

TECHNICAL ADVISORY COMMITTEE MEETING

Monday, January 28, 2019 University Park, Suite 300 3300 N. IH 35, Austin, Texas 78705 2:00 p.m.

AGENDA

1.	Certification of Quorum – Quorum requirement is 13 membersVice Chair Amy Miller
ACTION:	
2.	Approval of December 17, 2018 Meeting Summary
INFORMA	ATION:
3.	<u>Discussion on Vision, Goals, and Targets for 2045 Regional Transportation Plan</u>
4.	<u>Update on Demographic Analysis</u>
5.	Presentation on State of Safety for the CAMPO Region
6.	<u>Discussion on TxDOT National Highway System and Functional Classification Review</u>
7.	<u>Discussion on Ten Year Plan</u>
8.	Presentation on 2045 Fiscal Constraint Methodology Mr. David Paine, Freese & Nichols, Inc.

Mr. Paine will provide a brief overview of the methodology that CAMPO will be using to develop the fiscal

constraint analysis for the 2045 Plan.

- 9. Report on Transportation Planning Activities
- 10. TAC Chair Announcements
 - Next Meeting February 25, 2019
- 11. Adjournment



Capital Area Metropolitan Planning Organization Technical Advisory Committee Meeting Summary December 17, 2018

1. Certification of Quorum......Vice Chair Amy Miller

The CAMPO Technical Advisory Committee was called to order by the Chair at 2:11 p.m.

A quorum was announced present.

Present:

	Member	Representing	Member Attending	Alternate Attending
1.	Stevie Greathouse	City of Austin	Y	Tanya Swartzendruber (via phone)
2.	Cole Kitten	City of Austin	N	
3.	Robert Spillar	City of Austin	N	
4.	Tom Gdala	City of Cedar Park	Y	
5.	(Vacant)	City of Georgetown	N	Octavio Garza
6.	Trey Fletcher	City of Pflugerville	Y	
7.	Gary Hudder	City of Round Rock	Y	(via phone)
8.	Laurie Moyer	City of San Marcos	N	Rohit Vij (via phone)
9.	Julia Cleary	Bastrop County	Y	
10.	Amy Miller	Bastrop County (Smaller Cities)	Y	
11.	Greg Haley	Burnet County	Y	(via phone)
12.	Mike Hodge	Burnet County (Smaller Cities)	Y	(via phone)
13.	(Vacant)	Caldwell County	N	
14.	Dan Gibson	Caldwell County (Smaller Cities)	Y	
15.	Jerry Borcherding	Hays County	Y	(via phone)
16.	David Fowler	Hays County (Smaller Cities)	Y	(via phone)

17.	Charlie Watts	Travis County	Y	
18.	Alex Amponsah	Travis County (Smaller Cities)	Y	
19.	Bob Daigh	Williamson County	Y	
20.	Terri Crauford	Williamson County (Smaller Cities)	N	
21.	David Marsh	CARTS	Y	Ed Collins
22.	Justin Word	CTRMA	Y	Mike Sexton
23.	Todd Hemingson	Capital Metro	N	
24.	Marisabel Ramthun	TxDOT	Y	

Other Participants Via Phone: Anna Lan and Greg

2. Approval of the November 26, 2018 Meeting Summary......Vice Chair Amy Miller

Mr. Bob Daigh moved for approval of the November 26, 2018 meeting summary.

Mr. Trey Fletcher seconded the motion.

The motion to approve the meeting summary as presented prevailed unanimously.

Ms. Miers informed the Committee that the PPP was last updated in 2015. Ms. Miers provided a brief overview of the current updates to the PPP and discussed the timeline for adoption. Ms. Miers also discussed the outreach efforts and noted that the deadline for public comment is December 31, 2018. Question and answer with comments followed.

Mr. Ed Collins moved to recommend adoption of the draft PPP by the Transportation Policy Board.

Ms. Julia Cleary seconded the motion.

The motion prevailed unanimously.

4. Recommendation for Approval of FY 2018 Federal Transit Administration (FTA) Section 5310 Projects Mr. Ryan Collins, CAMPO

Mr. Ryan Collins discussed funding information for the FTA Section 5310 Program for FY 1018 and highlighted applicant requests. Mr. Collins later provided a brief overview of the scoring criteria, scoring results, and award recommendations. Question and answer with comments followed.

Mr. Dan Gibson moved to recommend approval of the FY 2018 FTA Section 5310 Projects by the Transportation Policy Board.

Ms. Alex Amponsah seconded the motion.

The motion prevailed unanimously.

5. Presentation on Demographic Analysis

......Mr. Greg Lancaster, CAMPO

Mr. Greg Lancaster informed the Committee that the 2015 Base year has been completed. Mr. Lancaster added that staff is on schedule in preparing data for the 2025 interim and working to complete the requested 2045 data. Mr. Lancaster later reported that the demographic analysis was part of a (3) three step process with cooperation from TxDOT and the State Data Center. Staff worked with TxDOT and the State Data Center to estimate the regional control totals for the six-county region. Mr. Lancaster further provided a brief overview of the process and highlighted the 2045 Projections and CAMPO Baseline 2045 Demographic Forecast included in the meeting materials. Question and answer with comments followed.

6. Report on Transportation Planning Activities

a. Capital-Alamo Connection Study Joint MPO Board Meeting

Mr. Ashby Johnson reported that the Capital-Alamo Connection Study Joint MPO Board Meeting was held on December 5, 2018 in San Marcos. As summary of the workshop and presentation will be provided at both MPO Board meetings.

7. TAC Chair Announcements

There were no announcements.

8. Adjournment

The December 17, 2018 meeting of the Technical Advisory Committee was adjourned at 3:10 p.m.



Date: January 28, 2019 Continued From: Action Requested: Information

N/A

Technical Advisory Committee To:

Mr. Kelly Porter, Regional Planning Manager From:

Agenda Item:

Discussion on Vision and Goals for the 2045 Regional Transportation Plan **Subject:**

RECOMMENDATION

None. This item is for information purposes only.

PURPOSE AND EXECUTIVE SUMMARY

Every five years, CAMPO is required to develop a long-range planning document that forecasts traffic and demographics at least 20 years into the future. The purpose of the long-range plan is to coordinate regional transportation planning activities, prioritize a comprehensive list of projects, activities, and programs, and a develop fiscal constraint analysis that estimates the region's capacity to fund projects in the Plan. CAMPO is currently operating under the CAMPO 2040 Long-Range Plan which was adopted by the Transportation Policy Board in May 2015. CAMPO is currently working on the development of the 2045 Long-Range Plan that must be adopted no later than May 2020 if the region is to remain in compliance with federal rules.

As part of the development of the 2045 Long-Range Plan, CAMPO has been working under the Platinum Planning Program which seeks to develop regional special studies, subregional, and locally-driven plans and studies to create a comprehensive bottom up approach to CAMPO's long-range planning work. As part of this program CAMPO has developed the 2045 Regional Active Transportation Plan, the Regional Incident Management Plan, and the Georgetown Williams Drive Study; and is currently in development of the 2045 Regional Arterials Plan, the Mokan/Northeast Subregional Study, Luling Relief Route Study and the Congestion Management Plan. In addition, CAMPO will be developing a 2045 Regional Transit Plan. As with any CAMPO planning process, the long-range plan must have a vision, goals, and objectives. CAMPO will work with regional partners in development of the long-range plan including, vision, goals, and objectives. The vision, goals, and objectives from the Regional Active Transportation Plan and Regional Arterials Plan can be used a reference point, eventually folding in these items from other ongoing or upcoming CAMPO-related regional plans/studies.

FINANCIAL IMPACT

None

SUPPORTING DOCUMENTS

- 1. 2040 Long-Range Plan Goals and Guiding Principles
- 2. Regional Active Transportation Plan Vision, Goals, and Objectives
- 3. Regional Arterials Plan Vision, Goal, and Objectives



Social Equity

Ensure that the benefits and impacts of the transportation system are equitably distributed regardless of income, age, race, or ethnicity.

Land Use and Transportation

Support coordinated planning of land use and transportation, where applicable.



Safety & Security

Increase the safety and security of the transportation system.

Cost Effectiveness

Maximize the affordability of the transportation system in both the near and long term.



Mobility and Access

Maintain and enhance mobility and access of goods and people within the region.

Connectivity

Improve connectivity within and between the various transportation modes for goods and for people of all ages and abilities.



Economy

Maximize the economic competitiveness of the region.

Project Delays

Reduce project delays through the project development and delivery process and in the allocation of funds.



Environment, Noise, and Neighborhood Character

Minimize negative impacts to environmental resources, reduce adverse noise impacts, and preserve neighborhood character.

Air Quality and Energy

Minimize air pollution and energy consumption related to the transportation system.



Efficiency

Improve the efficiency and performance of the transportation system.

System Preservation

Ensure that the transportation system can be maintained and operated over time.

PUBLIC OUTREACH

VISION, GOALS, AND OBJECTIVES

---VISION ----

The CAMPO region's world-class, regionally-coordinated, and well-maintained Active Transportation network provides safe, efficient, convenient, and comfortable walking and bicycling access to local and regional destinations for all residents and visitors. The vision, goals, and objectives for the 2045 Regional Active Transportation Plan were developed with the Active Transportation Advisory Committee and reviewed and confirmed by the public during community meetings.

GOALS



1 Safety

Increase the safety of walking and bicycling in the region.

Objectives:

- Reduce bicycle and pedestrian fatalities
- Reduce the number and severity of crashes involving bicyclists and pedestrians
- · Reduce distracted driving, walking, and bicycling
- Increase the personal safety and security of pedestrians and bicyclists



2 Accessibility

Create a complete, cohesive Active Transportation network that connects the region for people of all ages and abilities.

Objectives:

- Expand Active Transportation facilities to create a complete network
- · Fill in gaps in the Active Transportation network
- Retrofit (or enhance) the built environment, where appropriate, to create walkable and bikeable places
- Rehabilitate existing system to provide an ADAcompliant network
- Connect local and regional destinations with Active Transportation



3 Functionality

Establish an Active Transportation system that is logical, comfortable, versatile, accommodating, and useful for completing everyday trips, year-round, for all users.

Objectives:

- Enhance low-stress network and context-appropriate design
- Improve pedestrian and bicycle wayfinding and intuitive network design
- Enhance comfort and experience, and provide end-of-trip facilities
- · Improve multi-modal inter-connectivity (e.g. transit)
- Ensure the Active Transportation network supports a wide variety of trips



4 Equity

Ensure that the Active Transportation system is safe and well-designed for the use of all residents in the region regardless of geography, age, income, physical ability, or skill level.

Objectives:

- Provide equitable access to world-class Active Transportation facilities for all communities and in places with the most need
- Address high crash rates in vulnerable and underserved populations
- Provide safe, well-connected, context-sensitive, and low stress facilities across the region

PUBLIC OUTREACH



5 Everyday Use

Make walking and bicycling an easy and appealing everyday choice for the region.

Objectives:

- Increase walking and bicycle use in particular for short trips
- Support a culture where walking and bicycling are accepted as normal, routine, and accessible activities
- Improve land use and built form to facilitate walking and biking
- Support policies to ensure walking and bicycling are viable and desirable components of the transportation network



6 Quality of Life

Improve the economy, public health, sense of place in the region and increase transportation choices through the development of a high-quality Active Transportation system.

Objectives:

- Strategically prioritize investments to maximize benefits to the region
- Enhance economic development
- · Improve public health
- Increase viable transportation choices
- Reduce auto-dependency, enable auto-independent living, and manage congestion
- Develop a context sensitive system that values places and people



7 Regional Coordination and Connectivity

Create a seamless regional Active Transportation network through coordinated governance.

Objectives:

- Improve coordination among cities, counties, municipal utility districts, school districts, homeowners associations, and the region as a whole
- Develop a plan to coordinate funding for the construction and maintenance of facilities across agencies
- Work to establish clear expectations and roles for local governments
- Improve integration of technology into the regional multimodal operation system
- Develop a basic standard of service for regional active transportation infrastructure
- Manage public financial resources in a way that is cost effective and fiscally responsible during the development of the Active Transportation network



REGIONAL ARTERIALS PLAN - VISION, GOALS, AND OBJECTIVES

Vision: To facilitate a framework of a broad set of transportation choices that improve mobility, are safe, convenient, reliable, resilient, and efficient, and that promote equitable prosperity, region-wide connectivity, economic development, and healthy communities.

Goal 1: Safety – Improve safety for arterial road users.

Objectives

- Reduce severity and number of crashes for all modes to assist local governments and other transportation agencies reach vision zero metrics.
- Reduce emergency response times.
- Enhance evacuation routes.

Goal 2: Mobility – Improve network efficiency and flexibility to reduce travel times and distance. Objectives

- Expand the network to reduce congestion and increase capacity.
- Decrease network gaps to add connectivity, reduce bottlenecks and remove barriers.
- Improve network redundancy to reduce reliance on the limited access roadway network for short trips.
- Unlock economic development/redevelopment potential by allowing for opportunities to live, work, and play in close proximity.
- Utilize improved technology to increase efficiency of travel.

Goal 3: Growth – Plan for growth more effectively.

Objectives

- Plan for and leverage growth through a more comprehensive network to accommodate different development types.
- Prepare for future land use and development opportunities.
- Identify right of way for preservation, and reservation for future or redeveloping corridors.
- Use available policy tools creatively to achieve community objectives.
- Promote a network that supports a wide range of housing choice near employment.

Goal 4: Multimodal – Design multimodally to provide more transportation choices to move people and goods.

Objectives

- Design the roadway network for all modes.
- Design arterials for all ages and abilities.
- Design network with flexibility for all modes.
- Design arterials that are freight and transit supportive.

Goal 5: Environment – Protect and preserve the environment.

Objectives

Develop roadway design that limits negative impacts to water and air quality.

- Consider design elements and aesthetic treatments that are context appropriate.
- Consider environmental factors and the impacts of materials on the environment and roadway lifecycle costs.

Goal 6: Economy, Equity, and Health – Foster a system that promotes prosperity and vitality for our region.

Objectives

- Align road functionality with evolving road character and design to community and environmental standards.
- Consider freight and delivery needs.
- Provide equitable access to support economic development.
- Improve public health outcomes through air quality, active mobility and enhanced quality of life.



Date: Continued From: Action Requested: January 28, 2019 December 17, 2018 Information

To: Technical Advisory Committee

From: Mr. Greg Lancaster, Travel Demand Model Program Manager

Agenda Item: 4

Subject: Update on Demographic Analysis

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

This item provides the Technical Advisory Committee an update on the work being performed generating the 2045 forecast demographics for the six county CAMPO area.

FINANCIAL IMPACT

Not applicable.

BACKGROUND AND DISCUSSION

The Travel Demand Model is updated every five years and is used to support the Metropolitan Transportation Plan update. The current model update is for the 2015 Base year and the 2025 and 2045 Forecast years. The 2045 Forecast demographics were generated using UrbanSIM software and are based on the Regional Control Totals provided by the State Demographer and long range plans provided by other agencies.

SUPPORTING DOCUMENTS

Attachment A - 2045 Projections

Attachment B - CAMPO Baseline 2045 SED Forecast

CAMPO Regional Control Totals - DRAFT FINAL

5.22.2018

				UrbanSim Inputs												
	2015			2045			2045		•'	2045 Baseline (U	rbanSim run.2	0.6.14.18y)				
	Population	Households	Employment	рор	HH	CAGR	EMP	CAGR	emp/pop	P	POP	growth	CAGR	Employment		CAGR
Bastrop	76,948	25,454	32,343	237,587	78,079	3.8	47,000	1.7%	0.20	Bastrop:	265,512	188,564	4.2%	134,120	101,782	4.9%
Burnet	44,144	16,940	18,673	78,036	30,936	1.9	41,000	1.8%	0.53	Burnet:	94,360	50,216	2.6%	37,217	18,547	2.3%
Caldwell	39,347	12,451	16,693	85,197	31,948	2.6	18,000	1.0%	0.21	Caldwell:	103,815	64,468	3.3%	50,582	33,889	3.8%
Hays	177,562	61,360	87,233	775,302	289,061	5.0	150,000	1.6%	0.19	Hays:	632,937	455,375	4.3%	299,000	211,760	4.2%
Travis	1,121,645	428,220	599,597	1,858,149	742,569	1.7	1,729,000	2.0%	0.93	Travis:	2,196,582	1,074,937	2.3%	1,199,239	598,917	2.3%
Williamson	473,592	161,793	233,418	1,690,040	670,481	4.3	497,000	2.6%	0.29	Williamson:	1,377,323	903,731	3.6%	646,912	413,463	3.5%
Total	1,933,238	706,218	987,957	4,724,311	1,843,074	3.0%	2,494,100	2.1%	*							
GQ Pop	40,952	!								Allocated - Total:	4,670,529	1	3.0%	2,367,070		3.0%
										GQ Pop:	88,000	1		133,000 I	ED1	
		Baseline												47,000 I	ED2	

Baseline 2015 **2045**

	emp/pop emp/pop			
Bastrop	0.42	0.51	0.45	
Burnet	0.42	0.39	0.44	
Caldwell	0.42	0.49	0.50	
Hays	0.49	0.47	0.50	
Travis	0.53	0.55	0.53	
Williamson	0.49	0.47	0.50	
Total	0.51	0.50	0.50	

Notes

- Jobs/HH ratios, both targets and results, represent an improvement over straight county-specific growth rates assumptions for allocation at regional and county level. Ratios here may not include GQ subtotals by county.
- 2045 Baseline data allocations are lower than inputs due to reasonableness checks and adjustments to the land-development allocation tool with accompanying documentation.
- *Employment growth input for Compount Annual Growth Rate (CAGR) represents a Woods and Poole-sourced growth year over year rate, which is a different calculation source than other CAGRs represented here.
- Any use of this data other than for the CAMPO baseline, regional travel demand model forecast is not supported.

CAMPO Baseline 2045 Demographic Forecast

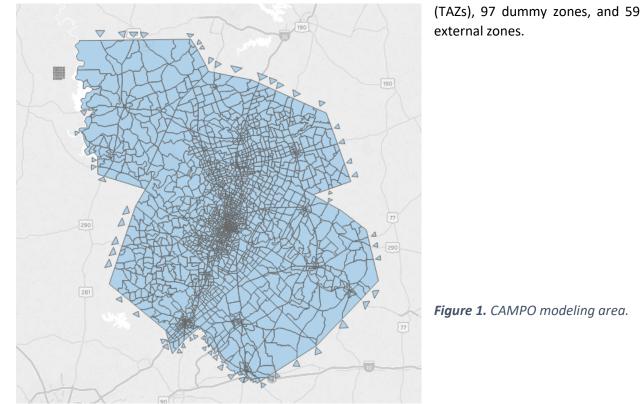
Introduction

The 2045 Baseline forecast was developed as a component of the regional Travel Demand Model program for travel demand forecasting to support regional transportation decision making. In order to test scenarios and understand large scale effects, an MPO makes a forecast every 5 years of where development is likely to occur. The goal for this process is to determine a reasonable estimate of what demographics would be as a baseline for testing travel demand model scenarios. The forecast items include general population and employment at a level sufficient to populate the model. The base year is 2015 and the horizon is 2045.

This baseline demographic forecast represents comparisons of existing published forecasts, and incorporating jurisdiction's understanding of the general trends to determine a regional control total. The trends serve as an upper target for the regional allocation step, which then assigns known constraints to land development - floodplain, parks, zoning, development patterns. For the 2045 year forecast, Regional control totals were used as a benchmark combined with an econometric-based land-use allocation model, UrbanSim, in a 3-stage process.

The process, patterns, assumptions and results for this forecast are summarized below.

Figure 1 shows the CAMPO modeling area, which stretches over six counties: Bastrop, Burnet, Caldwell, Hays, Travis, and Williamson. The modeling area is comprised of 2,235 internal traffic analysis zones



external zones.

Figure 1. CAMPO modeling area.

Methodology

Population and Employment levels are the two key demographic inputs for the CAMPO travel demand model in order to estimate travel trends. Estimating total population and employment levels are also key inputs for the land use allocation model that informs the 2045 Baseline forecast.

The demographic forecast 3 stage process included:

- 1. Estimating Regional Control Totals
- 2. Allocating the estimated growth across the 6 counties with UrbanSim
- 3. Adjusting outputs for knowns and other local inputs

Stage 1. Regional Control Totals

Population

Population for the 2045 Baseline is based on a combination of demographic growth estimate sources and trends by CAMPO, member jurisdictions and others. The estimates were considered by a key group of regional travel demand model users for reasonableness, which became a benchmark estimate for input in the land use allocation model/tool in the next Stage 2-Allocation.¹

The initial estimate for population in Stage 1 for the baseline 2045 CAMPO model demographics estimates were based on comparisons of three available demographics projection sources: two public and one private source. These sources included – the Texas State Demographer², The Texas Water Development Board,³ and Woods & Poole⁴. TxDOT's One-Stop-Shop demographics tool (OSS)⁵, based on projections

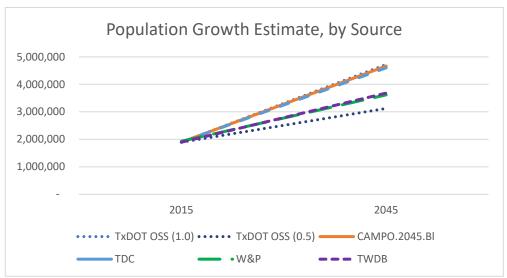


Figure 2. Population growth rates considered for model estimate.

¹ Core Model Users were identified as the City of Austin, Travis County, Williamson County, Capital Metro, and the Texas Department of Transportation - Transportation Planning and Programming Division.

² http://osd.texas.gov/Data/TPEPP/Projections/

³ http://www.twdb.texas.gov/waterplanning/data/projections/index.asp

⁴ https://www.woodsandpoole.com/

⁵ https://www.txdot.gov/inside-txdot/division/transportation-planning/orgs-committees/demographic.html

from the State Demographer, provides coarse variables to reflect past trends of in-migration rates to an area. The TxDOT tool also provides a starting point for demographic trend analysis. Initially, key model stakeholders nominated the higher setting of growth in the one-stop-tool, a compound annual growth rate (CAGR) of approximately 3.0%, to adjust population estimates. Though this was initially viewed as a potentially realistic control total, through this process the regional growth total was scaled back slightly after accounting for additional inputs and constraints detailed below in the allocation and adjustment stages, but the total remains at 3.0% growth. The rate of 3.0% is at the initial upper OSS total and significantly higher than the more moderate Texas State Water Development Board growth rate of 2.2% or lower OSS(0.5) rate of 1.6%. The rates are shown in **Figure 2.**

Employment

The initial estimate for employment in Stage 1 was based on comparisons of two available demographics projection sources: one public and one private. These sources included CAMPO's 2040 Long Range Plan and Woods & Poole⁷. Initially, the growth rate from the 2040 plan, extended out to 2045 (approximately 3.6%), was seen as aggressive given long-term growth trends for this demographic update, where growth rates for large numbers tend to taper off the larger they become. Another traditional, commercial source for employment demographics growth, Woods & Poole, was considered with their internally consistent growth rate of 2.1% for non-farm based employment as an initial input for allocation. However, through the allocation and adjustment stage, the employment total was also scaled to a level consistent with other trends at the regional and county levels. Key among these trends is the concept of jobs-population balance, whereby a region is considered to be 'balanced' at having approximately one job per two population.⁸ For example, the 2015 or 'current' jobs-housing balance for the CAMPO region is approximately 0.52. The number of jobs then tracks along a similar growth trend as

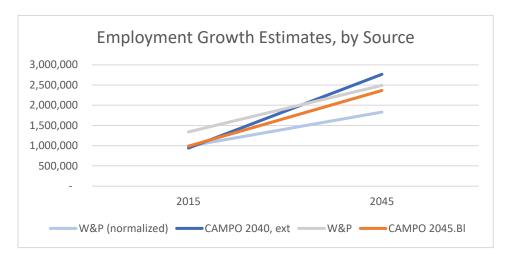


Figure 3. Employment growth rates considered for model estimate.

⁶ Represents an in-migration factor setting of "1" in the TxDOT OSS tool for all six counties in the CAMPO region. The alternative, an in-migration factor setting of "0.5" was seen by key stakeholders as unrealistically low for the CAMPO region, based on current and past trends.

⁷ https://www.woodsandpoole.com/

⁸ The 2016 TxDOT Socio-Economic Guidelines document recommends that employment to population ratios be between 0.3 and 0.5. However, a slightly higher ratio is not unexpected given employment levels in Central Texas, and Travis County, specifically.

population, where the two are related for forecast purposes. The resulting baseline rate of 3.0% compound annual growth in employment is between the initial upper CAMPO 2040-plan trend and the more moderate Woods & Poole trend rate of 2.1%. The resulting jobs-population rate for the 2045 baseline remains 0.50. The rates and employment totals are illustrated in **Figure 3.**

Stage 2. Allocation

The control totals in Stage 1 were used as initial input for the UrbanSim land use allocation tool.



