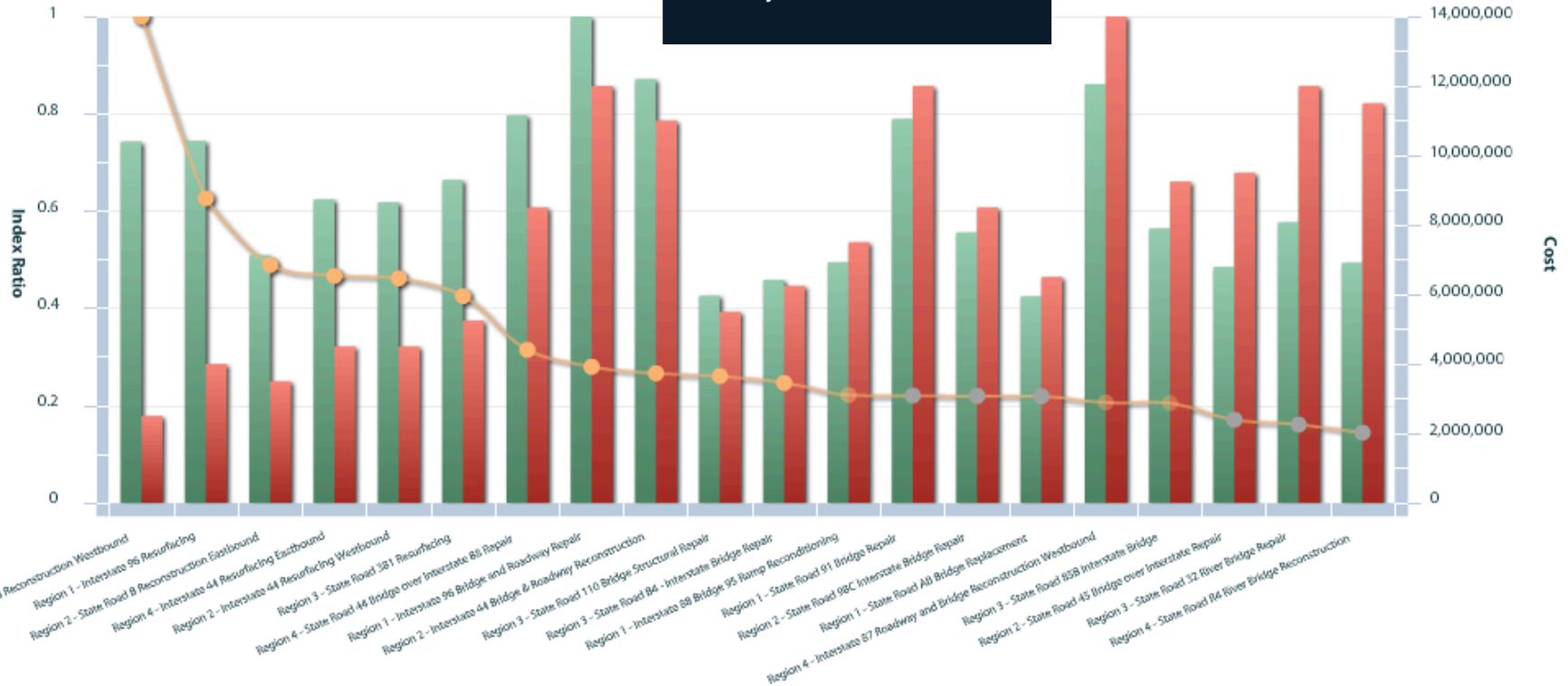
Scenario: **Regional Split**

Maximize Portfolio Score
Subject to Constraints

Viewing: Value-ROI Chart

Portfolio Value: **0.624**

Views ▾



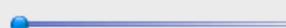
Alternatives

Sort by: **VROI Descending**

Show bars

Show trend line

Zoom:



Score Index

Cost Index

VROI index

Optimized

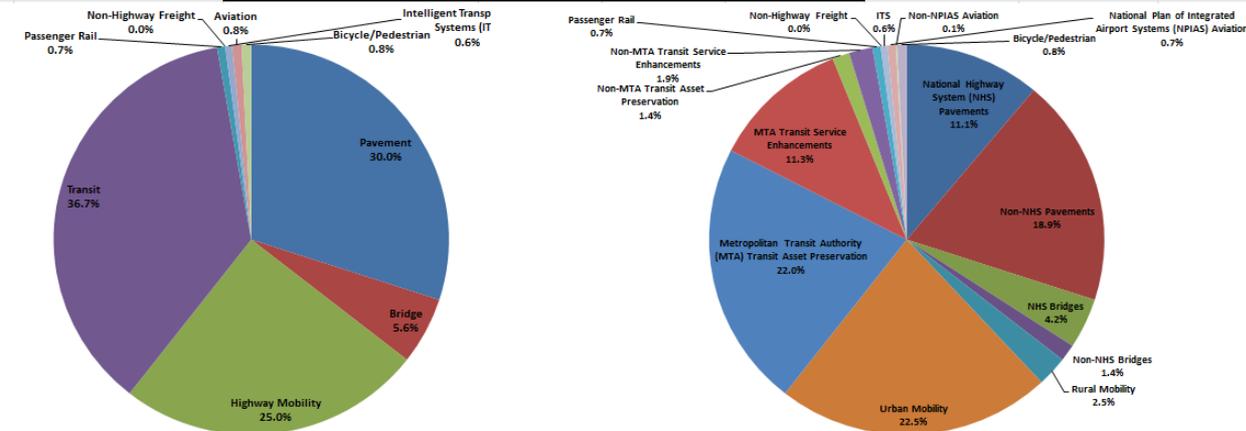
[About This Chart](#)

