Metropolitan Transportation Plan 2050

Amendment # 5

Effective ----------

South East Texas Regional Planning Commission
Metropolitan Planning Organization (SETRPC-MPO)

for the Jasper-Jefferson-Orange-Hardin Regional Transportation Study (JJOHRTS) Area

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SETRPC
SOUTH EAST TEXAS REGIONAL PLANNING COMMISSION

TRANSPORTATION & ENVIRONMENTAL RESOURCES

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Chapter 1: Planning Context

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1.0 Welcome

The purpose of this Metropolitan Transportation Plan (MTP) is to provide systematic, long-range planning for transportation projects and programs within the metropolitan planning area (MPA) comprising Jefferson, Jasper, Orange, and Hardin counties. The metropolitan transportation planning process is a federally regulated planning process that requires the development of an MTP that addresses at least a 20-year planning horizon that includes both long- and short- range strategies or actions for an integrated and intermodal transportation system. This MTP was developed through a continuing, cooperative, and comprehensive (3-C) planning process and identifies transportation needs, financial resources, and project or programming priorities for the South East Texas Regional Planning Commission (SETRPC) area from 2025 through the horizon year 2050. This MTP, the *SETPRC MTP-2050*, addresses and meets all *Moving Ahead for Progress in the 21st Century Act of 2012* (MAP-21), *Fixing America's Surface Transportation Act of 2015* (FAST Act), and the *Infrastructure Investment and Jobs Act (IIJA)*[1] planning requirements as provided by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).

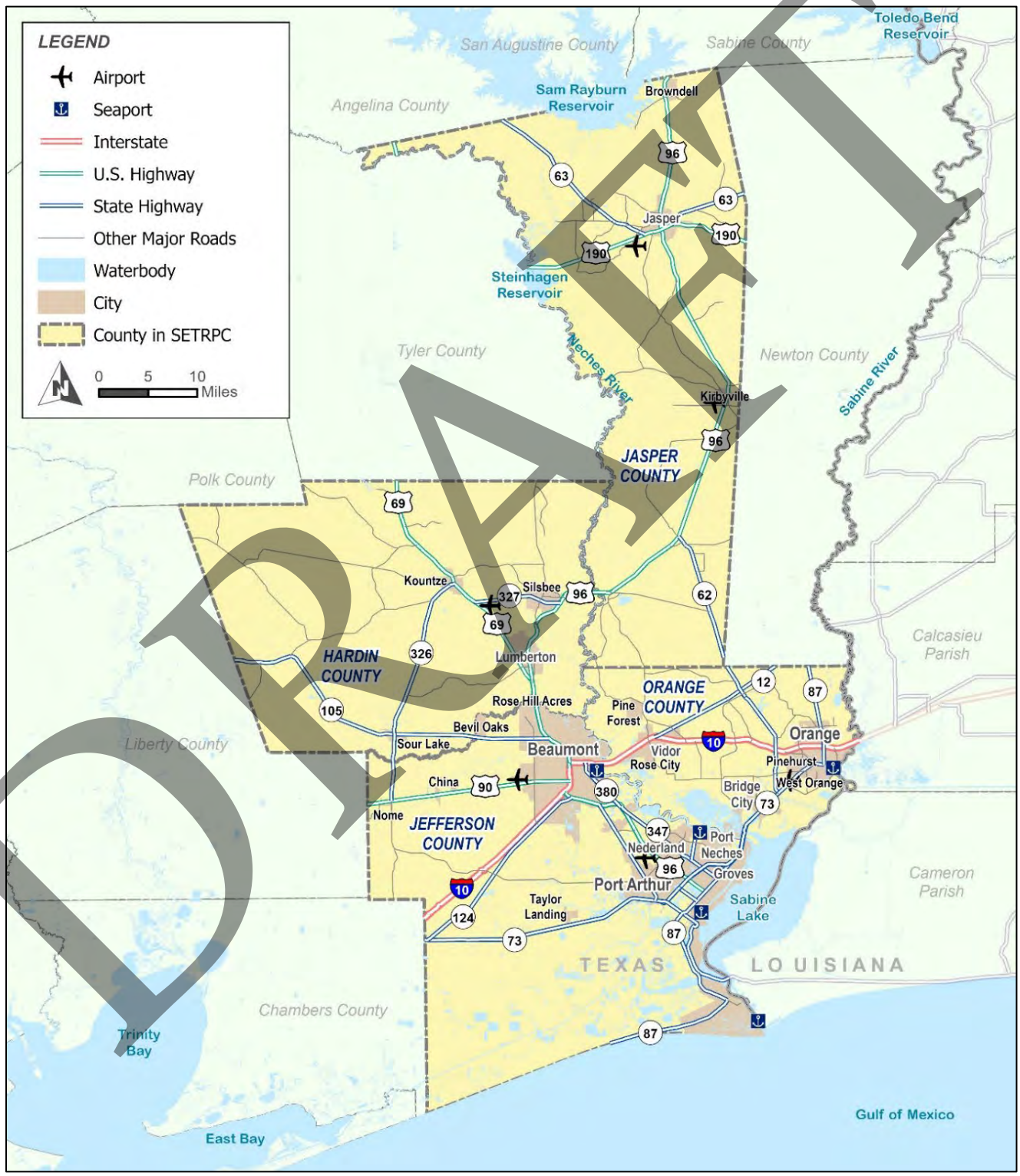
1.1 South East Texas Regional Planning Commission