Inputs – Zoning, Floodplains, Parks, travel time skims etc.

As outlined in the UrbanSim methodology, inputs for the model included "Zoning", defined for the UrbanSim model in terms of upper capacities on population and employment densities per zone. These were based on local zoning, demographic projections from available county or city-level plans, and prevailing development densities.

UrbanSim is also able to consider shapefiles for prohibition to growth. GIS layers for state and local parks and floodplains were included as areas to not allocate additional growth to. In the later adjustment stage, some corrections were needed to re-introduce existing housing back in to zones where it had been removed by algorithms. This adjustment step was not optimal considering that new households should not locate in flood hazard zones but was considered reasonable for this dataset given the general durability of existing housing and their travel patterns for this plan forecast. UrbanSim also uses existing travel time skims for determining elasticity of where to place development. This allows the allocation algorithms to consider jobs access and travel times as part of the 'attractiveness' of a geographic area for new-development or redevelopment. Prior base year model inputs were used as per the UrbanSim documentation.

Output – Jobs and Households

UrbanSim grows census-based block groups through its algorithms in a process that has had many iterations and extensive documentation over the model brand's 20+ years of development and production. The methodology and data was tailored to the CAMPO region through licensing directly with the cloud-based platform as detailed in the attached CAMPO-specific methodology brief (Attachment A).⁹

The outputs from the allocation process were converted to CAMPO TAZs, and totals for households and jobs were reviewed and adjusted as noted in Stage 3.

⁹ Additional UrbanSim methodology and documentation: http://cloud.urbansim.com/docs/general/documentation/urbansim.html http://www.urbansim.com/resources/

Special Generators, ED1 and ED2

Special Generators denotations were continued from the 2015 base year reviewed demographics, noted in **Table 1**, with absolute growth continued from the 2040 assumed values. Labels for some zones previously considered special generators were included, though awareness of special generator trip generation studies are unknown as of this writing.

Employer Name	Number of Employees 2015	Number of Employees 2045	Employment Type	TAZs include
Zilker Park	10	100	Service	436
Central Texas Medical Center	643	900	Service	776
St. David's South Austin Hospital	983	1,100	Service	490
Seton Northwest Hospital	1,900	2,100	Service	1820
St. David's Medical Center	4,500	5,000	Service	1651
IKEA	350	350	Retail	115
Tanger Outlets San Marcos	2,267	2,500	Retail	790
Round Rock Premium Outlets	2,495	3,000	Retail	1406
San Marcos Premium Outlets	3,164	3,500	Retail	1489
Southwestern University	0*	0*	Education	858
St. Edwards University	0*	0*	Education	479
Texas State University	0*	0*	Education	703
Huston-Tillotson University	137*10	0*	Education	411
ACC Highland	891	1,000	Education	1448

Table 1. Potential Special Generators.

ED1 and ED2 represent K-12 and Post K-12 education employment in the dataset, and were also largely held over form the 2040 dataset. A prototypical elementary school was estimated to have approximately 60 employees, a middle school 100, and a high school approximately 180. In some cases, zones were allocated additional ED1 employment after a review of the residential allocation from UrbanSim, to reflect the co-location of new education facilities.

ED2 facilities were reviewed to continue their location and a generalized growth rate. Texas State University has a posted growth plan of approximately 1.5% per year, and the University of Texas was assumed to have a growth rate of approximately 10% over the forecast after accounting for the siting of the new dell medical school at 15th and Red River in Austin.

Special note needs mention of Austin Bergstrom International Airport and the University of Texas at Austin central campus as special generators since their trip making patterns are separated into specific trip purposes in the CAMPO model (UT and AIR).

¹⁰ *Note, Special Generators for specific college education locations were moved in the database to ED2 for these locations and labeled uses to be more consistent. In all cases, modest growth was considered (10% approximate) unless other documentation was readily available through online research.

Stage 3. Adjustments to UrbanSim outputs

The raw outputs of UrbanSim were reviewed over several iterations to calibrate the results to expectations and predominant development patterns. General reasonableness reviews centered around 'does the output reflect the inputs and constraints', 'do the annual growth rates by county reflect a realistic pattern (ie. Not above 4% per year growth for all years for large counties less able to sustain high rates of growth, comparison to historical growth rates, general housing and population balances within the region and specific counties. Adjustments were then made to the following:

Parameter trends at the county level – use of control targets

For the reasonableness adjustments conducted after UrbanSim's allocation, it was necessary to determine target employment to population ratio ranges so that reviewers had a benchmark range to make edits within. The table at right illustrates the current base year ratios (2015) and forecast result ratios (2045).

Calibration "Target" ratios are also included. The calibration targets were established based on an internal goal of improving the perceived accuracy of the land use allocations over the 2040 demographics data. The results are considered reasonable because

	2015 2045	
	emp/pop emp/pop	target
Bastrop	0.43 0.51	0.45
Burnet	0.43 0.39	0.44
Caldwell	0.47 0.49	0.50
Hays	0.51 0.47	0.50
Travis	0.55 0.55	0.53
Williamson	0.50 0.47	0.50
		_
Total	0.52 0.50	0.50

Baseline

Table 2. Existing and Forecast Population-Housing ratios, and calibration "target"

they: a) make improvement over the 2040 dataset, b) are more in balance than individual county- growth-rate-based ratios from the comparable data sources are, c) more closely represent 'balanced' jobs-to-population sub-areas, and c) more closely represent existing data ratios.

Edits for reasonableness and peak smoothing (Negatives)

12 TAZs received a disproportionately high share of regional growth which exceeded the constraint inputs for UrbanSim. The outputs of these zones were generally deleted or balanced between adjacent TAZs using the control target levels above.

TAZs located in a number of the region's smaller cities (Lockhart, Burnet, Marble Falls, Bastrop, Giddings, Manor, Jarrell, Florence) and their employment-centric TAZ's showed negative employment growth – heavy losses of jobs, that was seen as unreasonable. Those negatives were reversed to a more neutral or slightly positive trend closer to existing data.

Retail output adjusted/conversion from Service employment sector

UrbanSim assigned relatively higher growth to the service sectors, and relatively fewer retail jobs. Where growth in service employment was observed, a percentage was converted to retail so that the regional growth in retail trend correlates with the population growth.

Land Use analysis from COA's Impact Fee Land Use Assumptions

The City of Austin completed a land use analysis of demographic growth for a transportation impact fee in 2017 with extensive documentation. The analysis was done on a TAZ level, combined with extensive review by city staff for reasonableness. The results of this projection were totaled at the impact fee service area and compared to UrbanSim results.

Reviewers subsequently modified inputs for UrbanSim to better reflect the City of Austin-noted growth capacities, which included a 'buildout' estimate by service area.

These comparisons proved very useful for calibrating the 2045 results for the core of the regional model area, and adjusting employment and population totals at the impact fee study-zone level. Summary of Service area comparison between the City of Austin "Buildout" scenario and CAMPO Baseline 2045 assumptions are included as **Attachment B.**

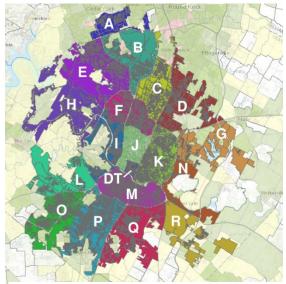


Figure 4. Austin Impact Fee Study Zones -Land Use Assumptions (City of Austin 2017)

Comprehensive Plan demographics allocation from Bastrop County

Bastrop County completed a Comprehensive Plan update in December, 2016 which included county-level demographic projections and adjustments to the then-assumed 2040 CAMPO demographic growth for the county. The analysis was done on a TAZ level, with incorporation of staff understanding of pending developments reasonableness. The results of this were then used for travel demand modeling at the County level for the Bastrop Plan.

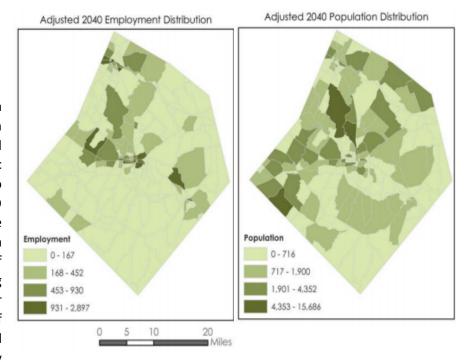
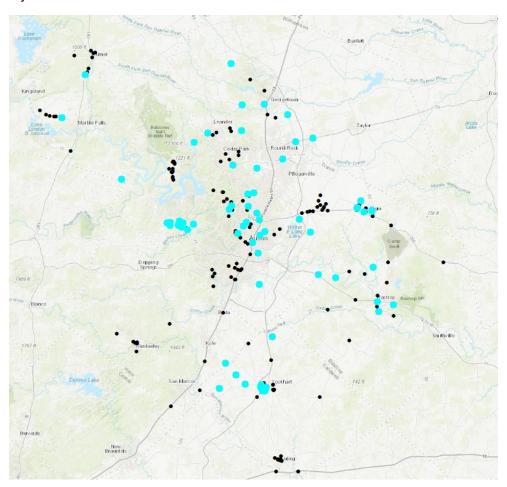


Figure 5. 2016 Bastrop County Comprehensive Plan demographic allocations

Reviewers subsequently adjusted outputs from the UrbanSim model run to better reflect the distribution of growth shown in the Bastrop plan. Bastrop County also provided comments to staff for inclusion.

Modifications for CAMPO RAP-sourced known developments

CAMPO undertook a Regional Arterial Concept Inventory (RACI) to coordinate arterials between jurisdictions along their borders. Part of the outreach to inform the plan included asking jurisdictions to identify significant developments on the horizon. These developments are included in the area snapshot as blue dots in the image below. For the 2045 Baseline allocation, these data points were also reviewed, and data adjusted to reflect them.



Modifications by local governments

CAMPO presented draft baseline results to the TAC December 17, 2019, including this draft methodology. An additional round of comments and adjusting modifications was coordinated in early 2019 to incorporate local-specific understanding. Specific comments received at the TAZ level consisted primarily of moving certain projected demographics from one TAZ to another within the jurisdiction based on local understanding of potential allocation at the sub-regional level. This feedback was considered important for the MPO to take local understanding into consideration within the larger context of the forecast. In their review and comments, Williamson County chose to provide specific comments based on a detailed, separate county-growth total based forecast and allocation that was considered more in-line with local expectations. CAMPO was able to incorporate much of TAZ-specific recommendations within the parameters of the approach outlined above.

From Williamson County's supporting backup provided in support of their commends, their allocation process also uses developable land-area, time access between zones, and predominant development densities as core methodological factors.

"The demographic allocation process utilizes zone to zone travel time, development density and developable land to allocate demographics at the TAZ level. Population is allocated first at the TAZ level and then employment categories. For population, available developable land is estimated using the amount of developable land and existing development density. Existing development density is calculated based on existing population and employment. Then available developable land together with accessibility measures are used to produce the population development scores. These scores are used to allocate County control total of non-group quarter population to TAZs. For households, county level change in the number of households is proportionally distributed to TAZs based on their non-group quarter population changes." 11

In CAMPO review, the differences in allocation methodology consists of the Urban Sim methodology taking in to account land costs and changes to land uses as the pressure to redevelop, wages influence on employees abilities to access jobs from housing, and other economic factors noted on page 4 of this document. Both methods are considered reasonable by oversight agencies such as TxDOT.

Modifications to clear TxDOT QC

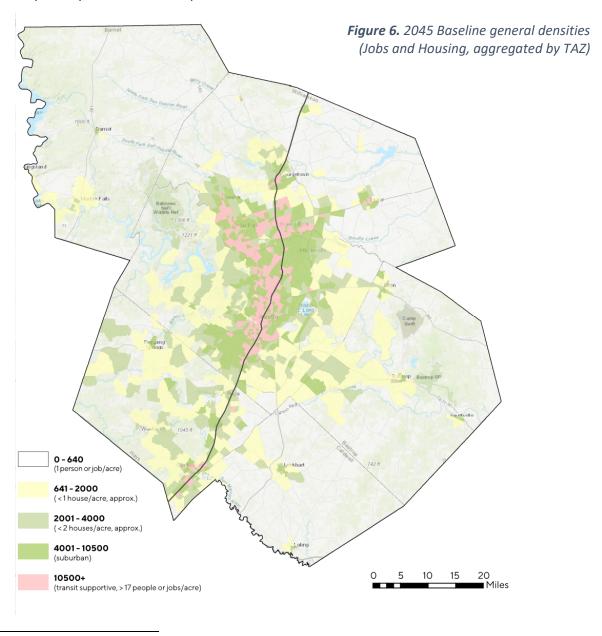
For the 2045 RTP Travel Demand Model development, TxDOT has partnered with CAMPO to provide a model architecture "refresh", and the baseline demographics were a standing critical path benchmark point for the contractual delivery of the model back to CAMPO for use. CAMPO exchanged interim draft results with TxDOT over several months of 2018 for comments and QC review consistent with their oversight and reasonability checks provided to all MPOs in the state. TxDOT's review of demographics included referrals of the data to both TTI and the State Demographer for comments that were then addressed to their satisfaction by CAMPO. Subsequent to the local governments review and comments, a revised, Draft-Final baseline 2045 demographic file was exchanged with TxDOT in March 2019 in order to meet the model architecture "refresh" partnership expectation allowing TxDOT's contractor to test the model before releasing it back to CAMPO for use.

¹¹ Memo to Williamson County Transportation Coordinator re: Williamson County TAZ level Socioeconomic data, April 10, 2019.

2045 Baseline Results

Generally

The results of the process generally match expectations – with new residential development spreading out through the MPO area, and along predominant development densities with employment growth generally following major roadway corridors. **Figure 6** shows the 2045 aggregated densities (represented as jobs plus housing) visually. **Figure 7** shows the existing conditions (2015). Tabular summaries are included on the following pages. **Table 2** summarizes the UrbanSim allocated growth, as adjusted, by county, and **Table 3** compares 2015 to 2045 statistics. ¹²



¹² Totals in Table 2 reflect employment and population allocated by the UrbanSim process, and do not including GQ population, SGZ, ED1 or ED2 employment

Table 2. 2045 Baseline results and growth, as adjusted, by county.

	POP	growth	CAGR	Employment		CAGR
Bastrop:	265,512	188,564	4.2%	134,120	101,782	4.9%
Burnet:	94,360	50,216	2.6%	37,217	18,547	2.3%
Caldwell:	103,815	64,468	3.3%	50,582	33,889	3.8%
Hays:	632,937	455,375	4.3%	299,000	211,760	4.2%
Travis:	2,196,582	1,074,937	2.3%	1,199,239	598,917	2.3%
Williamson:	1,377,323	903,731	3.6%	646,912	413,463	3.5%

Allocated - Total: 4,670,529 3.0% 2,367,070 3.0%

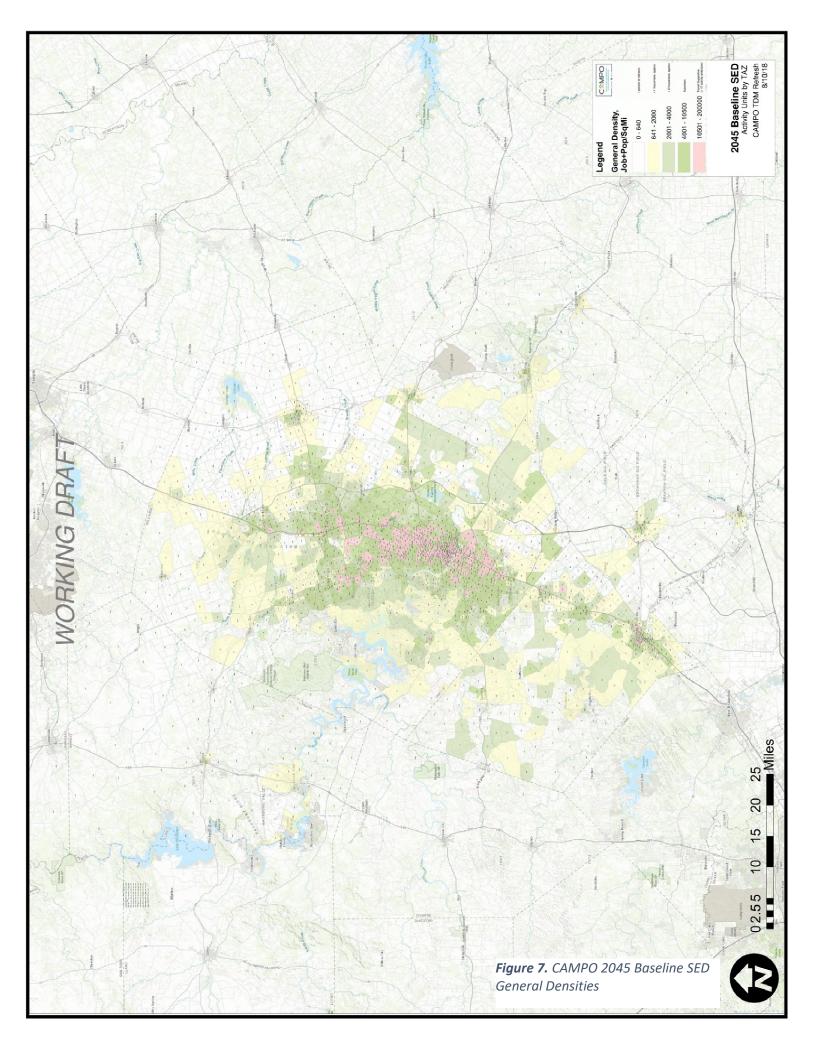
	2015	2045	Absolute Growth	Percent Growth	Annualized Growth
Population	1,899,617	4,672,794	2,773,177	145.99%	3.05%
Households	711,859	1,900,276	1,188,417	166.95%	3.33%
POP/HH	2.67	2.46			
Total EMP	995,216	2,367,070	1,371,854	137.84%	2.39%
Total EMP*100/POP	52.39	50.66			
Total EMP/HH	1.40	1.25			
Total EMP/POP	0.52	0.51			
Basic	199,603	397,934	198,331	99.36%	2.33%
Retail	238,159	447,670	209,511	87.97%	2.13%
Service	469,897	1,302,410	832,513	177.17%	3.46%
Education	87,557	219,056	131,499	150.19%	3.10%
Retail EMP * 100 / POP	12.54	9.58			
Service EMP * 100 / POP	24.74	27.87			

Table 4. Base Year Summary Statistics

			Special
	Total	DA1 Total	Generators Total
Population	1,899,617	1,897,352	2,265
Households	711,859	711,859	0
Population/Households	2.67	2.67	
Employment			
Basic	199,603	199,603	0
Retail	238,159	227,754	10,405
Service	469,897	461,861	8,036
Education	87,557	82,891	4,666
Employment Total (DA1 + SG + EDU)	995,216		
Employment/Population	0.52		
Population/Employment	1.91		
Median Income	\$55,451		

Table 5. Forecast Year Summary Statistics

	Total	DA1 Total	Special Generators Total
Population	4,672,794	4,670,529	2,265
Households	1,900,276	1,900,276	0
Population/Households	2.46		
Employment			
Basic	397,934	397,934	0
Retail	447,670	430,317	17,353
Service	1,302,410	1,294,130	8,280
Education	219,056	218,056	1,000
Employment Total (DA1 + SG + EDU)	2,367,070		
Employment/Population	0.51		
Population/Employment	1.97		
Median Income	\$59,100		



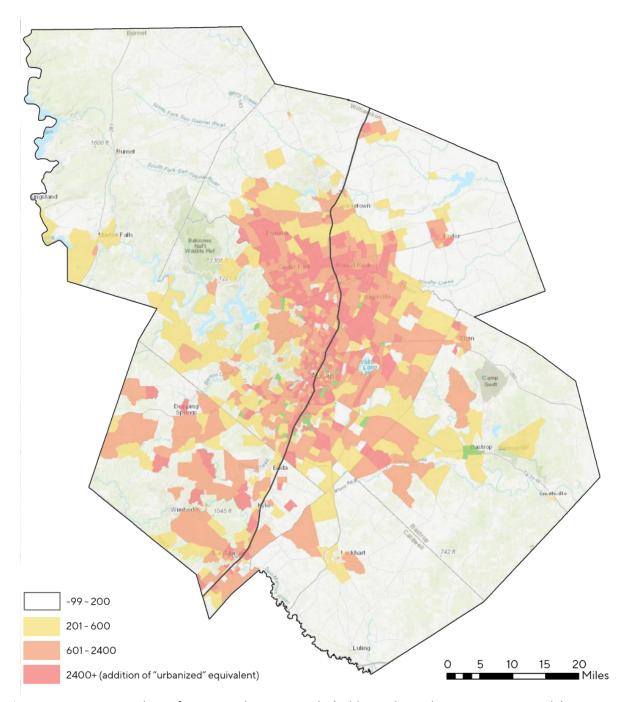


Figure 8. TAZs assigned significant population growth. (Additional population per square mile)

Population Growth

Figure 8 shows the distribution of allocated population growth between 2015 and 2045. The pattern illustrates areas generally within the ETJs of existing cities experience the largest increases in population density changes, and growth occurring across the region. Areas with less significant growth in population density (an increase of fewer than 200 persons per square mile) are omitted from this exhibit to contrast the more significant changes.

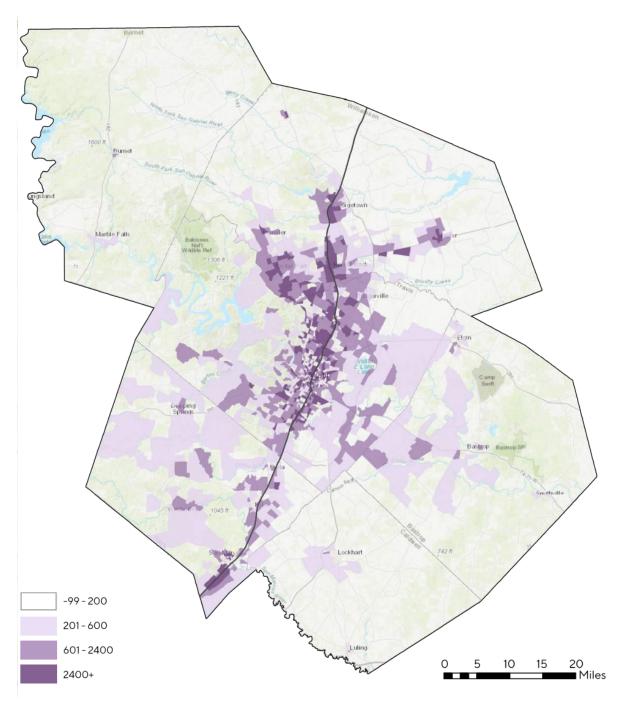


Figure 9. TAZs assigned significant growth in employment.

Employment

Figure 9 shows the distribution of allocated employment growth between 2015 and 2045. The pattern illustrates areas generally within the ETJs of existing cities experience the largest increases in employment density increases, and growth occurring across the region oriented along the major highways. IH-35 is illustrated for orientation, with notable employment growth expected along the corridor. Areas with less significant growth in population density (an increase of fewer than 200 jobs per square mile) are omitted from this exhibit to contrast the more significant changes.

Household Size

The average household size is a function of UrbanSim process. In the few cases where results in a TAZ deviated from a reasonable output (HHSize >5), averages from adjacent TAZs were used to nominally adjust the size and population totals.

Area Type

For the CAMPO TDM, the area type factors are calculated according to the formula below:

$$Area \ type \ factor = \frac{Pop_i + \left(\frac{Regional \ Population}{Regional \ Employment}\right)x \ Emp_i}{Acres_i}$$

Where i is a TAZ in the study area.

The area type factors are then aggregated into five area types according to the cutoff points in Table , which are retrieved from the CAMPO 2010 Planning Model Guide document.

Table 6. Area Type Classes

Area Type	Range	Description
1	Historic — Manually Assigned	CBD
2	Area Type factor ≥ 25	Urban Intense
3	9 ≤ Area Type factor < 25	Urban Residential
4	1 ≤ Area Type factor < 9	Suburban Residential
5	Area Type factor < 1	Rural

Figure 10 (Appendix C) shows the spatial distribution of the area types in the model area. It is reasonable that urban and suburban activity would continue to center around the cities of Austin, Cedar Park, Round Rock, Georgetown, and San Marcos. The CBD area located in downtown Austin is consistent with the 2015 CBD delineation.