TTP 2040 Tradeoff Tool

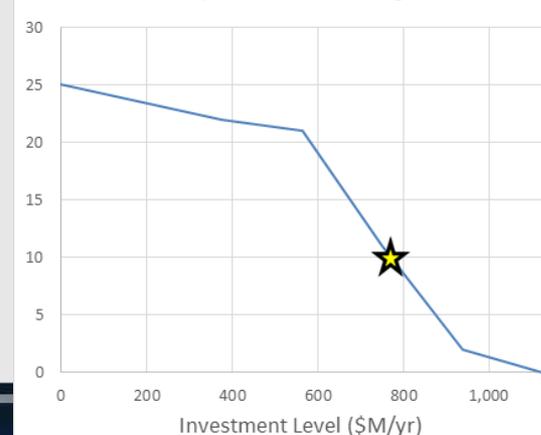
TTP 2040 Funding Scenarios

		Return to Home Screen	View Modal Tradeoffs	Set Performance Targets	Optimize Allocations	Compare Scenarios		
Mode	Investment Category	Performance Measure	2040 Performance Outcome	State-of-Repair	Minimum Budget Allowed in Millions of 2014\$	Maximum Budget Allowed in Millions of 2014\$	Annual Allocation in Millions of 2014\$	Allocation by Mode
Pavement	National Highway System (NHS) Pavements	% NHS Pavement Lane-Miles in a State-of-Good-Repair (based on IRI)	63	Low	0	1,000,000	\$1,000 M/yr	\$2,700 M/yr
		% NHS Pavement Lane-Miles in a State-of-Good-Repair (based on Condition Score)	47	Low				
	Non-NHS Pavements	% Non-NHS Pavement Lane-Miles in a State-of-Good-Repair (based on IRI)	42	Low	0	1,000,000	\$1,700 M/yr	
		% Non-NHS Pavement Lane-Miles in a State-of-Good-Repair (based on Condition Score)	34	Low				
Bridge	NHS Bridges	% Structurally Deficient NHS Bridge Deck Area	22	Low	0	1,000,000	\$375 M/yr	\$500 M/yr
		Count of Structurally Deficient NHS Bridges	3,919	Low				
	Non-NHS Bridges	% Structurally Deficient Non-NHS Bridge Deck Area (on State System)	25	Low	0	1,000,000	\$125 M/yr	
		Count of Structurally Deficient Non-NHS Bridges (on State System)	2,691	Low				
Highway Mobility	Rural Mobility	Rural Level-of-Service	E	Low	0	1,000,000	\$225 M/yr	\$2,250 M/yr
	Urban Mobility	Urban Level-of-Service	F	Low	0	1,000,000	\$2,025 M/yr	
Transit	Metropolitan Transit Authority (MTA) Transit Asset Preservation	% of MTA Assets in a State-of-Good-Repair	76	Medium	0	1,000,000	\$1,980 M/yr	\$3,300 M/yr
	MTA Transit Service Enhancements	Additional MTA Annual Rider Trips in Millions	142	High	0	1,000,000	\$1,020 M/yr	
	Non-MTA Transit Asset Preservation	% of Non-MTA Assets in a State-of-Good-Repair	67	Low	0	1,000,000	\$126 M/yr	
	Non-MTA Transit Service Enhancements	Additional Non-MTA Annual Rider Trips in Millions	9	High	0	1,000,000	\$174 M/yr	
Passenger Rail	Passenger Rail	% Passenger Rail Needs Met	7	Low	0	1,000,000	\$60 M/yr	\$60 M/yr
Non-Highway Freight	Non-Highway Freight	% Non-Highway Freight Needs Met	0	Low	0	1,000,000	\$00 M/yr	\$00 M/yr
Intelligent Transportation Systems (ITS)	ITS	% ITS Needs Met	10	Low	0	1,000,000	\$50 M/yr	\$50 M/yr
Aviation	National Plan of Integrated Airport Systems (NPIAS) Aviation	NPIAS Project Backlog	272	Medium	0	1,000,000	\$60 M/yr	\$70 M/yr
	Non-NPIAS Aviation	Non-NPIAS Project Backlog	21	High	0	1,000,000	\$10 M/yr	
Bicycle/Pedestrian	Bicycle/Pedestrian	% Bicycle/Pedestrian Needs Met	88	Medium	0	1,000,000	\$70 M/yr	\$70 M/yr
							TOTAL	\$9,000 M/yr

Resource Allocation Outcomes



% Structurally Deficient NHS Bridge Deck Area



Next Steps

- Coordination meetings and access to TxDOT-identified project database and stakeholders
- Define a project sub-set (March – April 2015)
- Compile performance measures/criteria and develop recommendations for implementation sub-set
- Develop rating scales for performance-based analysis
- Analyze projects and report on findings (August 1 – September 30, 2015 for draft and final analyses)
- Demonstrate Excel supplemental dashboard to view tradeoffs in running optimization processes for various funding and weighting scenarios (to be completed by December 2015)