The SETRPC is a voluntary association of local governments that serve the MPA comprising Hardin, Jasper, Jefferson, and Orange Counties (Figure 1-1). The SETRPC provides comprehensive planning services in community development, transportation, and environmental resources. The SETRPC, established in 1970 under the authority provided by the 1965 Texas Legislature, solves regional challenges by promoting intergovernmental cooperation and coordination, conducting comprehensive regional planning, and providing a forum for the discussion and study of regional challenges.

In 1974, the Governor of Texas designated the SETRPC as the Metropolitan Planning Organization (MPO) for the region to comply with the Federal Highway Act of 1962. Per federal law, an urban area with a population of 50,000 or more is required to establish an MPO. The MPO is responsible for conducting a 3C transportation planning process that results in plans and programs that consider all transportation modes and support metropolitan community development and social goals. MPOs receive federal funding for transportation planning and many also receive state and local funds to carry out mandated planning activities. As the MPO for the region, the SETRPC is responsible for the development of the region's MTP.

[1] Also referred to as the Bipartisan Infrastructure Law (BIL)

Figure 1-1: SETRPC Metropolitan Planning Area



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1.1.1 SETRPC Structure

The standard MPO structure consists of the planning staff, a planning committee, and a technical advisory committee. The SETRPC maintains this standard MPO structure. The functions and responsibilities are summarized as follows:

- **Planning Staff:** Within the SETRPC, the MPO staff support is housed within the Transportation and Environmental Resources (TER) Division, which provides the technical support for the operations of the MPO. The TER Division administers federal and state funds for the planning and implementation of programs, projects, and polices related to various modes of transportation, air quality, solid waste management, and economic development for the three-county region.
- **Transportation Planning Committee:** The Transportation Planning Committee (TPC) serves as the planning committee and the MPO governing body. The TPC is comprised of elected officials from local government bodies in the region. The TPC usually meets on a quarterly basis to determine MPO policy.
- **Technical Committee**: The Technical Committee serves as the technical advisory committee and includes local professionals involved in various aspects of transportation infrastructure. Membership includes public works directors, traffic engineers, representatives of public transportation operations, and related private sector interests. The Technical Committee is responsible for interacting with the planning staff to review transportation plans and projects for recommendation to the TPC.

1.2 Purpose of the MTP

The MTP outlines the transportation goals, objectives, and performance measures for the region, and addresses transportation related issues and impacts over a 25-year planning horizon. The MTP is federally mandated and complies with the statewide and metropolitan transportation planning regulations issued by the US Department of Transportation (USDOT). This MTP is an update to the previous long-range transportation plan adopted in 2019.

The SETRPC MTP-2050 addresses and meets all MAP-21, FAST Act, and IIJA planning requirements as provided by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) from 23 CFR § 450.306, *The Scope of the Metropolitan Transportation Planning Process*.

1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2) Increase the safety of the transportation system for motorized and non-motorized users.
3) Increase the security of the transportation system for motorized and non-motorized users.
4) Increase accessibility and mobility of people and freight.
5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

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6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

7) Promote efficient system management and operation.

8) Emphasize the preservation of the existing transportation system.

9) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.

10) Enhance travel and tourism.