Median Family income

Travel demand models use median family income (MFI) to adjust the number of trips, and by what mode, a household makes. For this reason, the forecast includes an output of how incomes may change in a geography. Median Family Income (MFI) determination for the 2045 baseline forecast is a function of UrbanSim, which includes a capability for median family income output based on median family income from the 2009-2013 ACS Census data (in 2013-year dollars) and changes resulting from the model. For 2045 data development purposes, median income is kept in constant dollars across the forecast years. Initial results of the UrbanSim model were reviewed and adjusted for reasonableness in very few areas. Areas adjusted included TAZs west of Mopac but east of Loop 360 where negative growth trends were removed reflecting the stable higher income demographic of the area. Some smaller TAZs with households but no assigned MFI values were adjusted to an average of the adjacent TAZs.

The CAMPO TDM is not intended nor used as economic forecast. MFI indicators are used for the CAMPO TDM model functions only.

City-Specific Projections

CAMPO does not provide city-specific forecasts. TAZs do not match existing political subdivision boundaries exactly, and the MPO does not assume where future city limits would change. Any figure forecast for a specific city is an approximation of the population and employment, assumes standard development patterns, and that the employment or population from a partially covered TAZ is evenly distributed. City- and County-level aggregate forecasts are provided as informational items and will differ from projections produced by or specifically for any city or County using a place-focused forecasting method.

Updates to the forecasts for local jurisdictions are highly dependent on local land use laws, economic activity and annexation plans, if any. Comprehensive plans and demographic projections should be consulted for more representative data at the local level. Where available at the County or major city level, these plans have been incorporated into this baseline regional forecast.

Disclaimer

This data was developed for regional transportation planning activities and discussion and has not been evaluated for other use. The Capital Area Metropolitan Planning Organization makes no warranty, express or implied, including fitness or applicability for any particular purpose. Responsibility for the use of these data lies solely with the user.

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Allocation Process Methodology- CAMPO Block-level UrbanSim Model

UrbanSim is a microsimulation land use model, designed to support the need of Metropolitan Planning Organizations (MPOs), cities and other organizations for analyzing the potential effects of land use policies and infrastructure investments on the development and character of cities and regions. The modeling system relies upon a data-driven, transparent, and behaviorally-focused methodology that is designed to attempt to reflect the interdependencies in dynamic urban systems, focusing on the real estate market and the transportation system, and on the effects of individual and combinations of interventions on patterns of development, travel demand, and household and firm location. UrbanSim has become the operational modeling approach for a variety of metropolitan areas in the United States and abroad, and is actively used by metropolitan planning organizations in Albuquerque, Austin, Denver, Detroit, Honolulu, Phoenix, Salt Lake City, San Diego, San Francisco, Eugene-Springfield, Seattle, and Paris among others.

UrbanSim has been developed from over more than a decade of research led by Paul Waddell, currently Professor of City and Regional Planning at the University of California, Berkeley, from multiple grants from the National Science Foundation and from a number of MPOs in the United States. The research behind UrbanSim has been cited widely in the academic literature. In reviews of advanced models by independent studies such as the National Cooperative Highway Research Program (NCHRP), UrbanSim has consistently emerged as one of the most sophisticated and credible land use modeling methodologies. The core model code has been developed in the Python programming language as Open Source software and is publically available on the Urban Data Science Toolkit GitHub page.

UrbanSim is different from prior operational land use models that are based on cross-sectional, equilibrium, aggregate approaches in that UrbanSim models individual decision-makers (households, employers, real estate developers), and their changes from one year to the next as a consequence of economic changes, policy interventions, and market interactions. A dynamic perspective of time is used, with the simulation proceeding in annual steps, and the urban system evolving in a path dependent manner. The real estate market is used as a central organizing focus of the model system, with consumer choices and supplier choices explicitly represented, as well as the resulting effects on real estate prices. UrbanSim uses standard discrete choice models to represent the choices made by households and firms and developers (principally location choices). Although more sophisticated choice model structures can be used, the most common in practice is the Multinomial Logit Model (MNL). Discrete choice models derive a model of the probability of choosing among a set of available alternatives based on the characteristics of the chooser (e.g. households) and the attributes of the alternative (e.g. blocks), and the relative utility that the alternatives generate for the chooser.

The choice models in the block-level implementation of UrbanSim used by CAMPO are: household location choice, employment location choice, and residential unit location choice. In addition, a set of regression models representing residential prices are used to update prices in each simulation year. The household location choice model in the CAMPO model is segmented by income quartile and is estimated off of recent-movers in the synthetic population. The

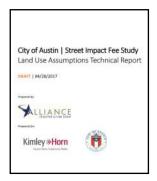
employment location choice model is segmented by 2-digit NAICS sector and is estimated off of LEHD data. The residential unit location choice model is segmented by tenure (rent versus own) and structure type (single-family versus multi-family), and is estimated off of recently constructed units in the synthetic residential units table which is based on 2010 SF1 residential unit counts with detailed unit characteristics imputed from ACS data. Each location choice model is estimated using cross-sectional local data and explanatory variables selected using a step-wise variable selection algorithm that takes behavioral considerations into mind. Regional accessibility variables are present in the model specifications (e.g. jobs within 30 minutes), and are calculated based on zone-to-zone travel times (i.e. skims) provided by CAMPO.

After model estimation, the location choice models were initially calibrated to longitudinal county-level growth targets, but this resulted in undesirable boundary effects. To mitigate this, the location choice models were then calibrated at a "place-type" geography, with calibration targets being longitudinal data summarized at the place-type level. Location choice model calibration in UrbanSim based on place-types instead of counties as the calibration geography can better reflect existing agglomerations at the sub-county level and reduce 'bunching' of development at county political boundaries. Calibration at the "place type" level is a more spatially detailed calibration option within the UrbanSim service package. The steps included:

- 1. Incorporate the constraints from the 2045_v2_2-23 scenario directly into the model file used in calibration to accelerate model performance
- 2. Perform clustering analysis to group tract geographies into place types based on similar characteristics
- 3. Summarizing calibration targets (ACS / LEHD change over time data) at the place type level instead of county
- 4. Calibrate the location choice models to move simulated patterns in the direction of observed place-type level growth shares

For additional information on the UrbanSim methodology, please see the suggested research papers listed here:

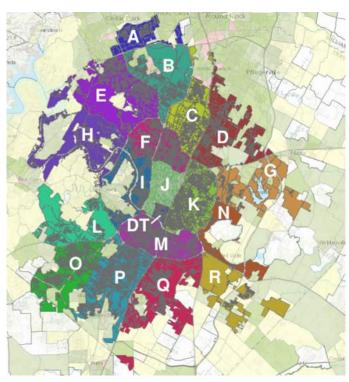
http://www.urbansim.com/research



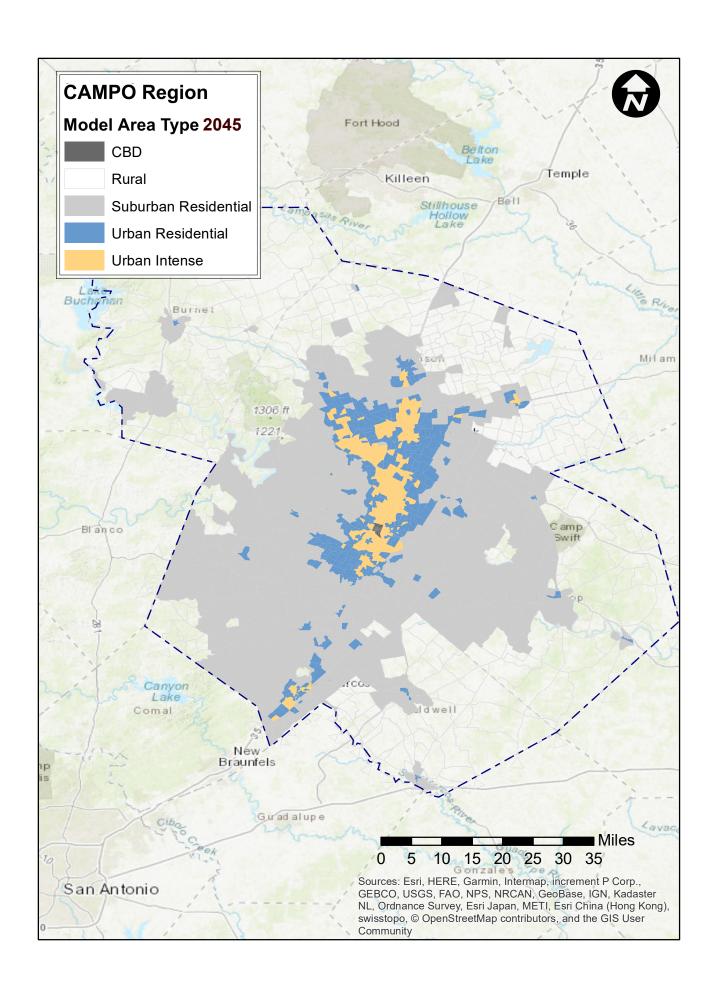
Proposed City of Austin Roadway Impact Fee Service Areas - Land Use Assumptions Technical Report (2017).

Comparison of City of Austin Land Use Assumption "Buildout" condition, by Impact Fee Service Area zones and CAMPO 2045 Baseline demographics.

Note: Approximate. Service areas and CAMPO TAZ estimates will not match exactly because COA service areas must conform to city limits boundaries which do not align exactly with TAZs.



	City of Austi	n "Buildout"	CAMPO 2045.Bl v	/20.06.14.18		
					Population	Employment
Service Area	Population	Employment	Population	Employment	Difference	Difference
Α	43,490	11,864	44,680	21540	2.7%	81.6%
В	102,265	49,416	131,095	76,085	28.2%	54.0%
С	100,313	68,814	161,293	92,008	60.8%	33.7%
D	83,618	56,958	151,830	67,102	81.6%	17.8%
DT	44,925	100,038	71787	97,301	59.8%	-2.7%
Е	83,985	31,388	110,058	57,297	31.0%	82.5%
F	97,598	62,619	81,852	67,144	-16.1%	7.2%
G	27,513	9,679	48,267	14,252	75.4%	47.2%
Н	31,816	16,588	39,526	14,958	24.2%	-9.8%
I	30,750	22,535	31,938	31,886	3.9%	41.5%
J	124,100	82,788	98,052	112,761	-21.0%	36.2%
К	142,597	56,672	130,722	69,480	-8.3%	22.6%
L	41,646	27,005	42,074	30,543	1.0%	13.1%
M	165,219	70,484	165,857	93,514	0.4%	32.7%
N	9,815	6,645	11,840	7,257	20.6%	9.2%
О	63,967	9,664	98,650	25,749	54.2%	166.4%
Р	149,125	42,749	145,858	61,884	-2.2%	44.8%
Q	74,731	34,514	94,840	47,291	26.9%	37.0%
R	19,617	7,654	31,834	20,533	62.3%	168.3%
	1,437,090	768,074	1,692,053	1,008,585		





Date: Continued From: Action Requested: January 28, 2019 N/A Information

To: Technical Advisory Committee

From: Mr. Jeff Kaufman, Texas Transportation Institute

Agenda Item: 5

Subject: Presentation on State of Safety for the CAMPO Region

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

This item provides a presentation to the Technical Advisory Committee on the performance of the CAMPO region in relation to various transportation safety factors.

FINANCIAL IMPACT

Not applicable.

BACKGROUND AND DISCUSSION

As federally required performance measures continue to be implemented, the need for a method to track CAMPO's performance in relation to those measures through a single platform is clear. This report, which is a practice conducted by other large MPOs, provides CAMPO that platform.

SUPPORTING DOCUMENTS

None.



Date: Continued From: Action Requested: January 28, 2019 N/A Information

To: Technical Advisory Committee

From: Mr. Ashby Johnson, Executive Director

Agenda Item: 6

Subject: Discussion on TxDOT Functional Classification and National Highway System

Analysis

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

TxDOT Transportation Planning and Programming Division recently met with CAMPO staff to discuss the initial findings of analysis they have performed on National Highway System facilities and their functional classifications.

TxDOT TP&P has asked CAMPO to provide comments on their initial findings by February 11, 2019. CAMPO staff has compiled some initial comments that will be provided to the TAC at the January 28, 2019 meeting. CAMPO staff is requesting input from the local governments prior to the TxDOT February 11th deadline.

Please send all comments to Zack Lofton at <u>zachary.lofton@campotexas.org</u> no later than 12:00 noon on February 9, 2019.

FINANCIAL IMPACT

None.

SUPPORTING DOCUMENTS

Attachment A -- TxDOT Initial Findings.



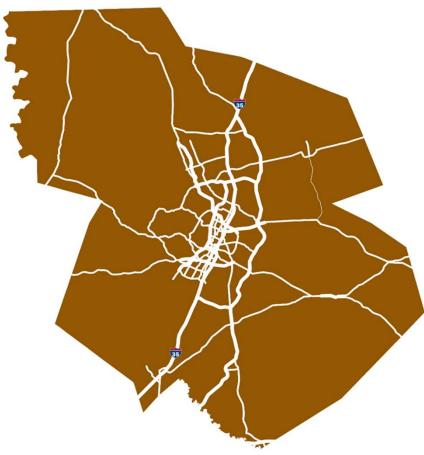
Texas National Highway System Review

Study Findings

Contents

- 1. Current National Highway System in MPO/District
- 2. Study Findings from NHS and Functional Class Review
- 2.1 Index of Corridors and Suggested Modifications
- 2.2 Corridor Overview Map
- 2.3 Corridor Fact Sheets
- 3. NHS Intermodal Connectors Review
- 3.1 Index of Intermodal Facilities Connected to the NHS
- 3.2 Fact Sheets for Intermodal Facilities & Connectors

Capital Area National Highway System Summary



On the NHS

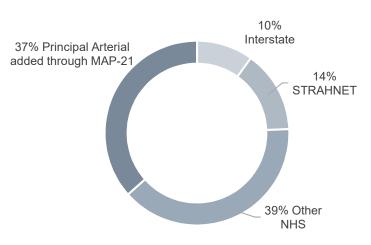
- 857 centerline miles (7% of total miles)
- 32 million daily vehicle-miles traveled (59% of total travel)
- 3 million daily truck-miles traveled (75% of all truck travel)

System Ownership

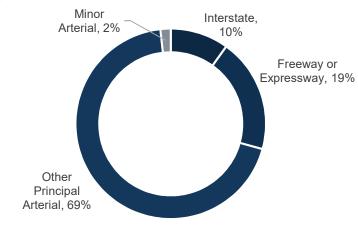
Owner	Miles
State Highway Agency	762
County	0
City (Municipality)	85
Local Toll Authority	0
Private Toll	10

System Breakdown

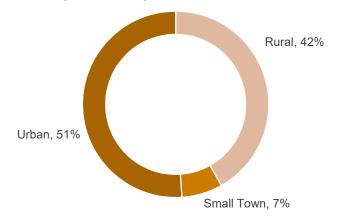
By Designation (% of miles)



By Functional Classification (% of miles)



By Area Type (% of miles)



Intermodal Facilities connected to the NHS

Facility Type	Facilities Connected	Designated Connectors
Truck/Rail Facility	0	(
Port Terminal	0	(
Truck/Pipeline Terminal	0	(
Multipurpose Passenger Facility	0	(
Ferry Terminal	0	(
Airport	2	(
Public Transit Station	1	(
Intercity Bus Terminal	1	(
AMTRAK Station	1	(
Total	5	

Source: TxDOT GRID, 2018

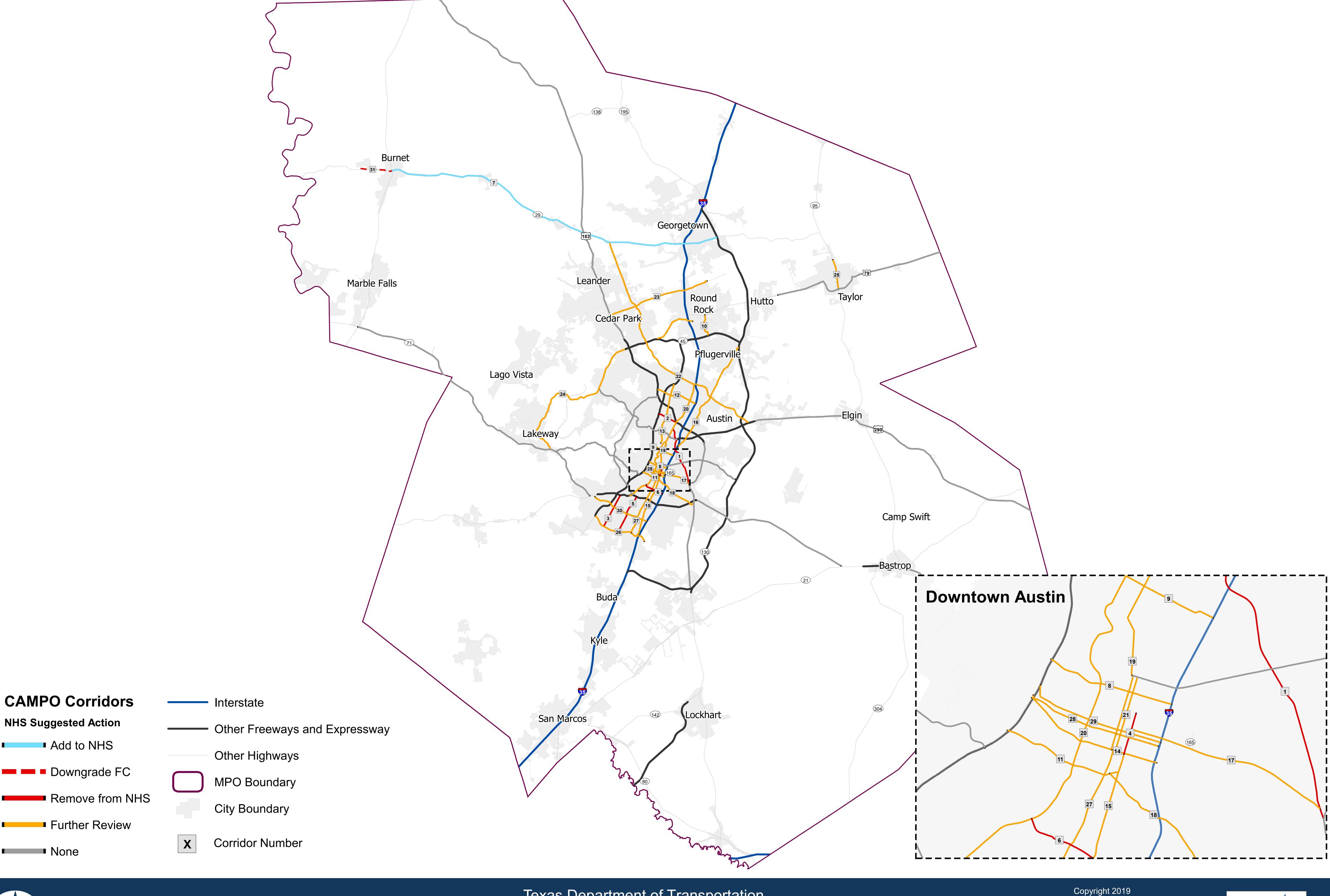
CAMPO NHS & Functional Class Review Corridor Index

Corridor Name	Corridor Limits	Current Functional Classification	Current NHS Status	Functional Classification Suggestion	NHS Suggested Action	Page Number
AIRPORT BLVD	Lamar Blvd to US 183	Principal Arterial - Other	Original NHS	Re-designate as MA	Remove from NHS	1
ANDERSON LN	MOPAC to Lamar Blvd	Principal Arterial - Other	MAP-21 Principal Arterial	Re-designate as MA	Remove from NHS	2
BRODIE LN	US 290/SH 71 to W Slaughter Ln	Principal Arterial - Other	MAP-21 Principal Arterial	Re-designate as MA	Remove from NHS	3
CONGRESS AVE NORTH	E 11th St to Cesar Chavez	Principal Arterial - Other	MAP-21 Principal Arterial	Re-designate as MA	Remove from NHS	4
MANCHACA RD	US 290/SH 71 to W Slaughter Ln	Principal Arterial - Other	MAP-21 Principal Arterial	Re-designate as MA	Remove from NHS	5
WEST OLTORF ST	Lamar Blvd to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Re-designate as MA	Remove from NHS	6
SH 29	Burnet to Georgetown	Principal Arterial - Other	On NHS from US 183 to SH 130	Keep as PA	Add to NHS	7
15TH ST	MOPAC to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	8
38TH ST	MOPAC to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	9
A W GRIMES BLVD	US 79 to SH 45	Principal Arterial - Other	Not on NHS	Further Review	Further Review	10
BARTON SPRINGS RD	MOPAC to Congress Ave	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	11
BRAKER LN	US 183 to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	12
BURNET RD	W 45th St to MOPAC	Principal Arterial - Other	On NHS from US 183 to 45 th St.	Further Review	Further Review	13
CESAR CHAVEZ	MOPAC to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	14
CONGRESS AVE	Cesar Chavez to W Slaughter Ln	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	15
DESSAU RD	SH 130 to I-35	Minor Arterial	Not on NHS	Further Review	Further Review	16
EAST 7TH ST	Congress Ave to US 183	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	17
EAST RIVERSIDE	Barton Springs Rd to US 183	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	18
GUADALUPE ST	Lamar Blvd to Cesar Chavez	Principal Arterial - Other	Not on NHS	Further Review	Further Review	19

CAMPO NHS & Functional Class Review Corridor Index

Corridor Name	Corridor Limits	Current Functional Classification	Current NHS Status	Functional Classification Suggestion	NHS Suggested Action	Page Number
LAMAR BLVD	US 290/SH 71 to W Parmer Ln	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	20
LAVACA ST	MLK Blvd to Cesar Chavez	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	21
PARMER LN	SH 29 to US 290	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	22
RM 1431	US 183 to I-35	Principal Arterial - Other	Not on NHS	Further Review	Further Review	23
RM 620	SH 71 to US 183, SH 45 to I-35	Principal Arterial - Other	Not on NHS	Further Review	Further Review	24
SH 95	In Taylor	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	25
SLAUGHTER LN	MOPAC to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	26
SOUTH 1ST ST	Cesar Chavez to W Slaughter Ln	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	27
WEST 5TH ST	MOPAC to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	28
WEST 6TH ST	MOPAC to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	29
WILLIAM CANNON DR	US 290/SH 71 to I-35	Principal Arterial - Other	MAP-21 Principal Arterial	Further Review	Further Review	30
SH 29 WEST	RR 2341 to Burnet	Principal Arterial - Other	Not on NHS	Re-designate as MA	Downgrade FC	31

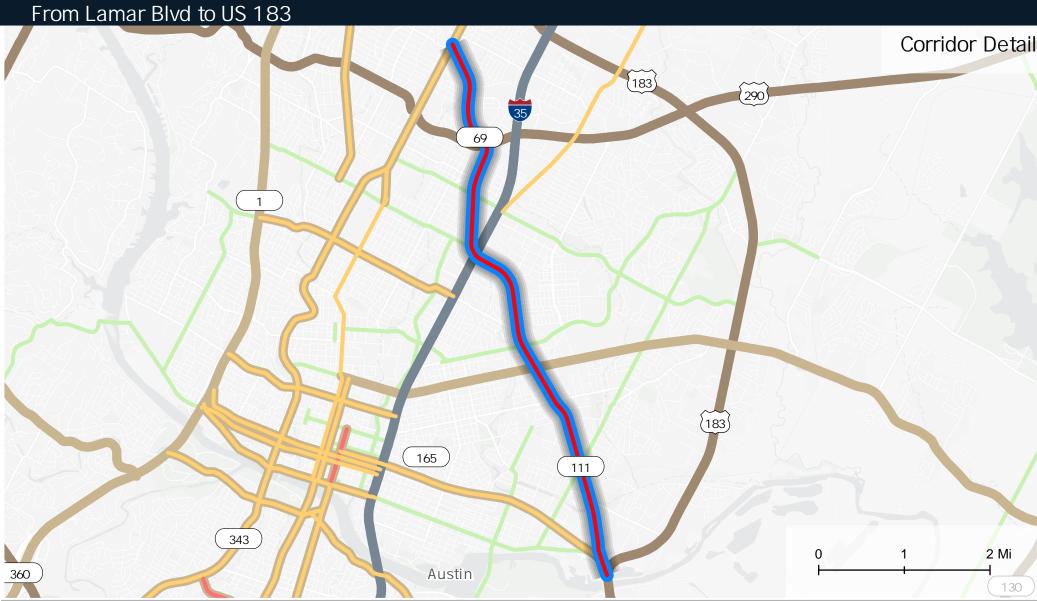
Texas NHS Study - Capital Area MPO Functional Classification and NHS Review Corridors

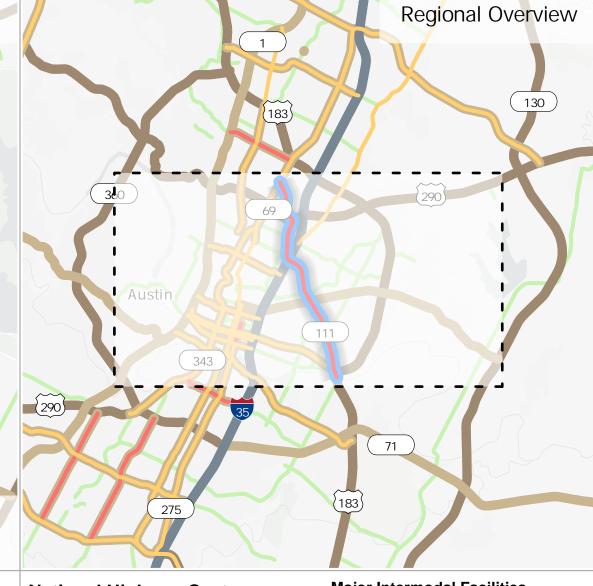




Preliminary Draft

Subject to Review





Preliminary Suggestion: Remove from NHS Should this corridor be removed from the NHS?

Facility Information				
Functional Class	Principal Arterial - Other			
On the NHS?	Original NHS			
Lanes	4 lanes			
Median Types	Divided, CTL			
Avg. Daily Traffic	14,862 - 40,988			

Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met 1/5	

National Highway System

Interstates

Other NHS

MAP-21 PA

STRAHNET Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Airport Ferry

Intercity Bus

0

Multi. Passenger



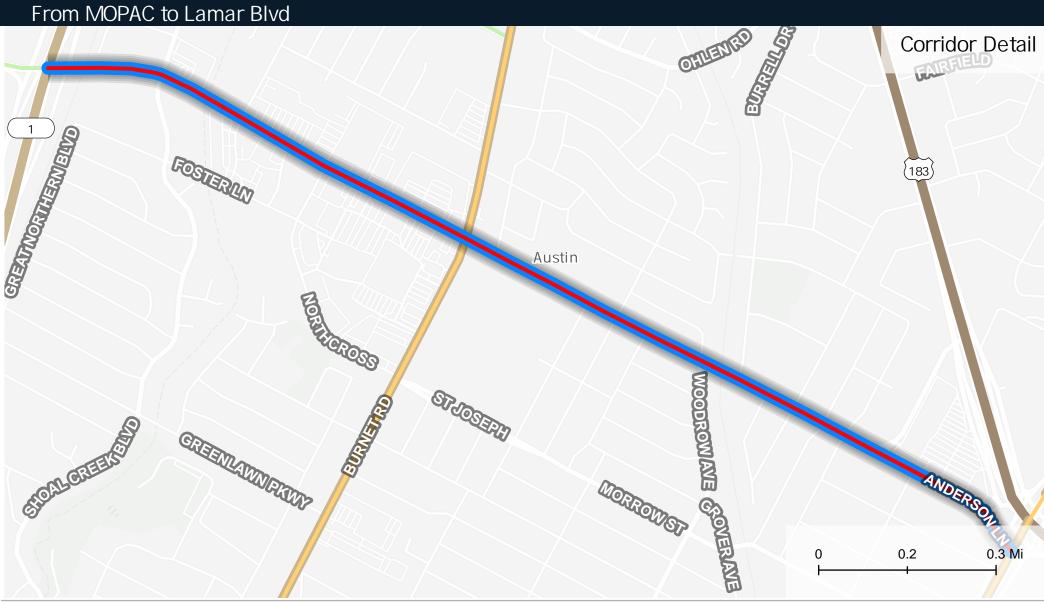
Port

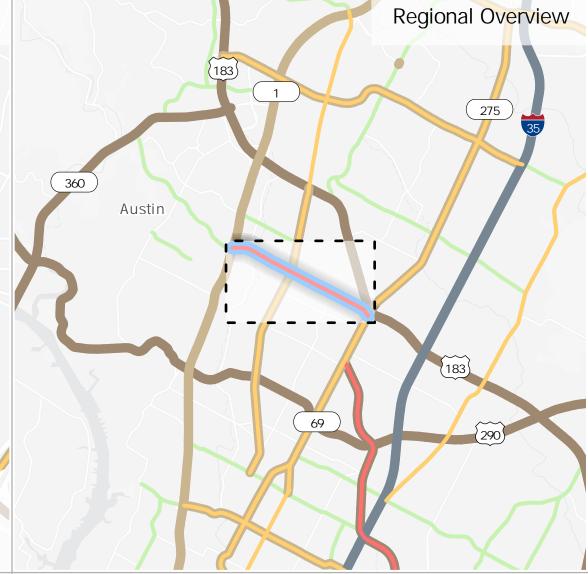
Public Transit

Truck/Pipeline

Truck/Rail

Network Sources: TxDOT GRID 2018, FHWA





Preliminary Suggestion: Remove from NHS

Should this corridor be removed from the NHS?

Facility Information			
Principal Arterial - Other			
MAP-21 Principal Arterial			
4 lanes			
CTL			
22,572 - 30,941			

Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met 1/5	

National Highway System

Interstates

Other NHS

MAP-21 PA

STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

) AMTRAK

) Airport

Ferry

0

Intercity Bus

Multi. Passenger



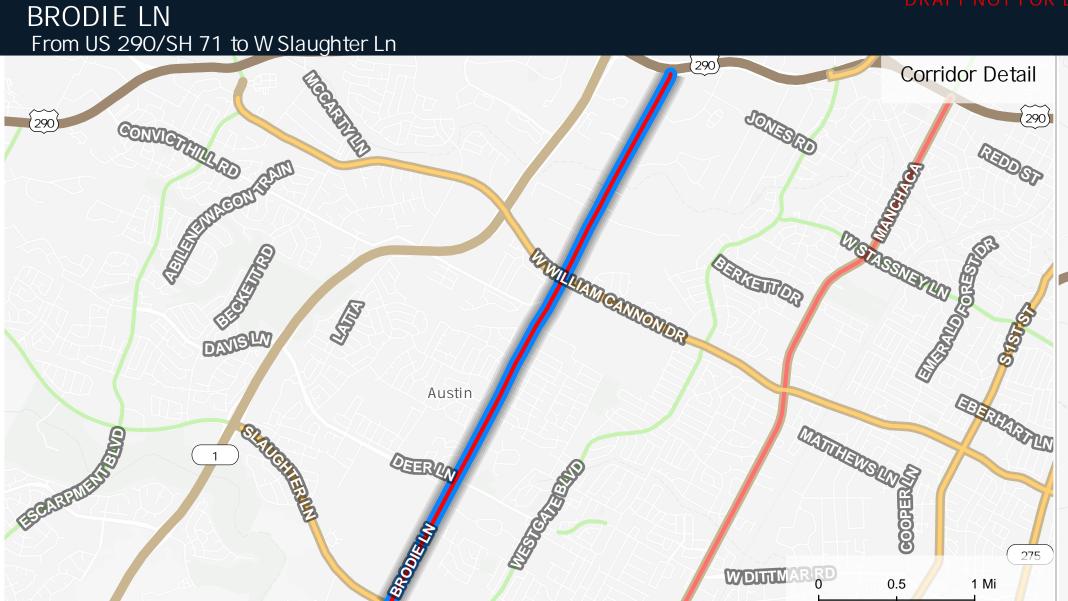
Port

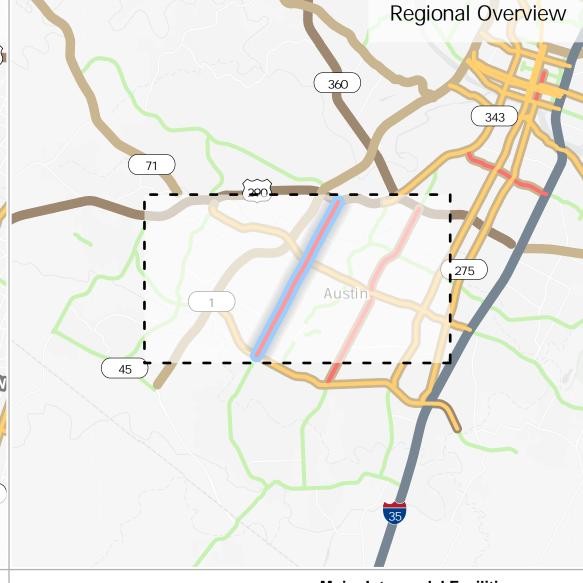
Public Transit

Truck/Pipeline

Truck/Rail

Network Sources: TxDOT GRID 2018, FHWA





Preliminary Suggestion: Remove from NHS Should this corridor be removed from the NHS?

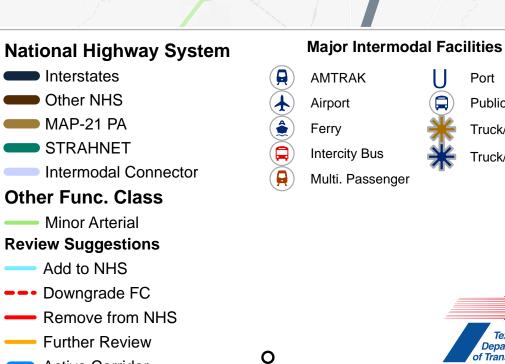
Facility Information				
Functional Class	Principal Arterial - Other			
On the NHS?	MAP-21 Principal Arterial			
Lanes	4 lanes			
Median Types	Divided			
Avg. Daily Traffic	19,743 - 28,594			

Functional Classification Review		
Serve major activity centers?	No	
Serve long-distance travel?	No	
Link surrounding region with urban core?	No	
Limit access to surrounding land uses?	No	
Link other major regional facilities?	Yes	
Total Principal Arterial Criteria Met		



Further Review

Active Corridor



Port

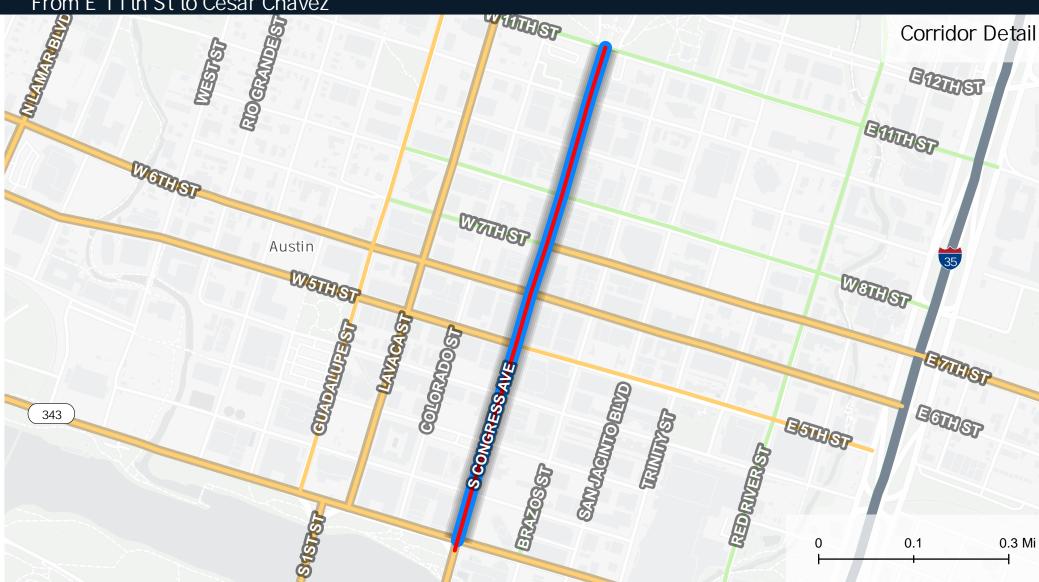
Network Sources: TxDOT GRID 2018, FHWA

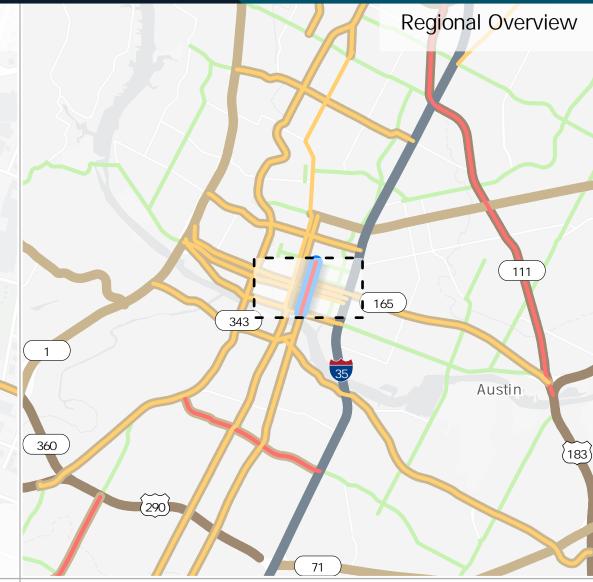
Public Transit

Truck/Pipeline

Truck/Rail







Preliminary Suggestion: Remove from NHS Should this corridor be removed from the NHS?

Facility Information			
Functional Class	Principal Arterial - Other		
On the NHS?	MAP-21 Principal Arterial		
Lanes	6 lanes		
Median Types	Undivided		
Avg. Daily Traffic	6,909 - 33,710		

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	No
Total Principal Arterial Criteria Met	1/5

National Highway System

Interstates

Other NHS

MAP-21 PA

STRAHNET

Intermodal Connector

Other Func. Class

Minor ArterialReview Suggestions

Add to NHS

-- Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Port

Public Transit

Truck/Pipeline

Airport

0

Ferry
Intercity Bu

Intercity Bus

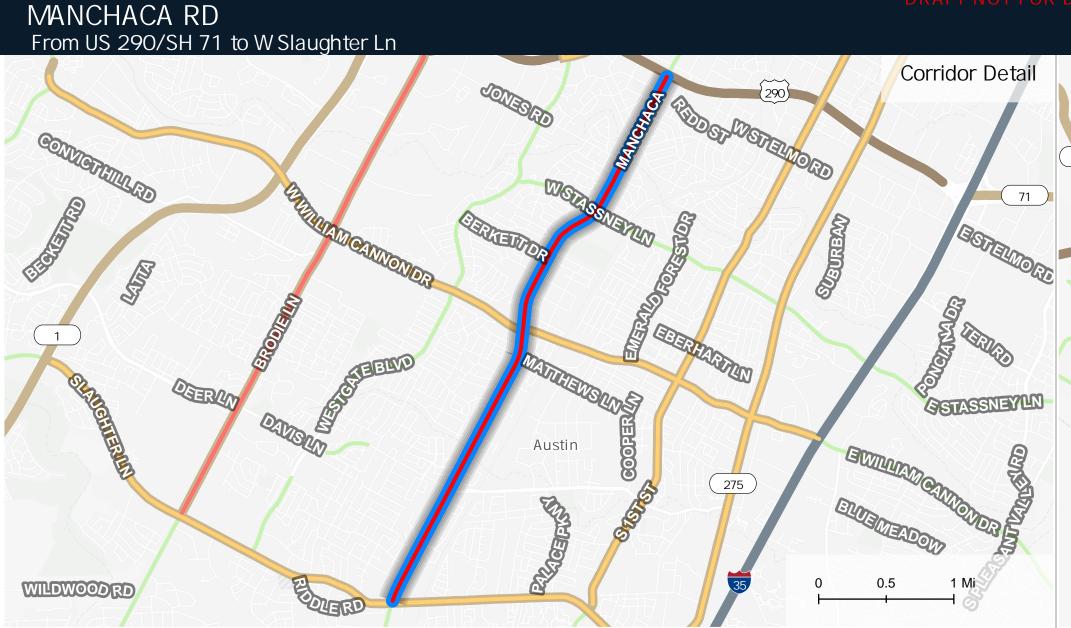
Multi. Passenger

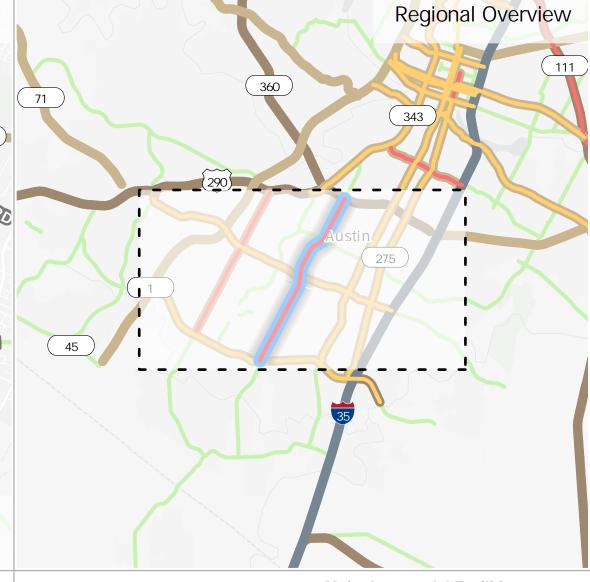
** Truck/Rail



Map Index - 4

Network Sources: TxDOT GRID 2018, FHWA





0

Preliminary Suggestion: Remove from NHS Should this corridor be removed from the NHS?

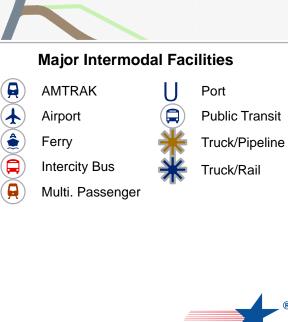
Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 lanes
Median Types	CTL
Avg. Daily Traffic	23,499 - 28,891

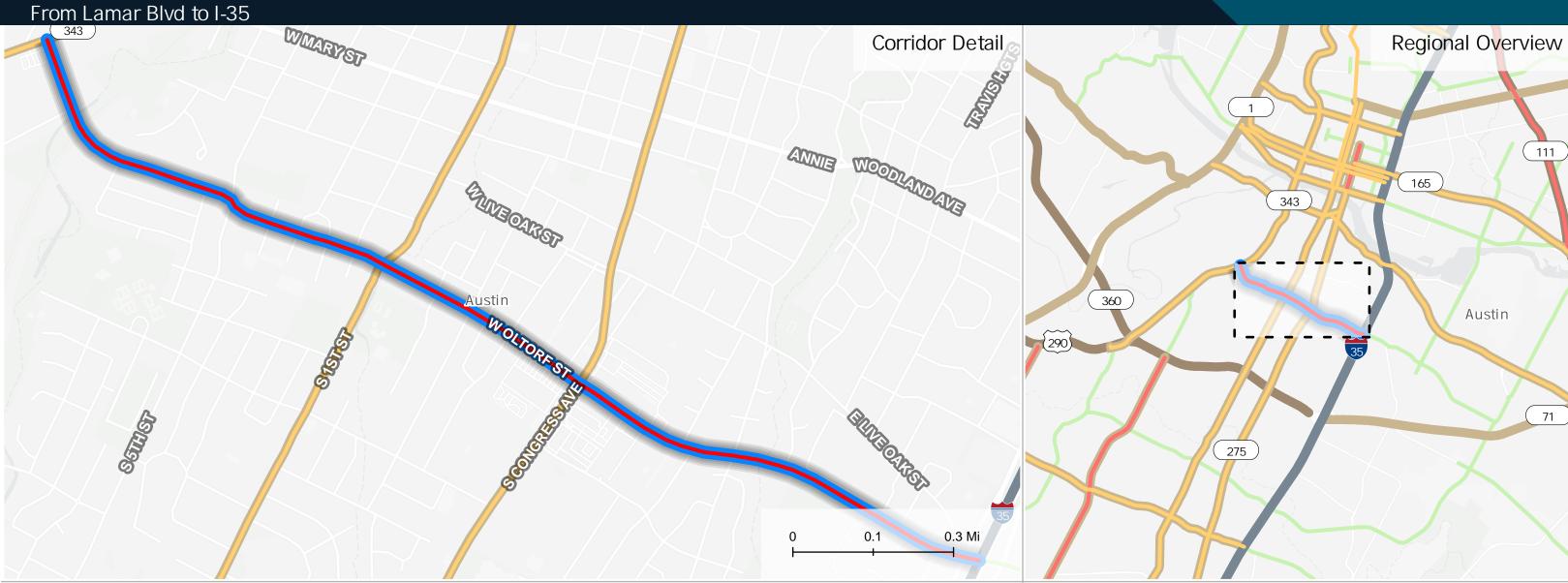
Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	1/5



Further Review

Active Corridor





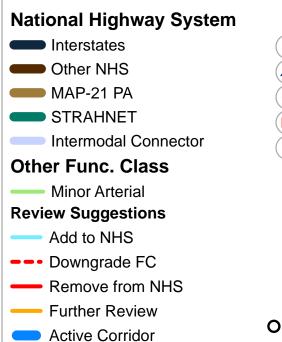
Preliminary Suggestion: Remove from NHS

Should this corridor be removed from the NHS?

WEST OLTORF ST

Facility Information	
Principal Arterial - Other	
MAP-21 Principal Arterial	
4 lanes	
Undivided	
9,774 - 20,586	

Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	
Total Principal Arterial Criteria Met	1/5







Map Index - 6

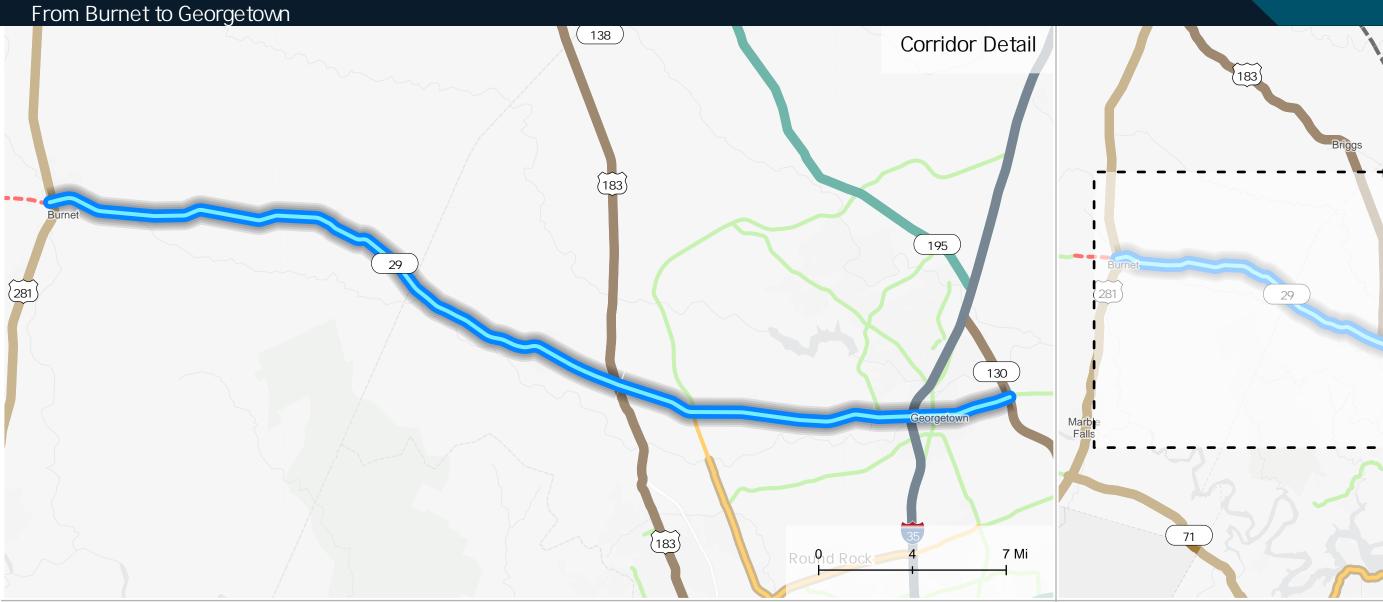
Round Rock

Network Sources: TxDOT GRID 2018, FHWA

Regional Overview

NHS & Functional Classification Review

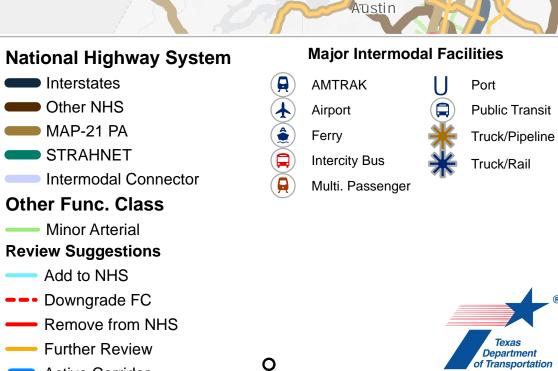
SH 29



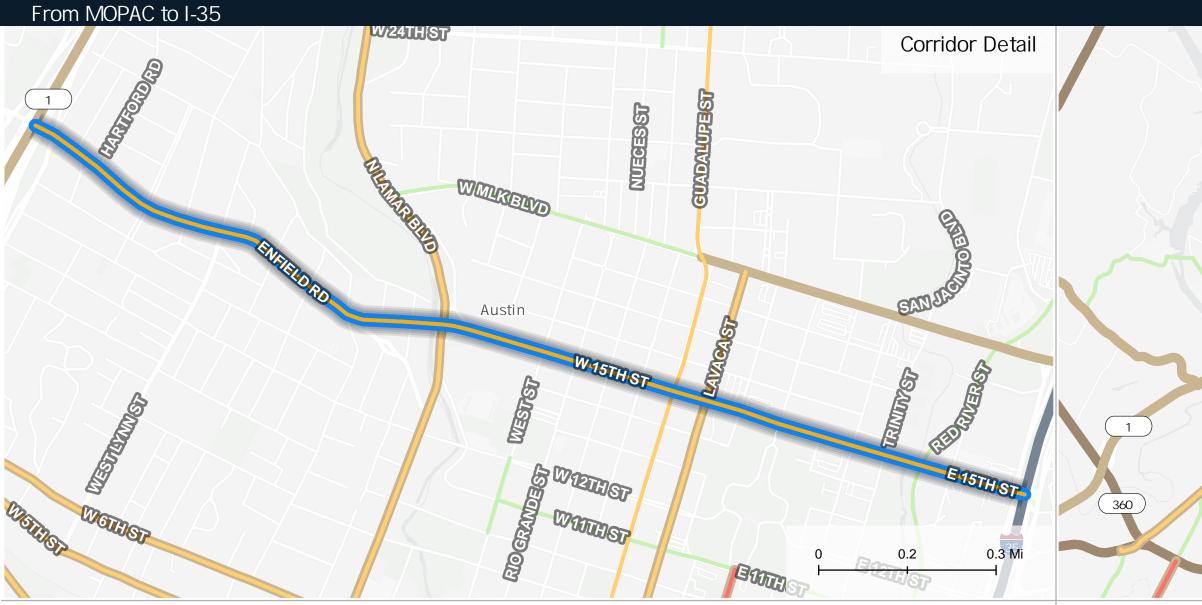
Preliminary Suggestion: Add to NHS Should this corridor be added to the NHS?