1.3 Related SETRPC Plans and Programs

Under federal and state mandates, the SETRPC-MPO is responsible for the development of several plans in addition to the MTP. These plans are as follows:

- **Unified Planning Work Program** – Most recently updated in 2021, the Unified Planning Work Program (UPWD) documents the metropolitan transportation planning activities performed with funds provided under Title 23 United States Code (U.S.C.) and Title 49 U.S.C. Chapter 53. The program is prepared annually and provides a statement of work with a budget identifying the planning priorities and activities that will be provided in the SETRPC area for the fiscal year (October 1 through September 30). The UPWD includes information on required planning tasks, resulting products from each associated task, denotes the responsible agency for the work tasks, provides a time frame for conducting the tasks, and identifies the sources of funds for each task.
- **Transportation Improvement Program** – The JOHRTS FY 2021-2024 Transportation Improvement Program (TIP) is the short-range transportation plan for the area. The TIP lists the highway and transit projects that are expected to be let for construction or implementation within the four-year timeframe covered by the document. The TIP is consistent with the MTP. All regional transportation projects and programs are required to be identified and prioritized in the TIP to be eligible for Federal Highway Administration (FHWA) and Federal Transit Authority (FTA) funds.
- **Public Participation Plan** – Most recently updated in September of 2020, the Public Participation Plan outlines the SETRPC process for providing all members of the general public, local governments, agencies, and special interest groups with fair, meaningful, and accessible opportunities to participate in the metropolitan transportation planning process. The fundamental purpose of the Public Participation Plan is to provide an inclusive approach in which citizens may participate during the 3C transportation planning process. The public participation process fosters better planning decisions and helps ensure that transportation plans address community needs.
- **Title VI/Environmental Justice Program** – The Title VI/Environmental Justice Program has been developed in accordance with requirements of the FHWA and the FTA and addresses the responsibilities of the SETRPC as a recipient of federal financial assistance as they relate to requirements of Title VI of the Civil Rights Act of 1964, The Civil Rights Restoration act of

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1987, and Executive Order 12898. The program contains the SETRPC's formal Policy statement regarding Title VI/Environmental Justice (EJ), describes the SETRPC's Title VI and EJ general program elements, and includes a Title VI complaint form.

- **Limited English Proficiency Plan** – The Limited English Proficiency (LEP) Plan has been developed in accordance with requirements of the FHWA and the FTA and addresses the responsibilities of the SETRPC as a recipient of federal financial assistance as they relate to requirements of Title VI of the Civil Rights Act of 1964, The Civil Rights Restoration act of 1987, and Executive Order 13166. The LEP Plan helps identify reasonable steps for providing language assistance to persons with LEP who wish to participate effectively in the MPO's transportation planning process. Additionally, the plan outlines methods for identifying individuals who may need language assistance, staff training that may be required, and how to notify LEP persons that assistance is available.

1.4 MTP-2050 Goals and Objectives

The goals and objectives for the SETRPC MTP-2050 must be consistent and in alignment with recent and relevant federal, state, and MPO planning efforts. Based on the review of the goals and objectives of the recent and relevant federal, state, and MPO plans, a draft list of goals and objectives was developed, as shown in Table 1-1.

During the SETRPC MTP-2050 Kick-off Meeting held on October 5, 2022, MPO representatives presented and described these goals and objectives to regional transportation stakeholders. The stakeholders were given the opportunity to ask questions, react, and provide any vocal and written feedback on the draft goals and objectives. Their feedback was incorporated into the final goals and objectives for this MTP.

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Table 1-1: Goals and Objectives for the SETRPC MTP-2050

Goal	Objective
Safety	Make our transportation system safer for all people. Advance a future without transportation-related serious injuries and fatalities.
Infrastructure Condition	Preserve and maintain the existing transportation system.
Congestion Reduction	Achieve a significant reduction in congestion within the transportation system.
System Reliability	Improve the efficiency of the surface transportation system
Freight Movement	Improve the regional freight network, improve the ability to access national and international trade markets.
Environmental Sustainability	Enhance the performance of the transportation system while protecting and enhancing the environment.
Economic Development	Support regional economic development and improve transportation access to resources, markets, and jobs.
Equity	Reduce inequities across our transportation systems and the communities they affect. Support and engage people and communities to promote safe, affordable, accessible, and multimodal access to opportunities and services while reducing transportation-related disparities, adverse community impacts, and health effects.
Innovation	Invest in research and innovation to meet the challenges of the present and the future.
Sustainable Funding	Maintain financial responsibility in the development and maintenance of the transportation system.
Resiliency	Tackle the climate crisis by ensuring that transportation plays a central role in the solution. Substantially reduce greenhouse gas emissions and transportation-related pollution and build more transportation systems to benefit and protect communities.
Security	Enhance the security of the transportation system for threats.

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1.5 Consideration of State and Local Plans

The SETRPC MTP-2050 is the most current MTP for the SETRPC area. The MTP builds upon and incorporates the ideas, issues, and recommendations of part and current planning efforts. The following plans and studies completed since the MTP-2045 are integrated within the MTP-2050.