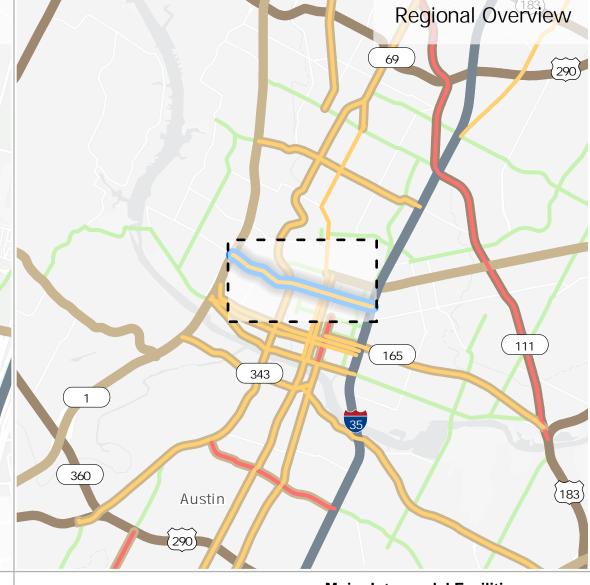
Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	On NHS etween US 183 and SH 13
Lanes	4 lanes
Median Types	Undivided, CTL
Avg. Daily Traffic	11,101 - 29,212

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	Yes
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	4/5



Active Corridor





Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 - 6 lanes
Median Types	Undivided, CTL, Divided
Avg. Daily Traffic	24,649 - 29,787

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5

National Highway System

Interstates

Other NHS

MAP-21 PA

STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Airport

Port **Public Transit**

Truck/Rail

Ferry Truck/Pipeline

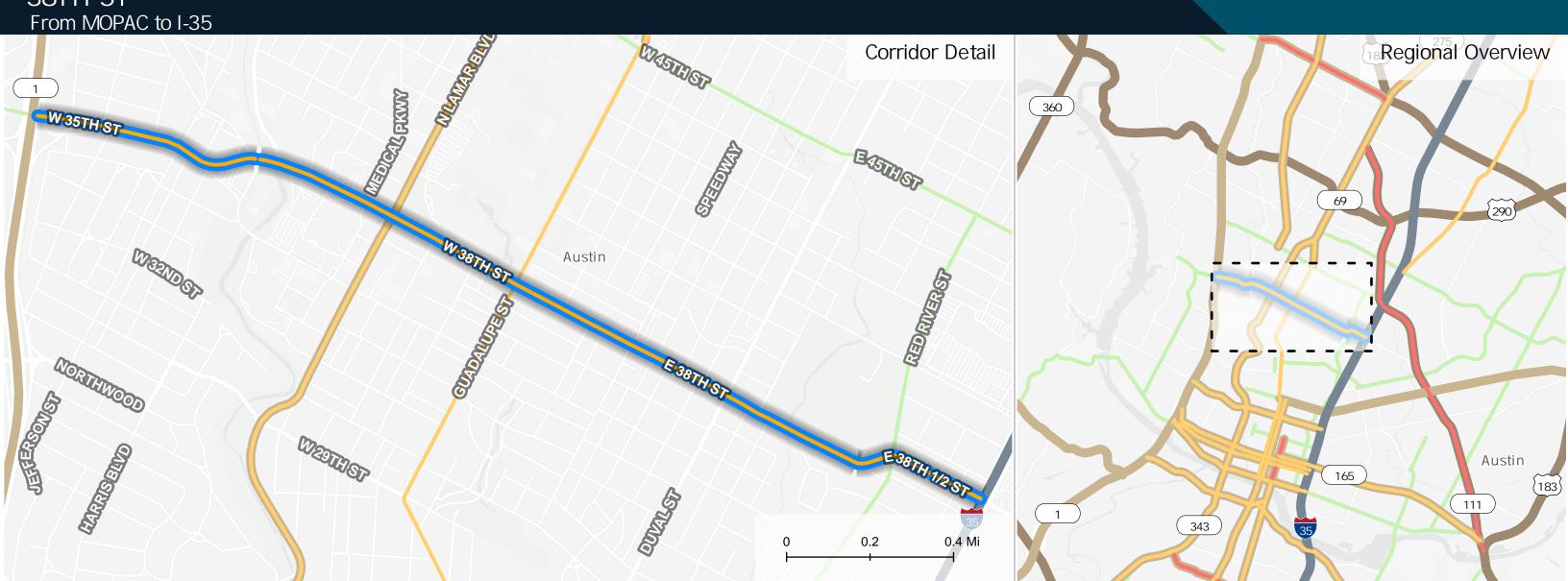
Intercity Bus

0

Multi. Passenger



Network Sources: TxDOT GRID 2018, FHWA



Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	2 - 4 lanes
Median Types	Undivided, CTL
Avg. Daily Traffic	6,331 - 28,042

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5



Interstates

Other NHS

MAP-21 PA

STRAHNET Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

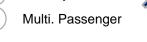
AMTRAK

Airport

Ferry

Intercity Bus

0



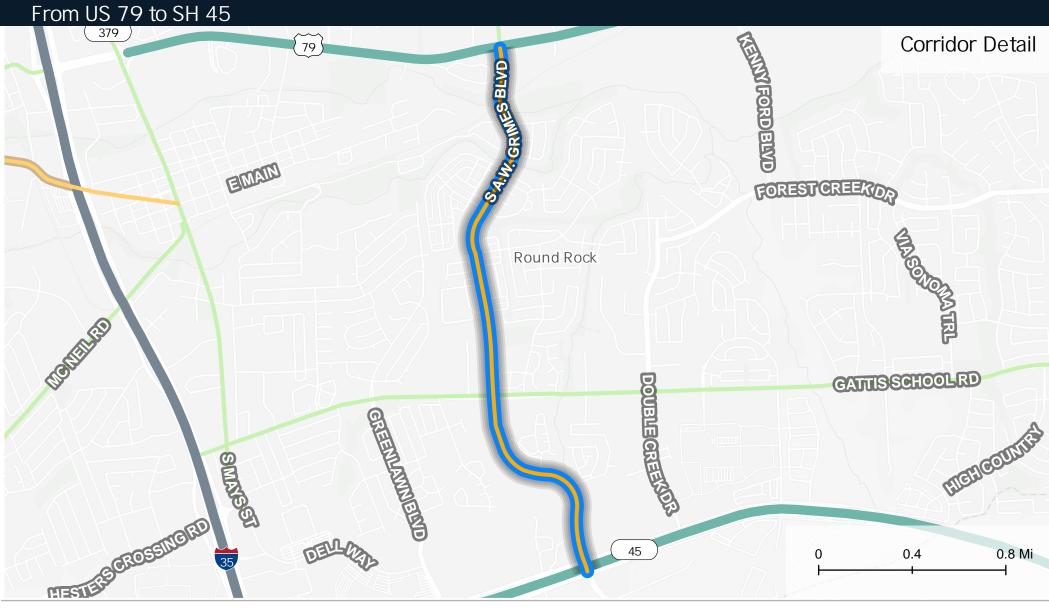


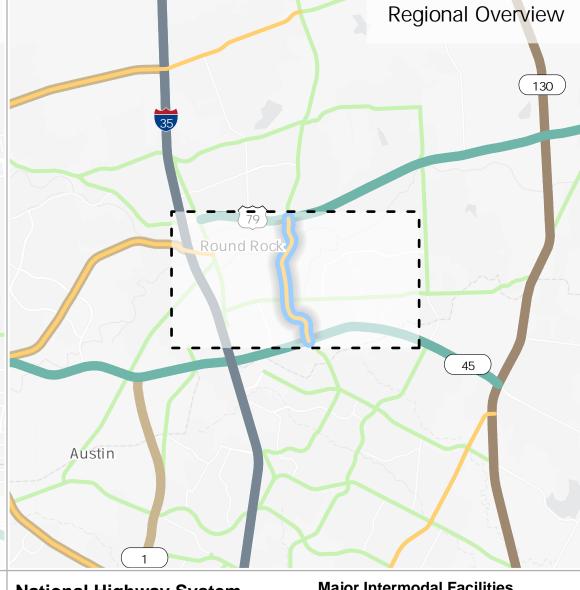
Port

Public Transit

Truck/Pipeline

Truck/Rail





Preliminary Suggestion: Further Review Should this corridor be added to the NHS?

A W GRIMES BLVD

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	Not on NHS
Lanes	4-6 lanes
Median Types	Divided, Undivided
Avg. Daily Traffic	15,051 - 22,167

Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	Yes
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5

National Highway System

Interstates

Other NHS

MAP-21 PA STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS **Further Review**

Active Corridor

Major Intermodal Facilities

AMTRAK

Airport

Ferry

0

Intercity Bus

Multi. Passenger

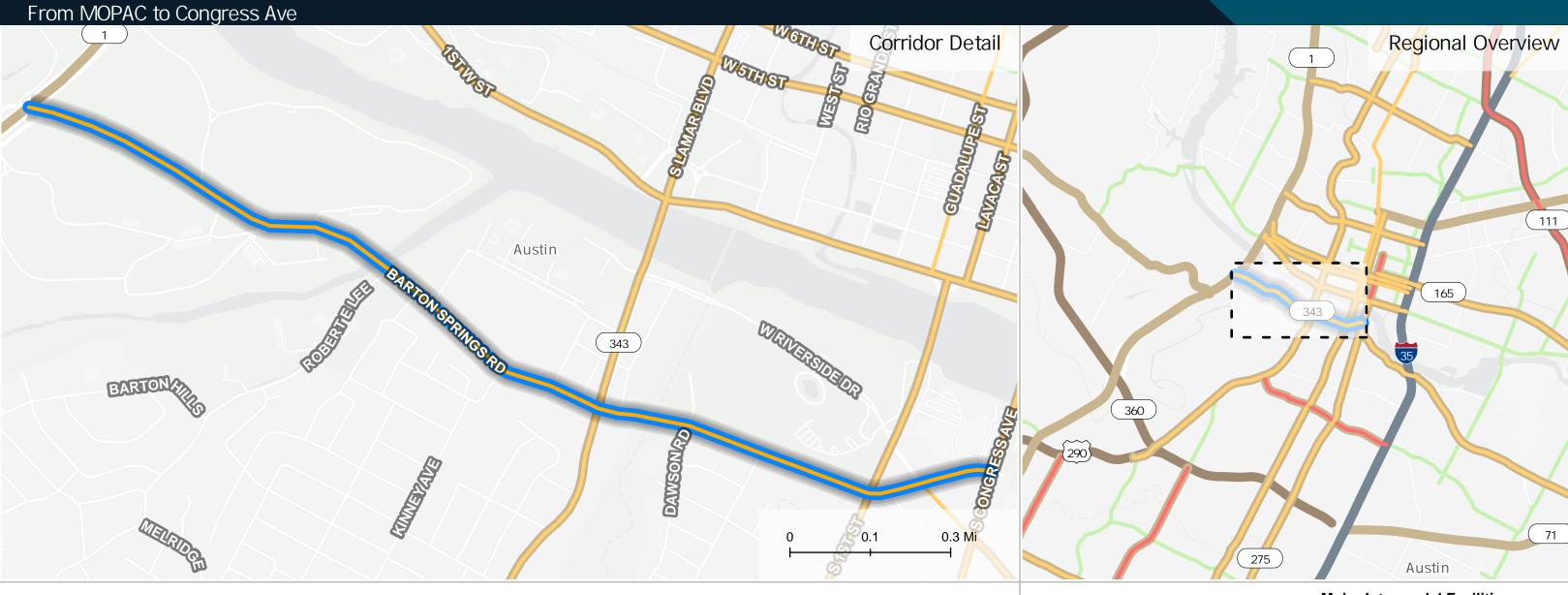
Port

Public Transit

Truck/Pipeline

Truck/Rail

Network Sources: TxDOT GRID 2018, FHWA



Preliminary Suggestion: Further Review

Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 lanes
Median Types	Undivided, Divided
Avg. Daily Traffic	7,418 - 25,088

Functional Classification Review	
Yes	
No	
No	
No	
Yes	
2/5	



Interstates

Other NHS

MAP-21 PA

STRAHNET
Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Λίνο ανι

Airport Ferry

Intercity Bus

0

Multi. Passenger





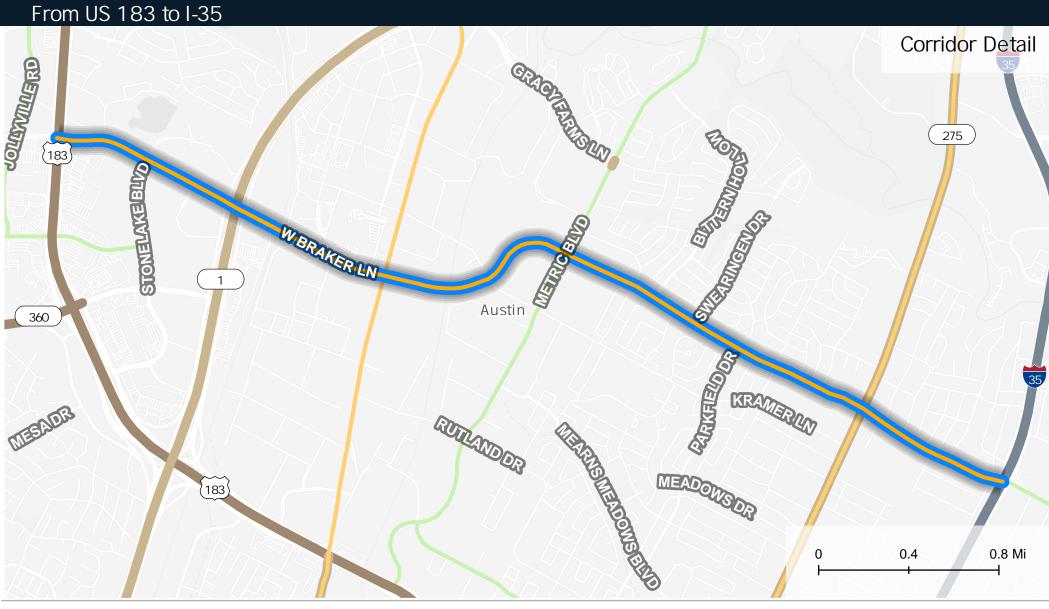
Port

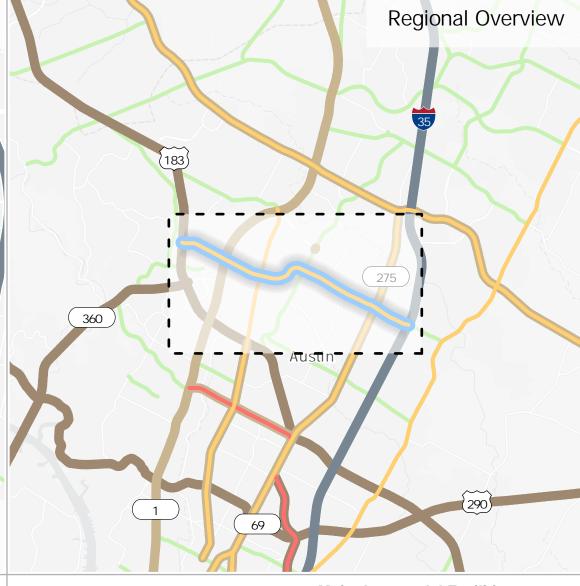
Public Transit

Truck/Pipeline



Map Index - 11





Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	6 lanes
Median Types	Divided
Avg. Daily Traffic	19,407 - 36,783

Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	Yes
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5



Interstates

Other NHS

MAP-21 PA STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial **Review Suggestions**

Add to NHS

Downgrade FC

Remove from NHS Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Public Transit

Truck/Pipeline

Port

Ferry

0

Airport

Intercity Bus

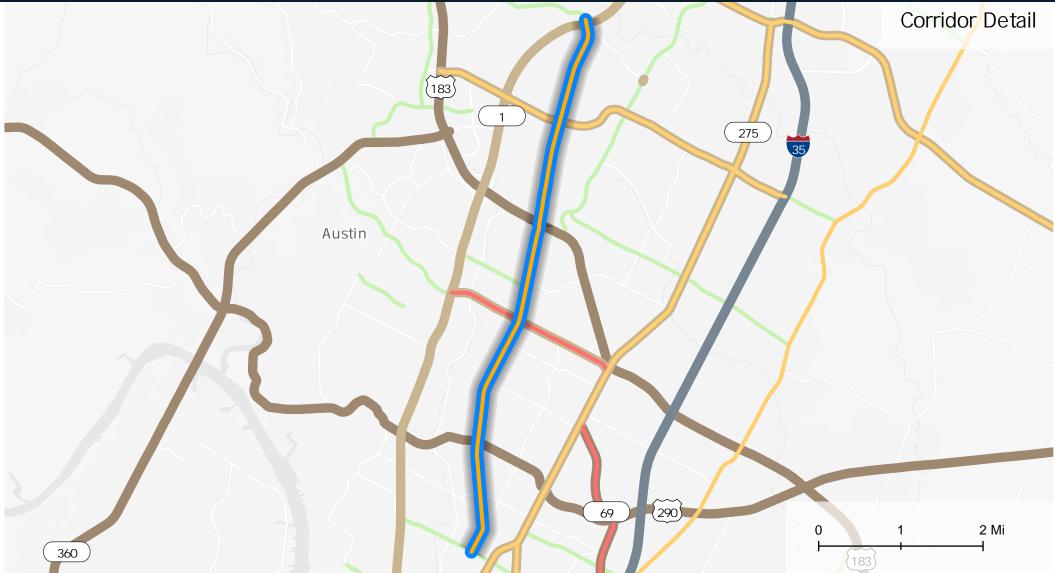
Multi. Passenger

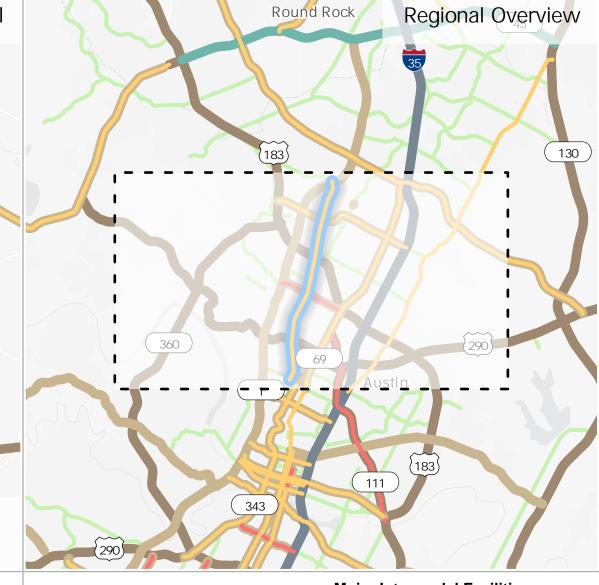
Truck/Rail

Map Index - 12

BRAKER LN





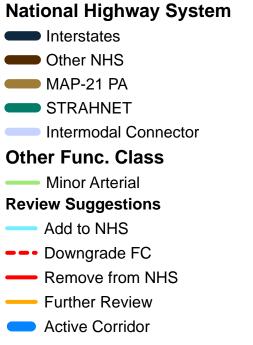


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Preliminary Suggestion: Further Review
Should this corridor be removed from the NHS?