- **TxDOT 2023 – 2027 Strategic Plan**. The Texas Department of Transportation (TxDOT) 2023-2027 strategic plan details the goals and action plans that guide the organization. The plan provides insight into the factors driving the department and its operations over the five years it covers and identifies the high-level action items TxDOT will implement for the benefit of all Texans and those who use the state's transportation system.
- **Texas (TxDOT) Transportation Plan 2050**. The Texas Transportation Plan (TTP) 2050 is the state's long-range statewide transportation plan (SLRTP). It provides a federally and state mandated long range vision for transportation in Texas. The purpose of the TTP 2050 is to guide planning and programming decisions for the statewide multimodal transportation system. The TTP 2050 details roles and responsibilities for TxDOT; considers key trends and challenges likely to influence transportation in the future; sets goals, objectives, measures, and targets; evaluates long term investment priorities; identifies planned rural investments; analyzes the impact of emerging technologies and growing freight demand; and outlines plan implementation strategies.
- **Texas (TxDOT) Unified Transportation Plan 2023**. The Unified Transportation Plan (UTP) is TxDOT's 10-year plan that guides development of transportation projects across the state. The UTP is a part of TxDOT's comprehensive planning and programming process, which connects the state's transportation goals, performance measures, and targets to the transportation projects that will eventually be constructed. The UTP addresses highway projects, public transportation, maritime transportation, aviation, rail, and freight and international trade.
- **Texas (TxDOT) Freight Mobility Plan**. The Texas Freight Mobility Plan is TxDOT's plan to facilitate economic growth through a comprehensive, multimodal strategy for addressing freight transportation needs and moving goods efficiently and safely throughout the state. The plan identifies multimodal challenges, policies, programs, investment strategies and data needed to enhance mobility; to provide efficient reliable and safe freight transportation, and to improve the state's economic competitiveness.
- **Texas (TxDOT) Strategic Highway Safety Plan 2022-2027**. The Texas Strategic Highway Safety Plan 2022-2027 (SHSP) is intended as a comprehensive approach to reduce fatalities and serious injuries on Texas' state and local roads. The SHSP is a part of the Highway Safety Improvement Program, which is a core federal-aid program intended to reduce traffic fatalities and serious injuries.
- **Texas (TxDOT) Statewide Transportation Improvement Program (STIP).** The Texas STIP is a statewide prioritized listing/program of transportation projects covering a period of four years that is consistent with the SLRTP, MTPs and transportation improvement programs (TIPs). It is required for projects to be eligible for federal funding.
- **City of Beaumont Comprehensive Plan**. The City of Beaumont Comprehensive Plan comprises a Development Strategies Plan, Major Street and Highway Plan, and an Economic Development Plan. The Comprehensive Plan is identifies general economic development and

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land use goals and policies. It serves as a guide for the Planning Commission and City Council in decision making to guide growth and development of the city.

- **City of Port Arthur Downtown Revitalization Plan**. The City of Port Arthur Downtown Revitalization Plan establishes a common image for Downtown Port Arthur. The plan provides a review of previous planning documents, an assessment of the physical environment, a market assessment, and an infrastructure assessment. The plan creates strategies and identifies specific projects for the future.
- **City of Port Arthur Comprehensive Plan, Imagine Port Arthur**. The City of Port Arthur Comprehensive Plan builds upon the Downtown Revitalization Plan and provides recommendations for the entire City and other targeted areas.
- **City of Port Arthur Disaster Recovery and Resiliency Plan.** The City of Port Arthur Disaster Recovery and Resiliency Plan provides guidance to the City's decision makers on recovery plans following Hurricane Harvey in August 2018. The plan identifies target areas which were most impacted by Harvey and establishes a blueprint for restoring neighborhoods, strengthening the community, and building resiliency.
- **City of Port Arthur Downtown Target Area Housing Plan** – The Downtown Target Area Housing Plan outlines a strategy plan for the development of new housing units in the Downtown Port Arthur area. The plan serves as a data reference and land acquisition guidance document for the development process, recommends City policy and regulatory changes, provides guidance in interpreting city, state, and federal regulations, and recommends strategies to encourage future housing and economic development.
- **Master Plan for the Gulf Intracoastal Waterway in Texas** – The Master Plan for the Gulf Intracoastal Waterway in Texas presents challenges and recommendations for ongoing maintenance needs of the Texas portion of the Gulf Intracoastal Waterway.
- **South East Texas Bike Plan** – The bike plan is a guiding document to help the region prioritize proposed bicycle routes along existing roads for Jefferson, Orange, and Harding counties.
- **Regional Freight Mobility Plan 2045** – The Regional Freight Mobility Plan for the JOHRTS region aims to outline freight characteristics, related economic impacts and identification of freight needs.
- **Regional Public Transportation Coordination Plan (2022)**– The Regional Public Transportation Coordination Plan provides projects from a "coordinated public transit-human services transportation plan" as required by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The plan identifies efforts for regional service coordination, creates a transportation coordination plan, and establishes an action plan for priority projects.

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Chapter 2: Socioeconomics

2.0 Introduction

Socioeconomic characteristics of a region provide key insights into the regional travel patterns. These characteristics include but are not limited to population, population distribution, demographics, employment, and income. Analyzing the current and future characteristics and trends within the region is an important step in determining transportation demand and making informed decisions in transportation planning.

2.1 Population

The region has experienced stagnant population growth from 2018 through 2022. Populations of all counties grew by less than 1%, except for Jasper County which saw a 7% decrease in this time period. Population growth in southeast Texas has paralleled the growth and decline of the petrochemical industry. Until the early 1980s, the region's population grew rapidly. Jefferson County's population grew rapidly until 1960, and Orange County until 1980. In the 1980s, Jefferson, Orange, and Hardin Counties experienced a decline in population and employment growth due to a downturn in the petrochemical industry. Since then, the population has remained stable except in Hardin County, which is continuing to grow. Table 2-1 show the population levels for the MPA from 2018 through 2022.

Table 2-1: Population

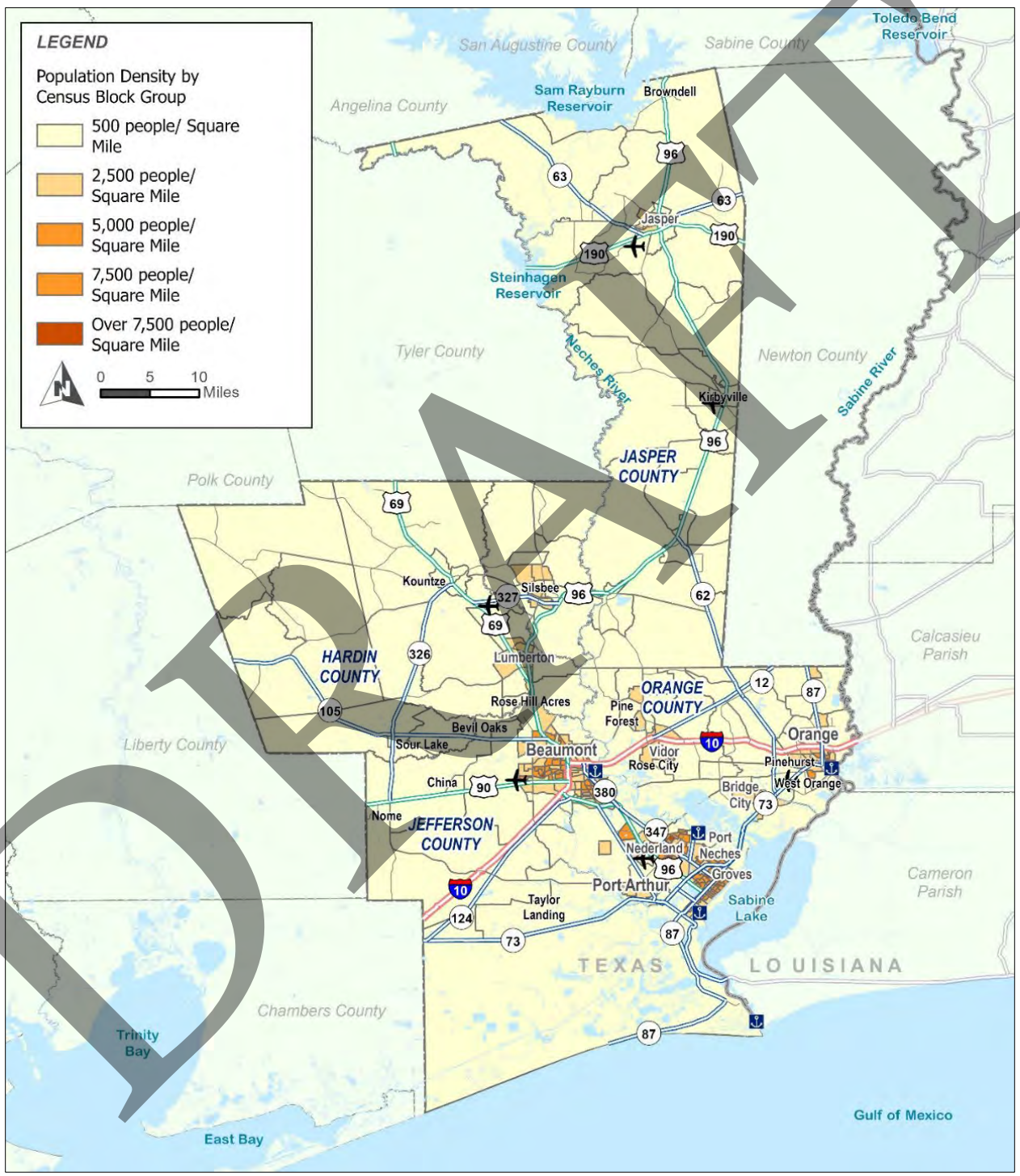
	2018	2019	2020	2021	2022	Percent Change
Hardin County	56,379	56,765	57,356	56,124	56,576	-0.35%
Jasper County	35,504	35,506	33,563	33,369	33,032	+6.96%
Jefferson County	255,210	254,340	253,136	256,755	254,942	+0.11%
Orange County	84,047	84,069	83,776	85,045	84,761	-0.85%
SETRPC MPA	431,140	430,680	427,831	431,293	429,311	+0.42%