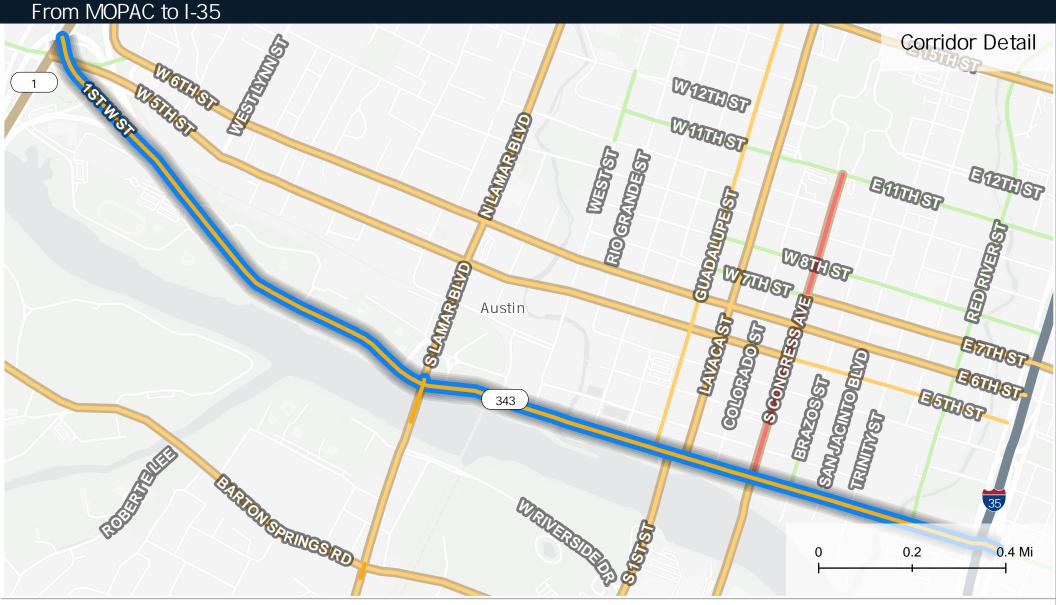
Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	On NHS between US 183 and 45th St.
Lanes	4 lanes
Median Types	CTL
Avg. Daily Traffic	21,018 - 38,611

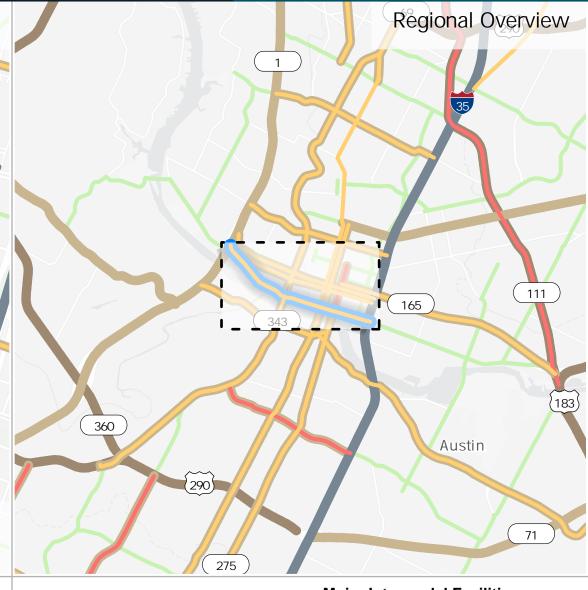
Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	3/5











Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 lanes
Median Types	Undivided
Avg. Daily Traffic	21,622 - 42,689

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met 2	

National Highway System

Interstates

Other NHS

MAP-21 PA

STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Port

Airport **Public Transit** Ferry Truck/Pipeline

Intercity Bus

0

Multi. Passenger

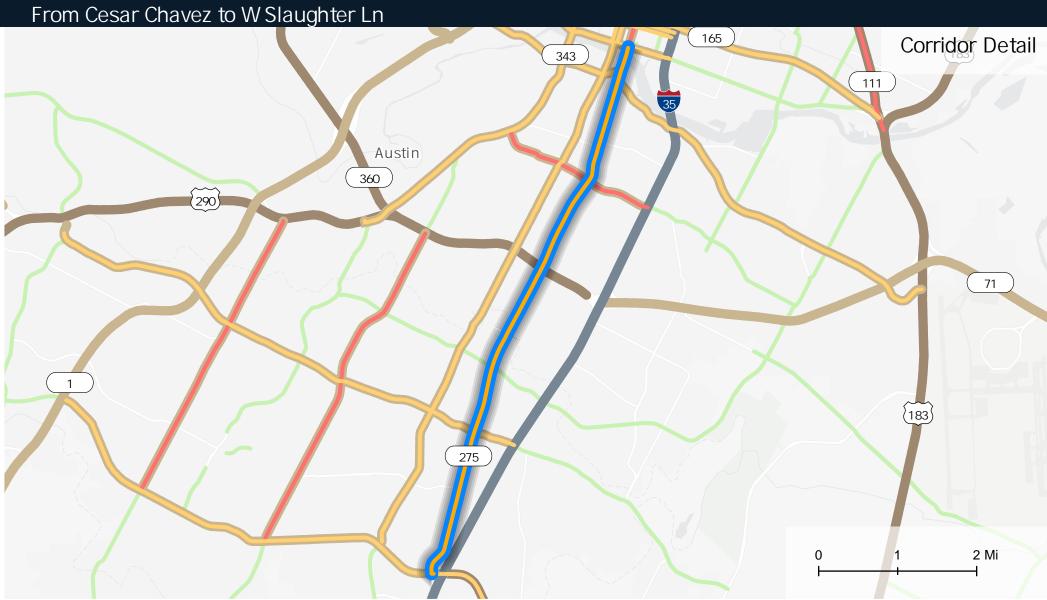


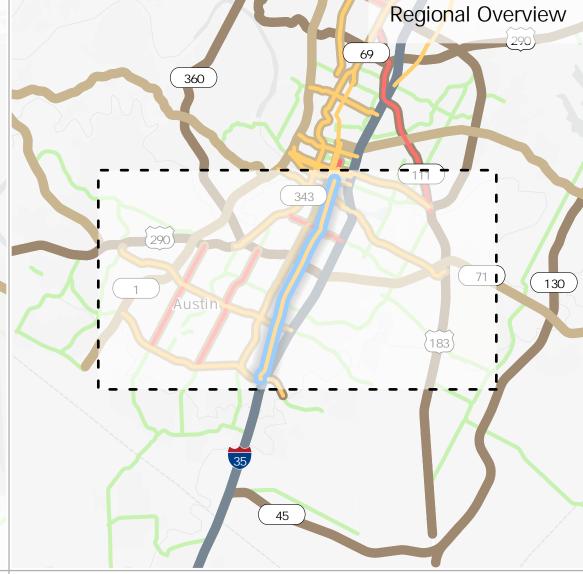
Truck/Rail

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CESAR CHAVEZ





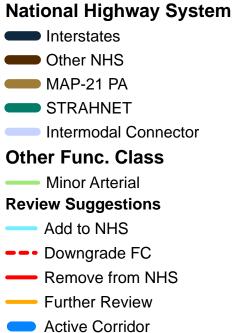


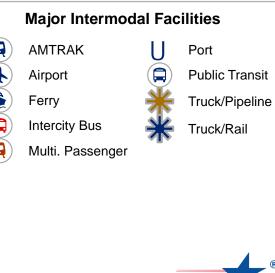
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Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 - 6 lanes
Median Types	CTL, Undivided
Avg. Daily Traffic	14,307 - 37,760

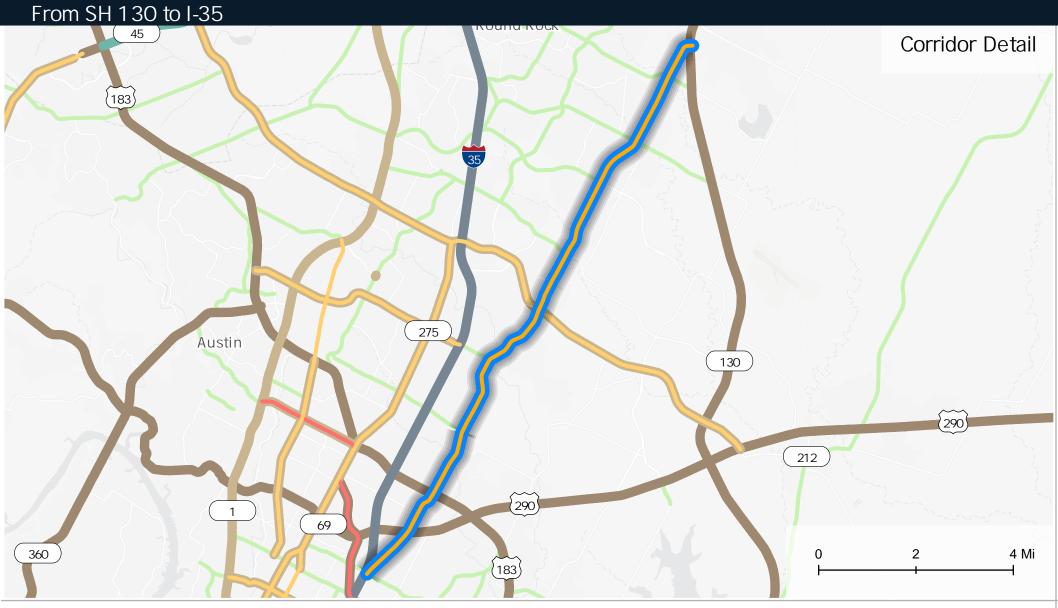
Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	No
Total Principal Arterial Criteria Met	2/5

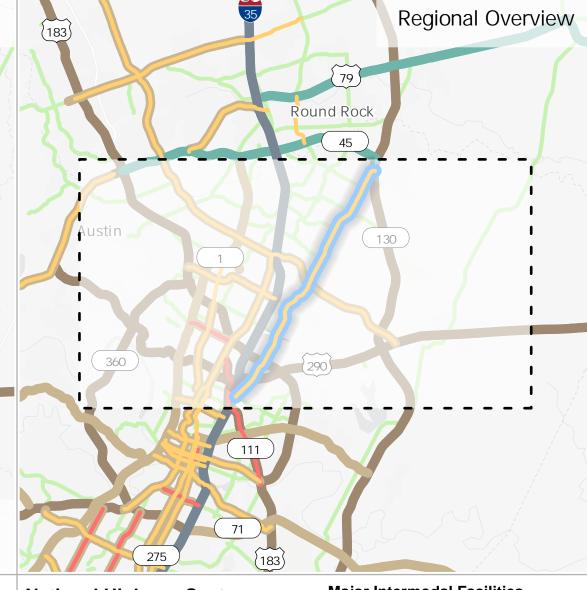




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Capital Area

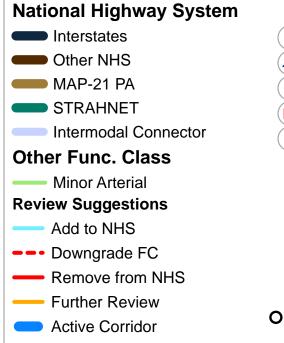


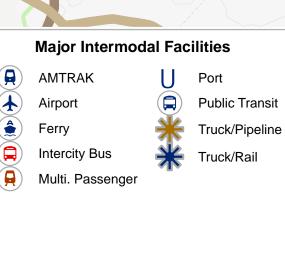


Preliminary Suggestion: Further Review Should this corridor be added to the NHS?

Facility Information		
Functional Class	Minor Arterial	
On the NHS?	Not on NHS	
Lanes	6 lanes	
Median Types	Divided	
Avg. Daily Traffic	14,580 - 30,980	

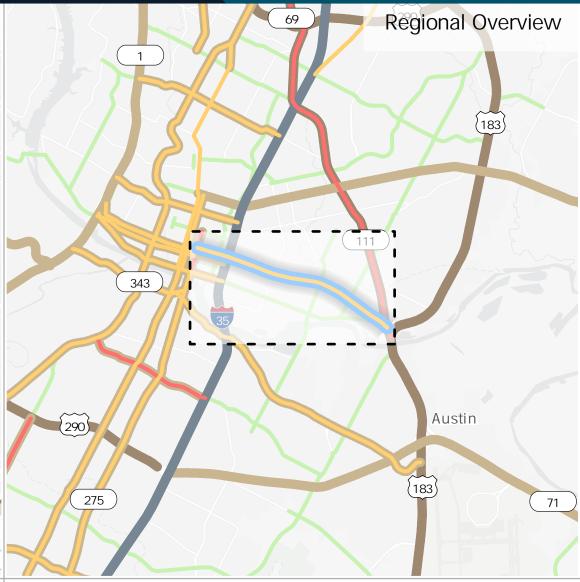
Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5







From Congress Ave to US 183 Corridor Detail BRAZOSST SAWAACINIO ELVD EMILIET W8THST 165 REDRIVERST 343 GESAR GHAVER THE THE PROPERTY OF THE PARTY O 0.3 0.6 Mi



0

Preliminary Suggestion: Further Review

Should this corridor be removed from the NHS?

Facility Information	
Principal Arterial - Other	
MAP-21 Principal Arterial	
4 lanes	
One-Way, CTL	
5,518 - 20,363	

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	3/5



Interstates

Other NHS

MAP-21 PA

STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

U Port

Airport Public Transit

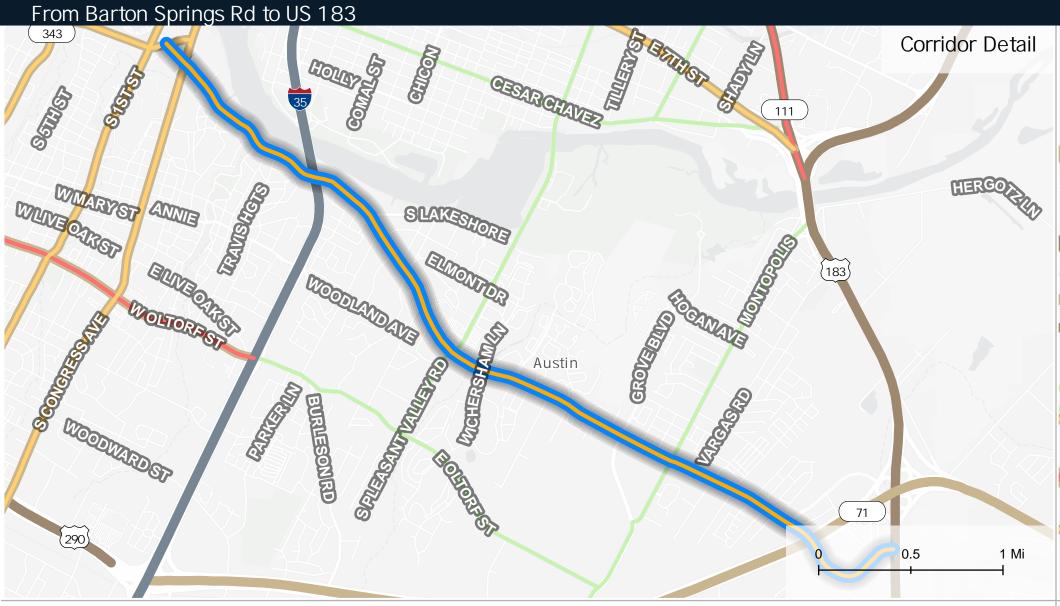
Ferry Truck/Pipeline
Intercity Bus Truck/Rail

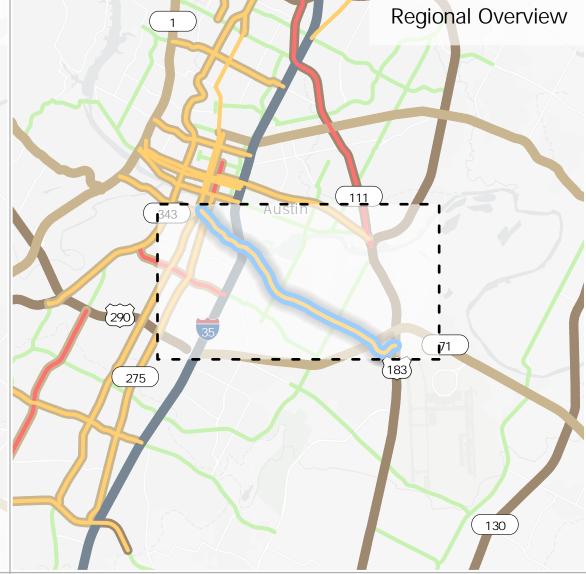
Intercity Bus Truck/Rail

Multi. Passenger



EAST RIVERSIDE





Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information		
Functional Class	Principal Arterial - Other	
On the NHS?	MAP-21 Principal Arterial	
Lanes	4 - 6 lanes	
Median Types	Divided, CTL	
Avg. Daily Traffic	19,466 - 42,113	

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	3/5



Interstates

Other NHS

MAP-21 PA STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Airport Ferry

Intercity Bus

0

Multi. Passenger



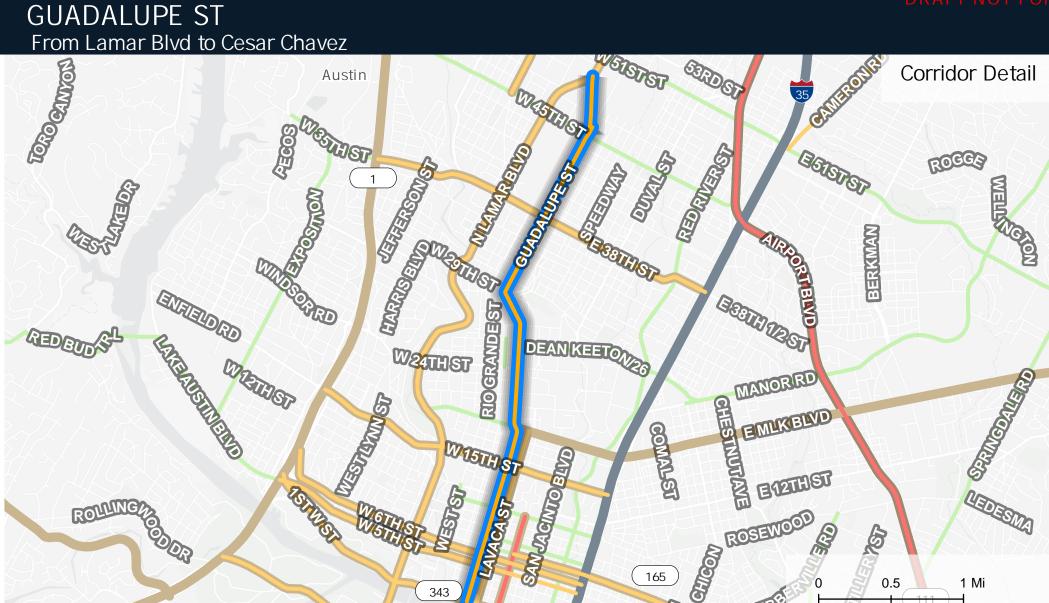
Port

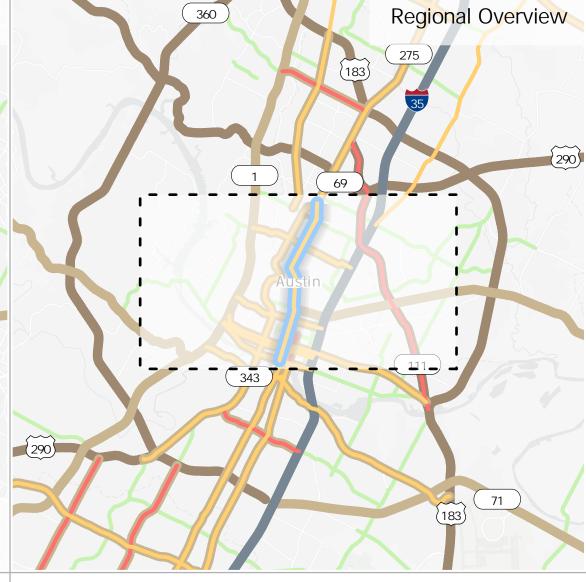
Public Transit

Truck/Pipeline

Truck/Rail

Map Index - 18





Preliminary Suggestion: Further Review Should this corridor be added to the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	Not on NHS
Lanes	3 - 4 lanes
Median Types	One-Way, Undivided, CTL
Avg. Daily Traffic	6,653 - 26,802

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	No
Total Principal Arterial Criteria Met	2/5

National Highway System

Interstates

Other NHS

MAP-21 PA STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS **Further Review**

Active Corridor

Major Intermodal Facilities

AMTRAK

Airport

Port **Public Transit**

Truck/Pipeline

Truck/Rail

Ferry

0

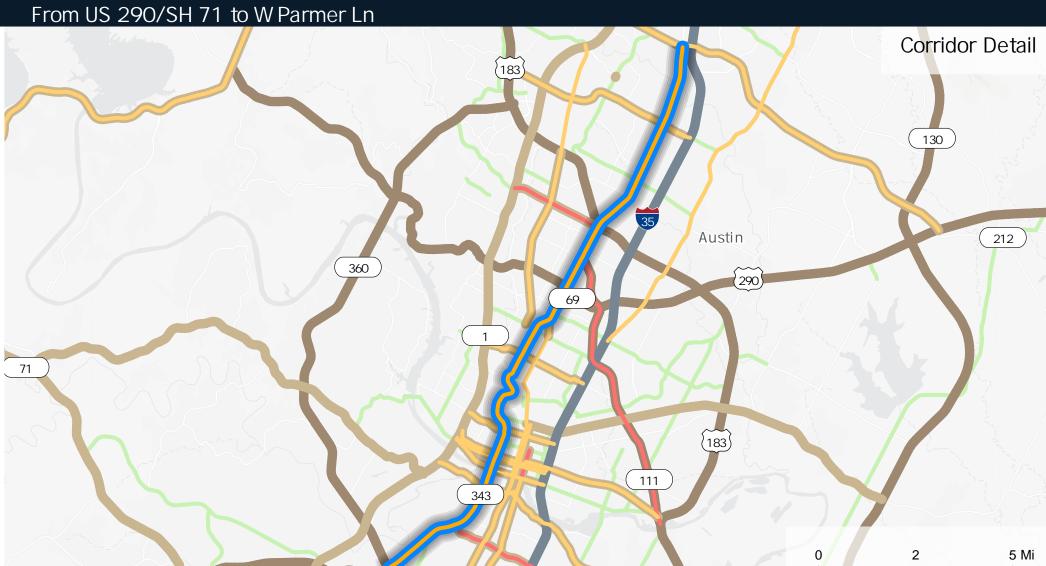
Intercity Bus

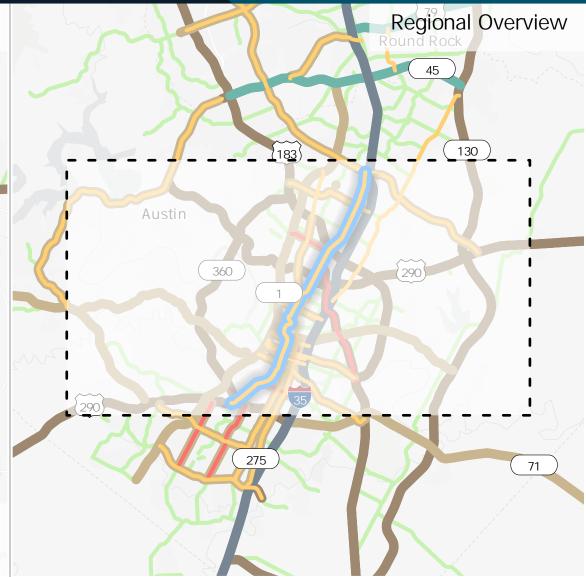
Multi. Passenger



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Capital Area



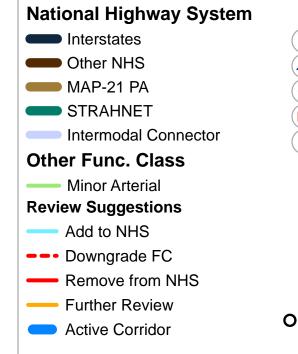


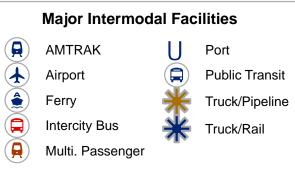
Preliminary Suggestion: Further Review

Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 lanes
Median Types	CTL
Avg. Daily Traffic	4,420 - 42,922

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	3/5

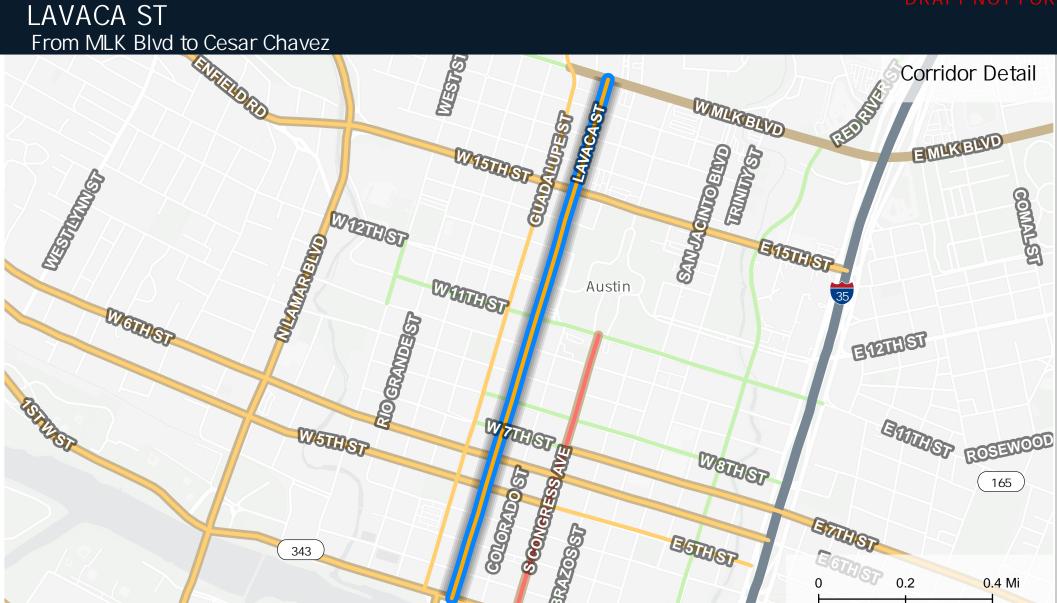


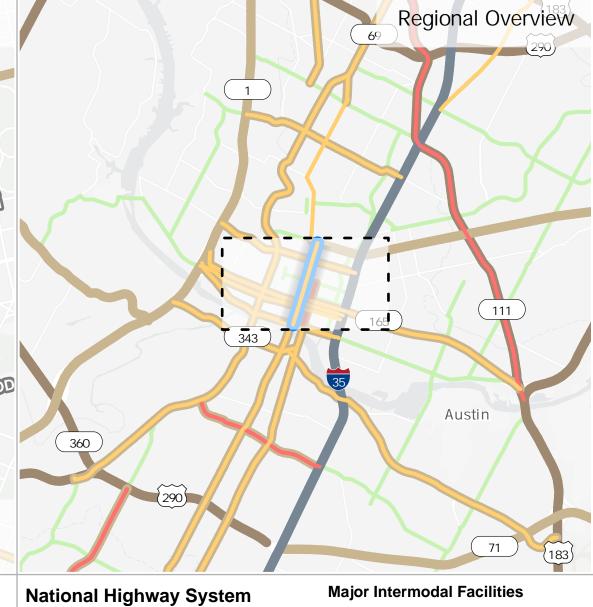




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LAMAR BLVD





Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 lanes
Median Types	One-Way
Avg. Daily Traffic	12,314