Source: U.S. Census Bureau. 2016-2020, 2015-2019, 2014-2018, 2013-2017, and 2012-2016 American Community Survey 5-Year Estimates. Table B01003.

Understanding population distribution across a region is necessary in transportation planning as decisions will affect mobility. Smarter infrastructure investments, however, can be made by focusing transportation improvements in the most densely populated areas. This approach is especially helpful for public transit, as the efficiency and effectiveness of public transit is largely dependent on the number of people it can serve. Figure 2-1 shows the population density by Census Block Group. Greater population densities are shown to be within Beaumont and its surrounding areas as well as areas along the I-10 corridor within the region.

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Figure 2-1: Population Density by Census Block Group, 2022



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B01003.

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2.2 Households

The number and size of households affect the number of trips made within the region. Larger households generally tend to generate more trips than smaller households. Similar to an increase in population, an increase in the number of households correlates to increased demand on the transportation system. Table 2-2 shows the total number of households in each county and the region.

Table 2-2: Number of Households

	2018	2019	2020	2021	2022	Percent Change
Hardin County	24,345	24,752	25,111	23,980	24,345	-0.15%
Jasper County	17,147	17,280	17,375	16,307	17,147	-4.26%
Jefferson County	108,112	108,535	108,947	108,335	108,112	+0.60%
Orange County	36,987	37,404	37,883	37,111	36,987	+1.18%
SETRPC MPA	186,591	187,971	189,316	185,733	186,591	+0.17%

Source: U.S. Census Bureau. 2016-2020, 2015-2019, 2014-2018, 2013-2017, and 2012-2016 American Community Survey 5-Year Estimates. Table B09019.

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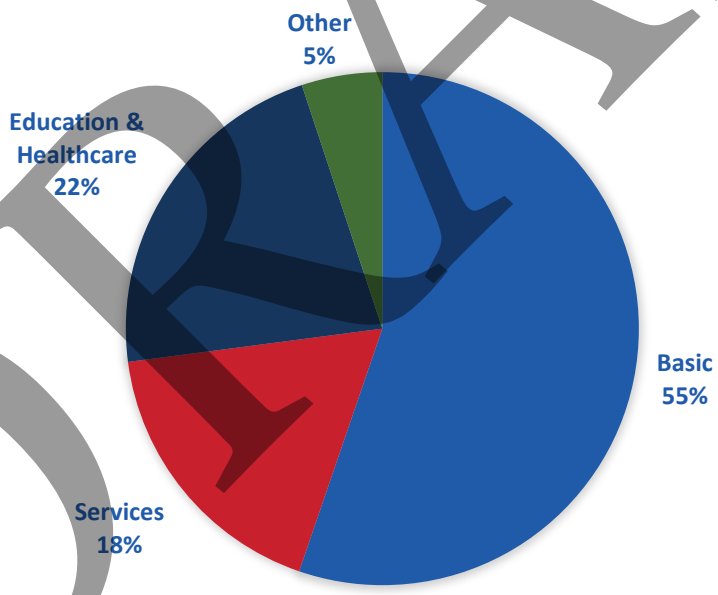
2.3 Employment

The regional economy is dependent on the ability of workers to travel to their places of work. The regional transportation system must meet the needs of the users by providing adequate access and connectivity. Regional employment generates a significant number of trips.

It is essential to review economic indicators to properly plan future transportation investments. Figure 2-2 illustrates the distribution of employment in the region by economic sector – Basic, Retail, Service, and Education & Healthcare – from the 2016-2020 American Community Survey. Basic sector employment includes mining, construction, manufacturing, transportation, communications and public utilities, and wholesale trade. Service sector employment includes finance, insurance, real estate services, and governmental organizations. The education and healthcare sector also includes social assistance.

Table 2-3 displays major employers in the region by number of employees based on data from the Southeast Texas Economic Development Foundation. According to the Foundation, 182,300 in the region are employed. Of that total, 12,192 are self-employed and 3,906 work from home [2]. The estimate unemployment rate for the region is 2.27%.

Figure 2-2: Employment Distribution



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[2] Southeast Texas Economic Development Foundation. (2023). 2023 Demographic Overview. Accessed 11 January 2024, https://www.animateddemographics.com/setedf/demographics.

Table 2-3: Major Employers

Number of Employees	County	Businesses
1,000+	Jefferson	▪ Baptist Hospitals of Southeast Texas ▪ Chevron Phillips ▪ CHRISTUS Southeast Texas Health System ▪ Total Petrochemicals USA ▪ Entergy Transfer Partners ▪ Exxonmobil Corporation ▪ Firestone ▪ Huntsman ▪ Jefferson County Courthouse ▪ Lamar University ▪ Sunoco ▪ Total Petrochemicals USA ▪ Valero Port Arthur Oil Refinery ▪ Walmart Supercenter
	Orange	▪ Signal International LLC
500-999	Hardin	▪ Walmart Supercenter
	Jefferson	▪ Air Liquide ▪ Arkema ▪ Brock Enterprises ▪ Dow - Beaumont ▪ En Global Engineering ▪ Exxonmobil Chemical ▪ Flint Hills ▪ Hargrove Engineers + Constructors ▪ Helena Laboratories ▪ Honeywell ▪ Invista ▪ Jefferson Energy ▪ Lanxess ▪ Medical Center of Southeast Texas ▪ Ohi ▪ Ohmstede ▪ Optimus Stel ▪ Sanserve Building Service ▪ Shenzhen Boqiang International Electronic
	Orange	▪ DuPont ▪ Invista ▪ Vidor Independent School District

Source: Southeast Texas Development Foundation, 2023

2.4 Income

Income is an important socioeconomic attribute. It influences consumption power and travel behavior, which, in turn, affects the planning of transportation systems. Table 2-4 displays the median household income by county and the average for the full SETRPC MPA for the years 2018, 2019, 2020, 2021, and

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2022. Figure 2-3 shows the spatial distribution of median household income for the 2022 across the SETRPC MPA.