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	Yes
Limit access to surrounding land uses?	No
Link other major regional facilities?	No
Total Principal Arterial Criteria Met	2/5

Interstates

Other NHS

MAP-21 PA

STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

AMTRAK

Airport Ferry

Public Transit

Port

Truck/Pipeline

Truck/Rail

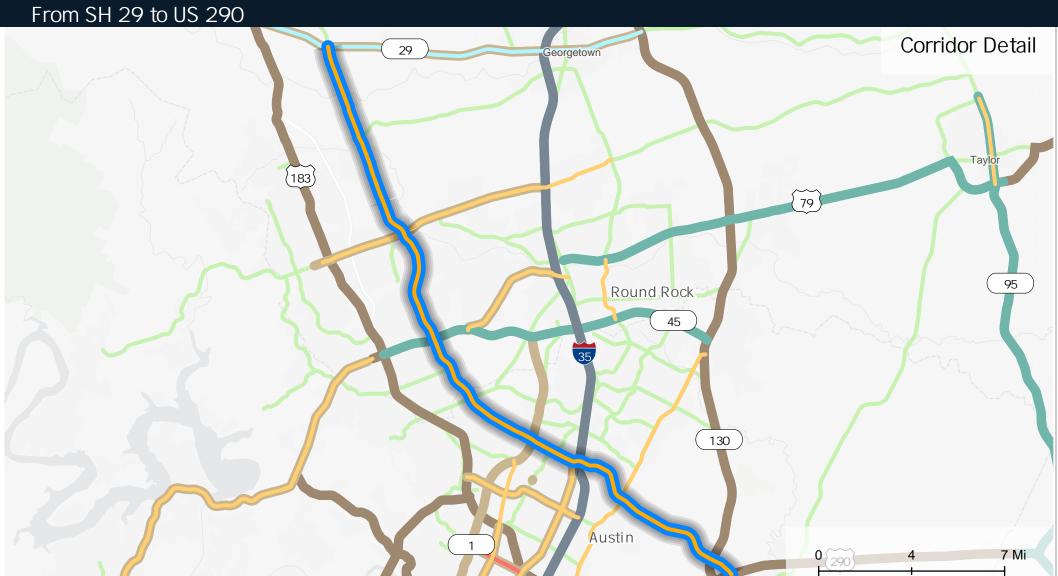
Intercity Bus

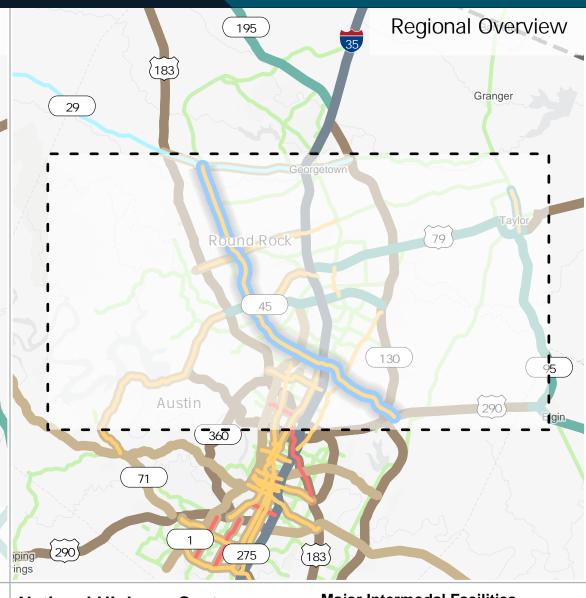
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Multi. Passenger



Map Index - 21



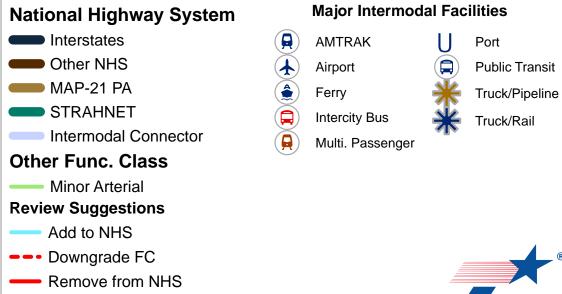


Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

360

Facility Information	
Principal Arterial - Other	
MAP-21 Principal Arterial	
4 - 6 lanes	
Divided	
6,731 - 55,365	

Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	Yes
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	3/5

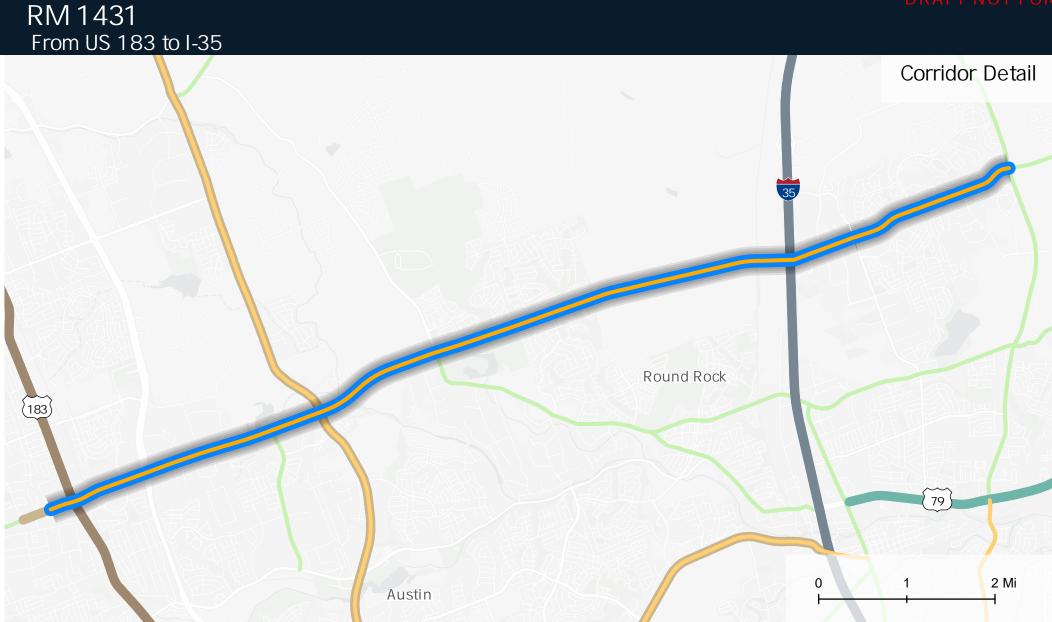


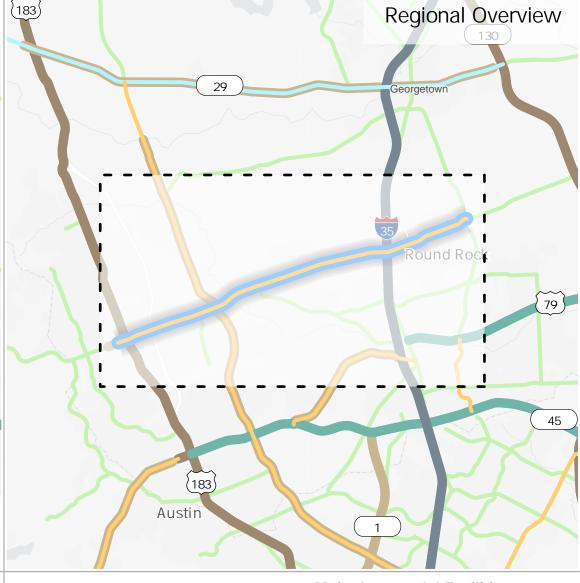
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Further Review

Active Corridor

PARMER LN

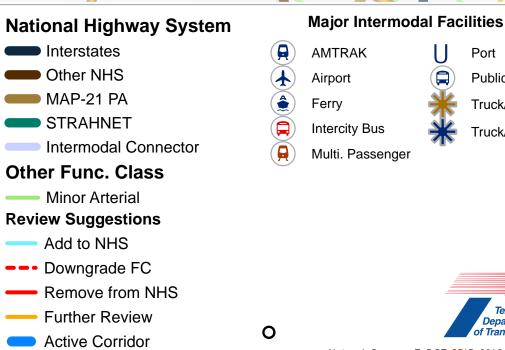




Preliminary Suggestion: Further Review Should this corridor be added to the NHS?

Facility Information	
Principal Arterial - Other	
Not on NHS	
4 lanes	
CTL	
8,758 - 43,858	

Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	Yes
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5



Port

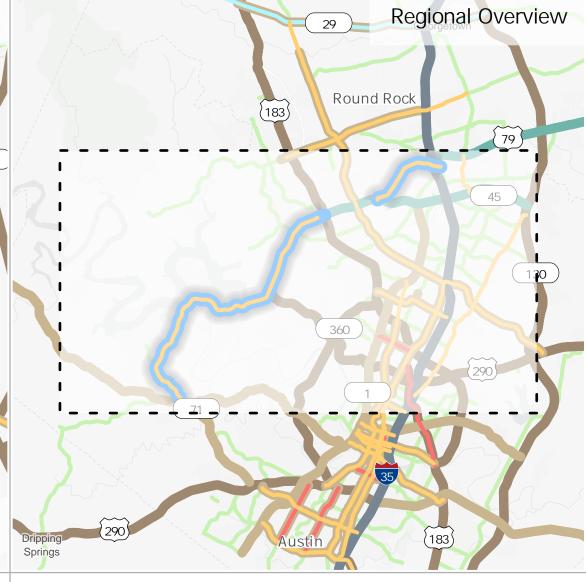
Public Transit

Truck/Pipeline

Truck/Rail

RM 620

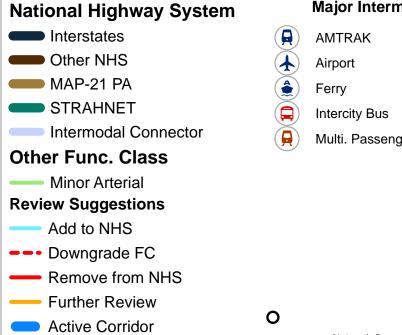
From SH 71 to US 183, SH 45 to I-35 Roun Corridor Detail 45 (183) 130 Austin 290 69 71 5 Mi

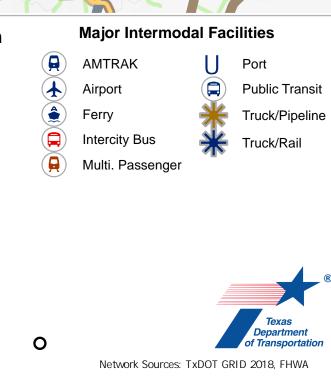


Preliminary Suggestion: Further Review Should this corridor be added to the NHS?

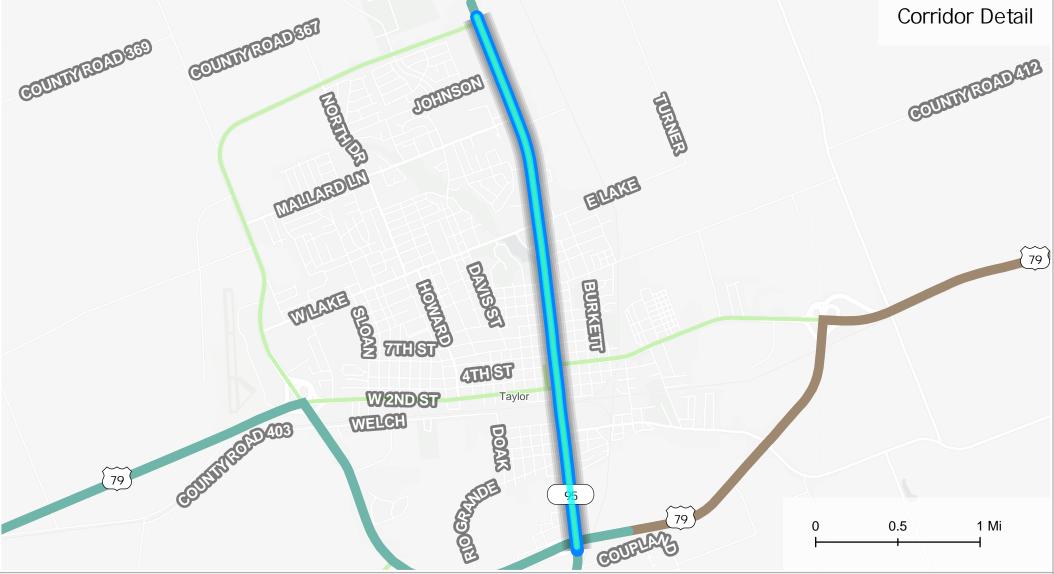
Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	Not on NHS
Lanes	4 lanes
Median Types	CTL
Avg. Daily Traffic	13,883 - 49,191

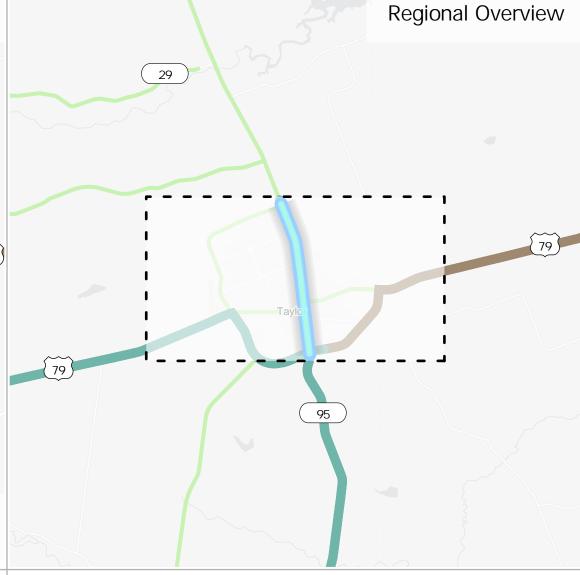
Functional Classification Review	
Serve major activity centers?	Yes
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5









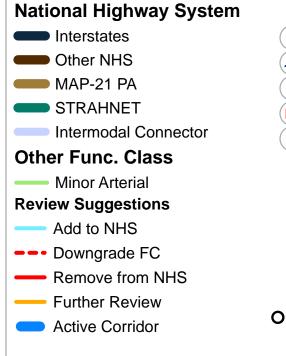


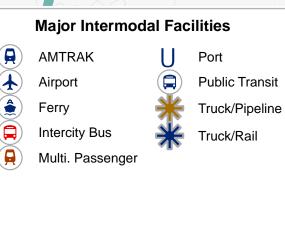
Preliminary Suggestion: Further Review

Should this corridor be removed from the NHS?

Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	Regular STRAHNET Route
Lanes	4 lanes
Median Types	Undivided, CTL
Avg. Daily Traffic	4,439 - 17,005

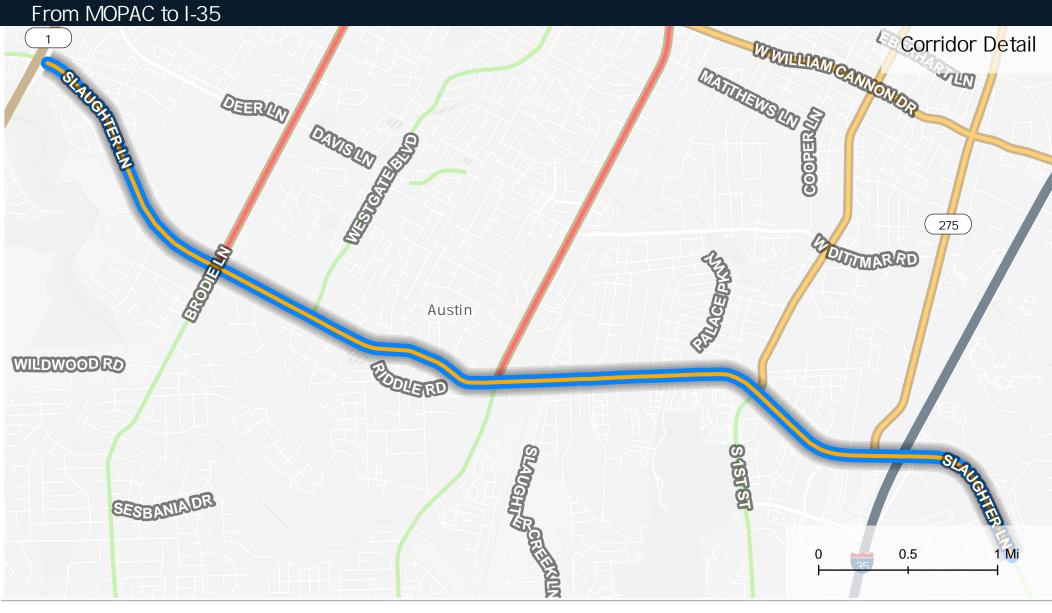
Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	No
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	1/5

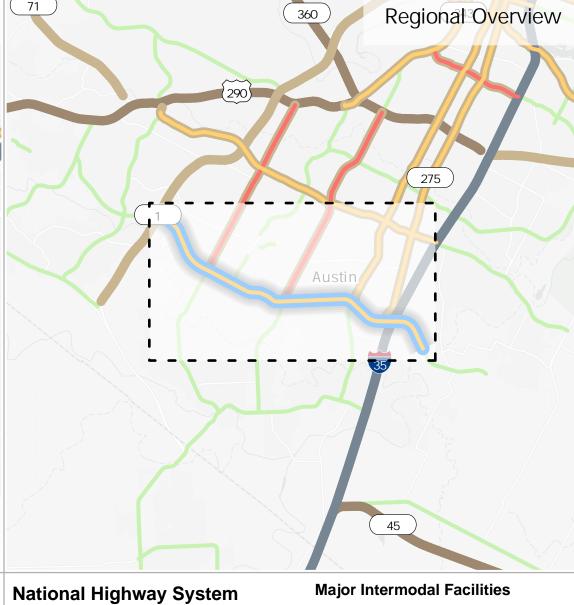




SLAUGHTER LN

NOT FOR DISTRIBUTION Capital Area





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Preliminary Suggestion: Further Review

Should this corridor be removed from the NHS?

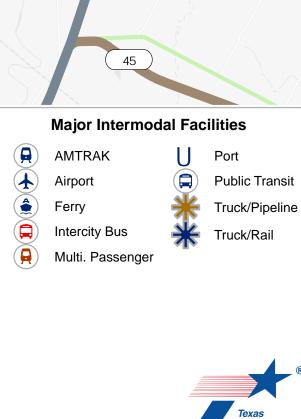
Facility Information	
Functional Class	Principal Arterial - Other
On the NHS?	MAP-21 Principal Arterial
Lanes	4 lanes
Median Types	Divided
Avg. Daily Traffic	14,307 - 45,118

Functional Classification Review	
Serve major activity centers?	No
Serve long-distance travel?	No
Link surrounding region with urban core?	No
Limit access to surrounding land uses?	Yes
Link other major regional facilities?	Yes
Total Principal Arterial Criteria Met	2/5



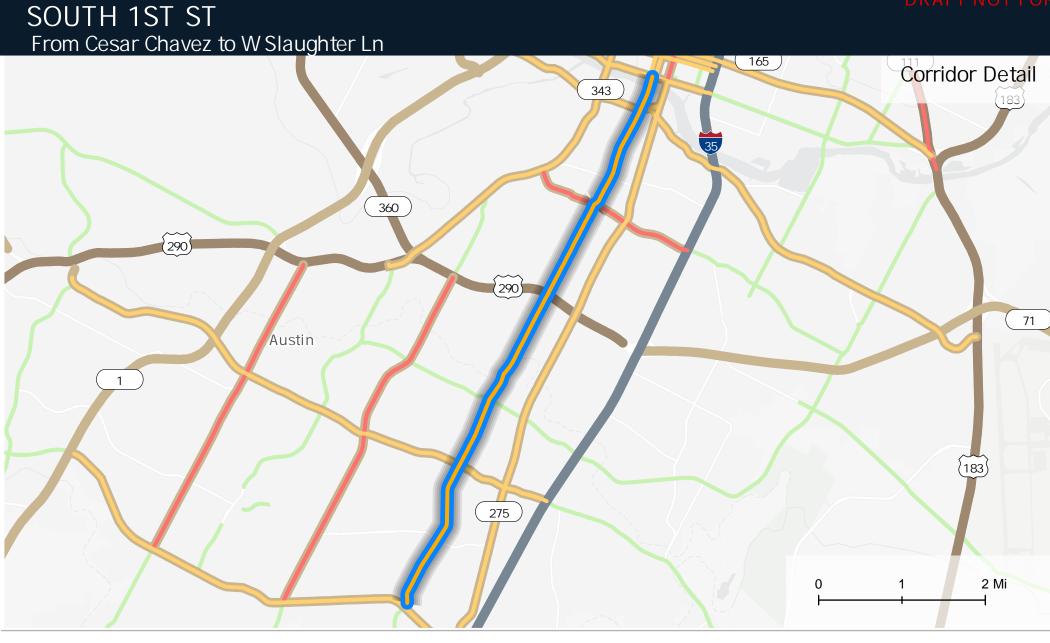
Remove from NHSFurther Review

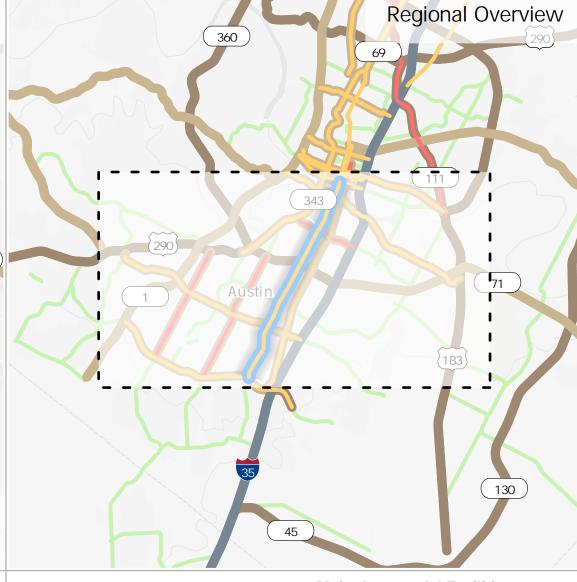
Active Corridor



Network Sources: TxDOT GRID 2018, FHWA

Capital Area





0

Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information				
Functional Class	Principal Arterial - Other			
On the NHS?	MAP-21 Principal Arterial			
Lanes	4 lanes			
Median Types	Undivided			
Avg. Daily Traffic	15,236 - 32,909			

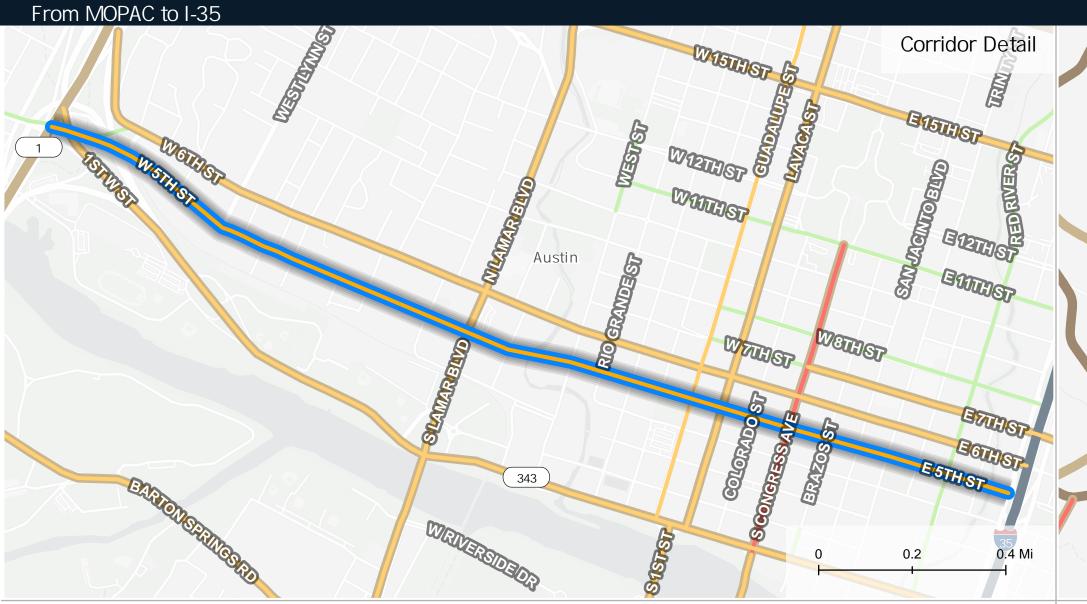
Functional Classification Review			
Serve major activity centers?	Yes		
Serve long-distance travel?	No		
Link surrounding region with urban core?	Yes		
Limit access to surrounding land uses?	No		
Link other major regional facilities?	Yes		
Total Principal Arterial Criteria Met	3/5		

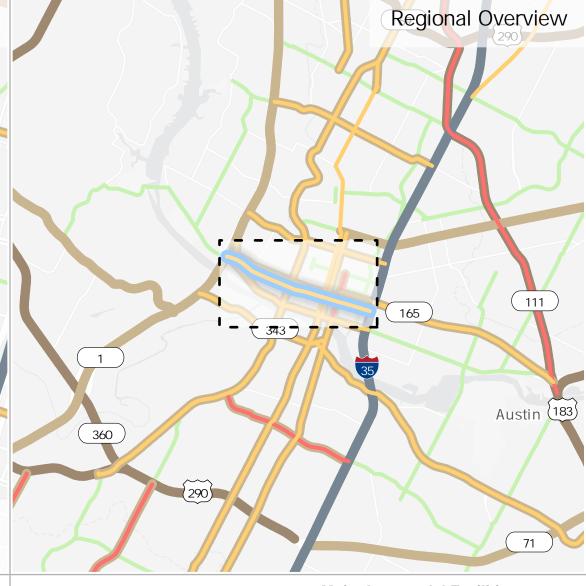


Further Review

Active Corridor







Preliminary Suggestion: Further Review

Should this corridor be removed from the NHS?

Facility Information			
Functional Class	Principal Arterial - Other		
On the NHS?	MAP-21 Principal Arterial		
Lanes	4 lanes		
Median Types	One-Way		
Avg. Daily Traffic	8,381 - 23,780		

Functional Classification Review			
Serve major activity centers?	Yes		
Serve long-distance travel?	No		
Link surrounding region with urban core?	No		
Limit access to surrounding land uses?	No		
Link other major regional facilities?	Yes		
Total Principal Arterial Criteria Met	2/5		

National Highway System

Interstates

Other NHS

MAP-21 PA
STRAHNET

Intermodal Connector

Other Func. Class

Minor ArterialReview Suggestions

Add to NHS

--- Downgrade FC

Remove from NHS

Further ReviewActive Corridor

Major Intermodal Facilities

AMTRAK

U

Airport Ferry

Intercity Bus

0

) Multi. Passenger



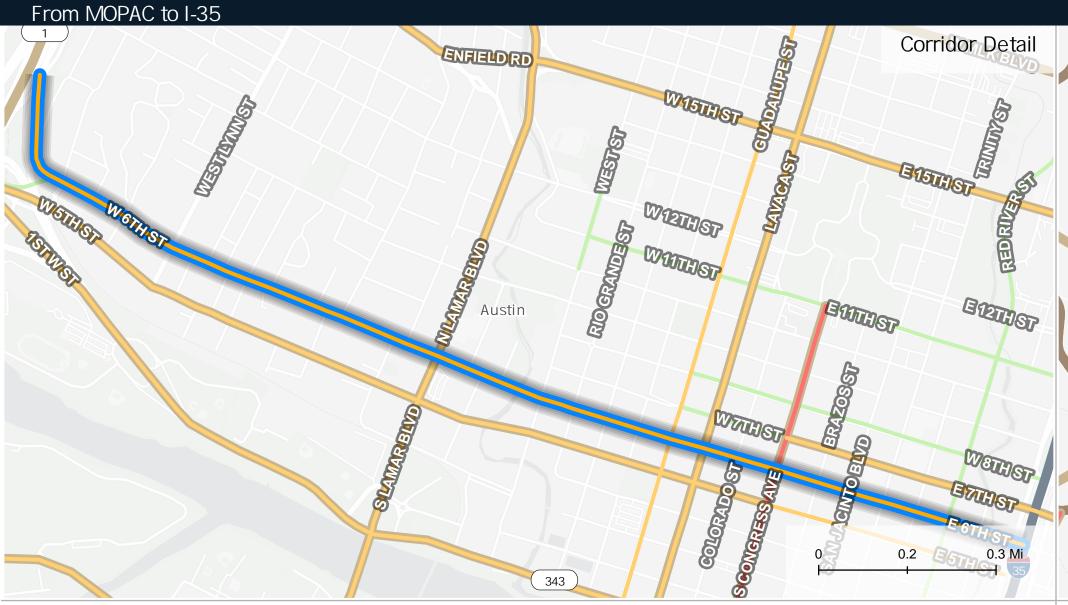
Port

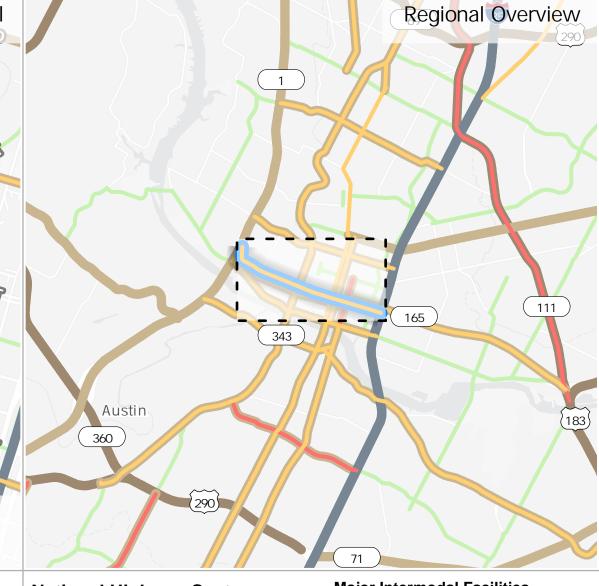
Public Transit



Map Index - 28

Capital Area





Preliminary Suggestion: Further Review Should this corridor be removed from the NHS?

Facility Information			
Functional Class	Principal Arterial - Other		
On the NHS?	MAP-21 Principal Arterial		
Lanes	4 lanes		
Median Types	One-Way		
Avg. Daily Traffic	6,862 - 22,800		

Functional Classification Review			
Serve major activity centers?	Yes		
Serve long-distance travel?	No		
Link surrounding region with urban core?	No		
Limit access to surrounding land uses?	No		
Link other major regional facilities?	Yes		
Total Principal Arterial Criteria Met	2/5		

National Highway System

Interstates

Other NHS

MAP-21 PA

STRAHNET

Intermodal Connector

Other Func. Class

Minor Arterial

Review Suggestions

Add to NHS

Downgrade FC

Remove from NHS

Further Review

Active Corridor

Major Intermodal Facilities

AMTRAK

Port

Public Transit

Truck/Pipeline

Truck/Rail

Airport

Ferry

Intercity Bus

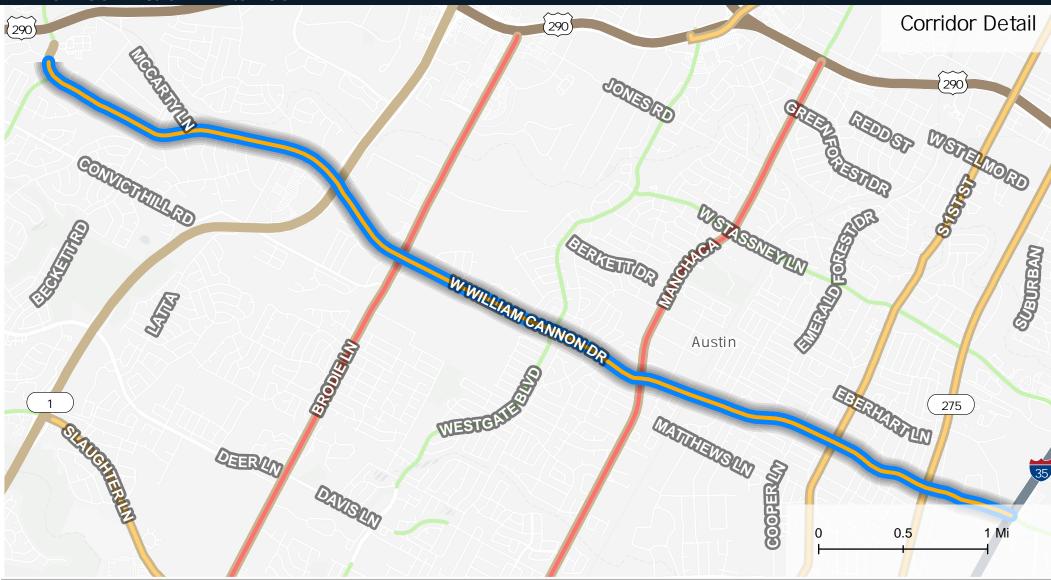
Multi. Passenger

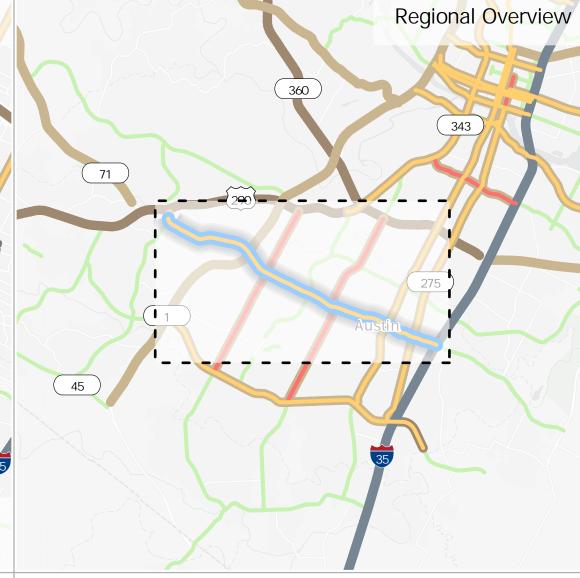


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Network Sources: TxDOT GRID 2018, FHWA

WILLIAM CANNON DR From US 290/SH 71 to I-35





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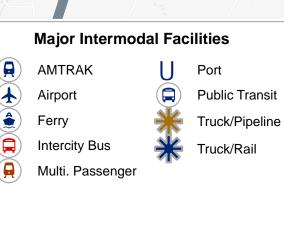
Preliminary Suggestion: Further Review

Should this corridor be removed from the NHS?

Facility Information			
Functional Class	Principal Arterial - Other		
On the NHS?	MAP-21 Principal Arterial		
Lanes	4 - 6 lanes		
Median Types	Divided		
Avg. Daily Traffic	5,961 - 37,058		

Functional Classification Review			
Serve major activity centers?	No		
Serve long-distance travel?	No		
Link surrounding region with urban core?	No		
Limit access to surrounding land uses?	Yes		
Link other major regional facilities?	Yes		
Total Principal Arterial Criteria Met	2/5		





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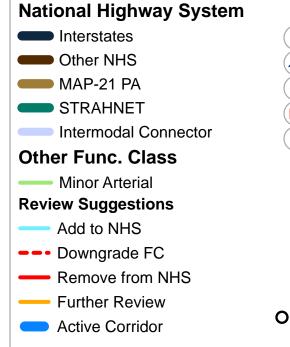
Capital Area



Preliminary Suggestion: Downgrade FC Should this corridor remain on the NHS?

Facility Information				
Functional Class	Principal Arterial - Other			
On the NHS?	Not on NHS			
Lanes	4 lanes			
Median Types	CTL			
Avg. Daily Traffic	4,717 - 15,197			

Functional Classification Review			
Serve major activity centers?	No		
Serve long-distance travel?	No		
Link surrounding region with urban core?	No		
Limit access to surrounding land uses?	No		
Link other major regional facilities?	No		
Total Principal Arterial Criteria Met	0/5		





Network Sources: TxDOT GRID 2018, FHWA

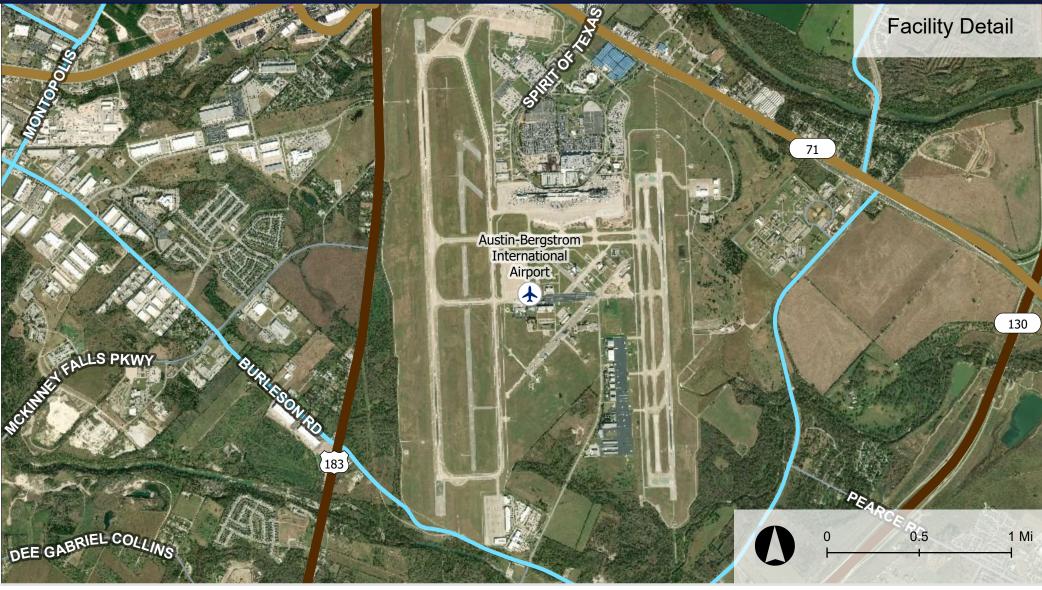
CAMPO NHS Intermodal Connector Review Index

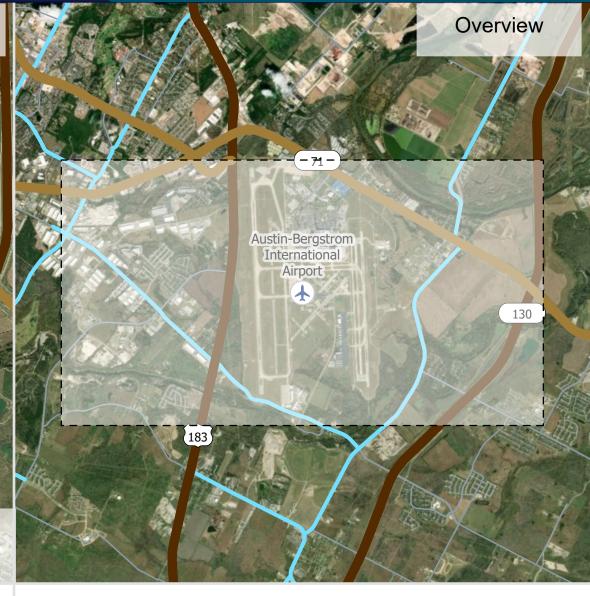
FACILITY NAME	FACILITY TYPE	CONNECTOR NO.	Connector Description	CONNECTOR LENGTH (Mi)	MPO	Major Finding	SHEET NUMBER
Amtrak Station (Austin)	AMTRAK Station	1	Served by an Existing NHS Route (State Loop 1)	0	Capital Area	No finding	No Fact Sheet
Austin Bergstrom Intl Airport	New Connector- Airport	1	Served by an Existing NHS Route/SH 71	0	Capital Area	Suggest designating Connector between facility and NHS	1
Dillo Transit Park-N-Ride Facility (Austin)	Public Transit Station	1	Served by an Existing NHS Route (State Loop 1)	0	Capital Area	No finding	No Fact Sheet
Greyhound Bus Station (Austin)	Intercity Bus Terminal	1	Served by an Existing NHS Route (State Spur 69)	0	Capital Area	No finding	No Fact Sheet
Robert Mueller Municipal Airport (Austin)	Airport	1	Served by an Existing NHS Route (State Loop 111)	0	Capital Area	Facility no longer exists	No Fact Sheet

NHS Intermodal Connector Review

Capital Area







Major Finding

Suggest designating Connector between facility and Main NHS

Facility Type

Airport

Review Details

FHWA Criteria Evaluation

Criterion 1: 250,000 Annual passenger enplanements Facility Data: 6,813,141 passengers (meets criterion)

Criterion 2: 100 Trucks per day in each direction on the principal connecting route Facility Data: Data not available

Criterion 3: 100,000 Tons per year arriving or departing by highway mode Facility Data: 273,867 tons (meets criterion)

Intermodal Facilities

AMTRAK

Airport

Ferry

Intercity Bus

Multi. Passenger

Port

Public Transit



Truck/Pipeline



National Highway System

Interstates

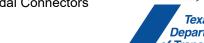
Original NHS

MAP-21 PA STRAHNET

Non-NHS Func. Class

Other Principal Arterial

Minor Arterial Intermodal Connectors



Network Sources: TxDOT GRID 2018, FHWA Facility Data Sources: FAA Preliminary CY 2017 Passenger Boarding Data, FAA Preliminary CY 2017 All-Cargo Airports by Landed Weight - ALL MODES



Date: Continued From: Action Requested: January 28, 2019 N/A Information

To: Technical Advisory Committee

From: Mr. Ryan Collins, Short-Range Planning Manager

Agenda Item: 7

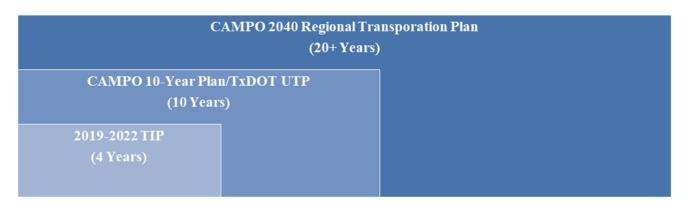
Subject: Discussion on the Development of the 10-Year Plan

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

As part of the implementation of House Bill (HB) 20, the Capital Area Metropolitan Planning Organization (CAMPO) must develop a 10-year transportation plan. This 10-year plan will be comprised of the projects listed in the Transportation Improvement Program (TIP) as well projects listed in years five through 10 in the Regional Transportation Plan (RTP). This plan will also help supplement and coordinate the program of projects listed in TxDOT's Unified Transportation Program (UTP) and ensure consistent development of significant projects within the region.



FINANCIAL IMPACT

None.

BACKGROUND AND DISCUSSION

In May of 2015, the Texas Legislature passed House Bill (HB) 20. This law pertains to the transportation planning activities and expenditures carried out by the Texas Department of Transportation (TxDOT) as well as the planning organizations within the state. The emphasis of HB-20 is the development of a comprehensive performance-based planning and programming process.

SUPPORTING DOCUMENTS

None.



Date: Continued From: Action Requested: January 28, 2019 N/A Information

To: Technical Advisory Committee

From: Mr. David Paine, CAMPO General Planning Consultant

Agenda Item: 8

Subject: Discussion on 2045 Fiscal Constraint Methodology

RECOMMENDATION

None. This item is for informational purposes only.

PURPOSE AND EXECUTIVE SUMMARY

As part of the development of the CAMPO 2045 Regional Transportation Plan (RTP), federal statute requires that CAMPO perform a fiscal constraint analysis. CAMPO has retained a financial consultant with knowledge of local and TxDOT financing mechanisms to perform the analysis. The consultant will be contacting the financial points of contact for your agencies very soon.

Included in this information item is the methodology and questions that the consultant will use to help CAMPO perform the fiscal constraint analysis.

FINANCIAL IMPACT

None.

SUPPORTING DOCUMENTS

Attachment A – CAMPO Fiscal Constraint Methodology



The Estimation of Local Resources for the Fiscal Constraint in the 2045 Transportation Plan

1 SUMMARY AND REQUEST

This note describes the method that the Capital Area Metropolitan Planning Organization (CAMPO) will use to estimate the fiscal capacities of local governments and agencies that should be included in the fiscal constraint of its 2045 long-range transportation plan.

In summary, the method estimates the <u>capacity</u> of a local government or agency as a financial analyst would: by estimating its operating surplus in the future then applying ratios and reserves to test the local government's or agency's resilience to adverse financial events. Capacities are not connected in any way to any <u>commitments</u> to capital spending, through capital improvement plans or otherwise, that the local government or agency might undertake.

The method yields results that, before being included in the estimate of the fiscal constraint, should be reviewed by financial officials in each of the member governments or agencies to which the method is applied. CAMPO intends to apply this method to the City of Austin, all six counties in the region, and the Capital Metropolitan Transportation Authority. Accordingly, CAMPO requests that the members of the Technical Advisory Committee (TAC) who represent those local governments and agencies take this note to their financial counterparts and relay back to CAMPO the contact information for those people so that CAMPO's financial analysts may consult with them.

2 REQUIREMENT

The 2045 transportation plan for which CAMPO will obtain federal certification must include an estimate of its fiscal constraint, i.e.:

"A financial plan that demonstrates how the adopted transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. (23 U.S.C. 134 (j) (2))."

The test of what is "reasonably expected to be made available" requires neither commitments nor intentions to commit to spending; rather it requires a demonstration of the capacities of the sources of funds that have been used in the past, or may be reasonably be expected to be used in the future, to fund transportation programs and projects.

3 DESCRIPTION OF THE METHOD

For each local government or agency to which CAMPO applies this method, analysts will build a model of its financial position that estimates its net operating surpluses and net

¹ U.S. Federal Highway Administration. Financial Planning and Fiscal Constraint for Transportation Plans and Programs. http://www.fhwa.dot.gov/planning/guidfinconstr_qa.cfm.





financial liabilities in each year to 2045. These estimates will be presented in the form of *pro forma* balance sheets and income statements. Analysts will then apply coverage ratios and other financial stress tests to the *pro forma* statements to estimate the amounts that would be available to fund additional expenditures while maintaining adequate reserves to deal with adverse events or conditions. CAMPO will review all of these estimates, along with the assumed coverage ratios and stress tests used to generate them, with the appropriate finance officers of the local government or agency for which it generates the estimates.

This method is different than, and independent of, estimates of <u>commitment or intent</u> in future years that local governments or agencies might make. Such commitments and intentions are usually expressed in capital improvement programs (CIPs) or in other capital spending plans. This method estimates each local government's or agency's <u>capacity</u> to fund new capital or operating spending, above the current funding levels of each local government's or agency's programs.

The method assumes that existing programs, including transportation-related programs, remain funded at their current levels with an allowance for inflation. As such, transportation-related operating and maintenance expenditures for existing transportation assets are already funded outside of this method's estimates of capacity. On the other hand, all of the capacities estimated by this method cannot be assumed to be available for transportation: those capacities must provide for all of the local government's or agency's programs and priorities.

The financial model built for each local government or agency has, as its baseline, the financial position reported in the local government's or agency's most recent comprehensive annual financial report (CAFR) and, if it has been made available to the public, its most recent budget. Where analyses of trends over time are necessary, the model includes data from the CAFRs of prior years. No information from local governments or agencies that has not already been made available to the public is required.

The model reports estimates of capacity in three forms:

- Operating Surplus: the revenues remaining after operating expenditures and debt service but before any new capital spending.
- <u>Debt</u>: the amount of debt service payments, over and above payments on existing debt that are expected in current and future years, that the agency can support with the operating surplus estimated above. This estimate is subject to legislated debt limits.
- <u>Cash</u>: the amount by which unrestricted cash balances exceed a minimum cash reserve needed to ensure that the local government or agency can meet its near-term obligations.

Operating surplus and debt are the same financial capacity stated in two different forms: a local government or agency can use its capacity to either fund "pay as you go" programs or to service additional debt; it cannot do both. Surplus cash, because it has been accumulated from surpluses in prior years and may be required to fund outstanding obligations, can only be used to fund short-term and one-time expenditures with cash management methods.



The method depends on macro-economic and demographic forecasts as inputs from which it estimates revenues and expenditures. These assumptions will be the same as those used in the rest of the 2045 transportation plan.

4 PROCESS AND SCHEDULE

After the TAC meeting in January 2019, the TAC members for the local governments and agencies that are to be covered with this forecast method should pass this note on to the appropriate financial officer in their local government or agency. In larger local governments and agencies, the appropriate person is usually the budget director. In smaller local governments and agencies, the appropriate person is usually the chief financial officer.

Analysts will prepare draft forecasts in MS Excel workbooks, with explanatory notes in MS Word documents for each local government and agency. In mid-February 2019, CAMPO will distribute the forecasts and notes for each local government and agency to its TAC member and to the financial officer that the TAC member has designated. In February or early March 2019, CAMPO staff and analysts will meet with the TAC member and the designated financial officer of each local government and agency to obtain either their assent to the forecast or their guidance in revising it. These forecasts, as revised, will be submitted to the TAC during its March 2019 meeting. Subject to the TAC's approval of the forecasts, they will be submitted in summary form to the February 2019 meeting of the Transportation Policy Committee (TPC).