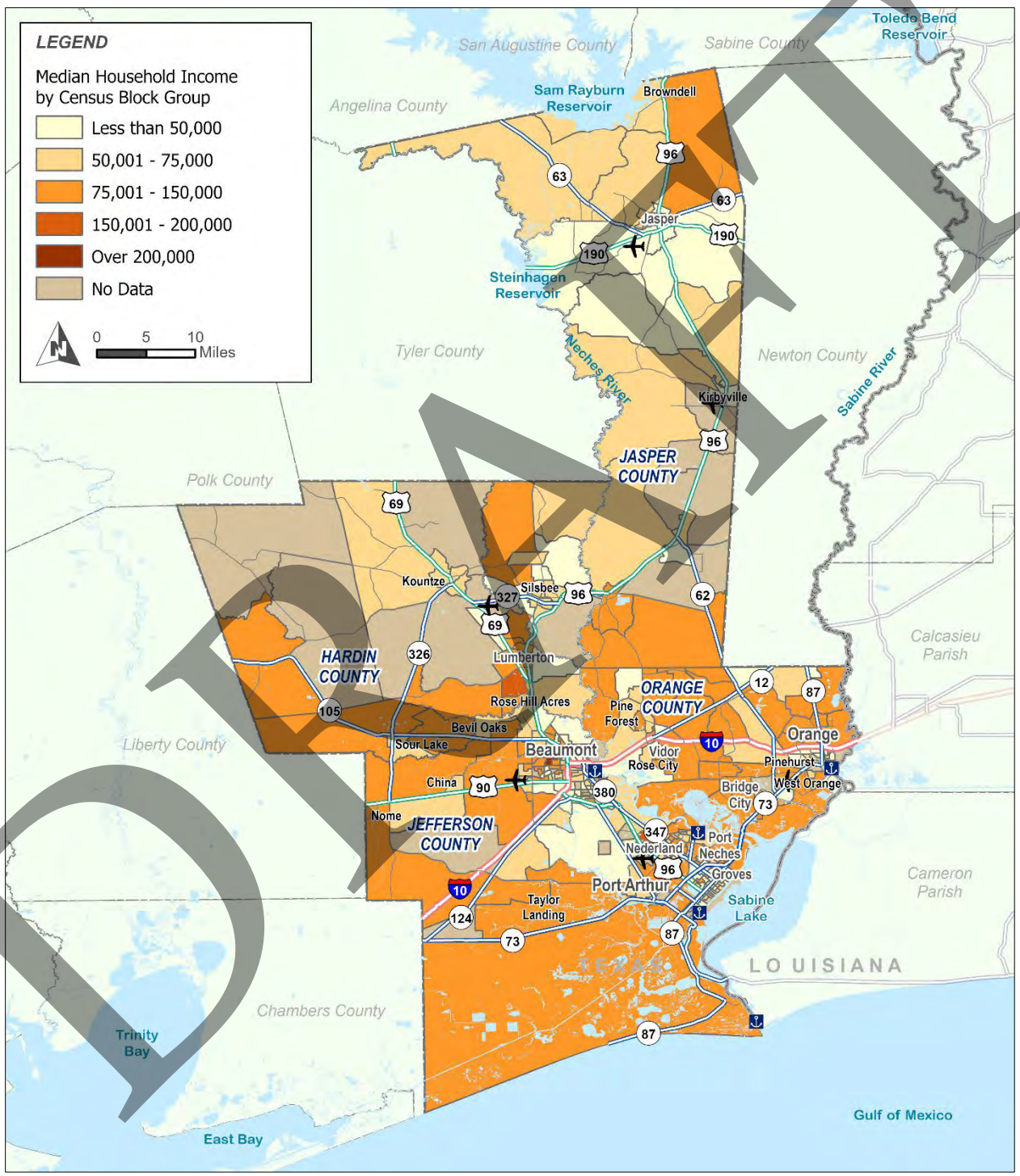
Table 2-4: Median Household Income (in inflation adjusted dollars)

	2018	2019	2020	2021	2022
Hardin County	$57,519	$61,056	$66,109	$72,460	$75,113
Jasper County	$47,958	$47,533	$45,223	$49,464	$51,864
Jefferson County	$50,844	$53,608	$55,595	$58,656	$63,264
Orange County	$56,360	$60,197	$70,069	$72,599	$77,197
Average for SETRPC MPA	$53,170	$55,599	$59,249	$63,295	$66,860

Source: U.S. Census Bureau. 2014-2018, 2015-2019, 2016-2020, 2017-2021, and 2018-2022 American Community Survey 5-Year Estimates. Table B19013.

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Figure 2-3: Median Household Income, 2022



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B19013.

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2.5 Environmental Justice

The SETRPC gives due consideration to environmental justice when making transportation planning decisions. Presidential Executive Order 12898, entitled Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, promulgated on February 11, 1994, expanded the scope of previous guidance to include identifying and avoiding "disproportionately high and adverse" effects on minority and low-income populations. The United States Department of Transportation (USDOT) Order 6640.23 requires the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) to implement the principles of environmental justice in all programs, policies, and activities. SETRPC also considers the use of the FHWA Screening Tool for Equity Analysis of Projects (STEAP) Tool to address equity and Title VI/EJ issues as part of the next 2050 MTP update.

The three principles of environmental justice are:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

Environmental justice must be considered in all phases of planning and focuses on enhanced public involvement and an analysis of the distribution of benefits and impacts. Environmental justice issues arise most frequently when certain communities:

- Receive the benefits of improved accessibility, faster trips, and congestion relief, while others experience fewer benefits.
- Suffer disproportionately from transportation programs' negative impacts, like air pollution.
- Pay higher transportation taxes or higher fares than others in relation to the services received.
- Experience underrepresentation when policymaking bodies debate and decide allocations of transportation resources.

2.5.1 Minority Populations

Executive Order 12898 defines the protected population for environmental justice oversight as Minority Populations, Low-Income Populations, and the Native Indian Tribes. The SETRPC uses the Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) definition of Minority Persons:

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- **Black.** Persons having origins in any of the black racial groups of Africa.
- **Hispanic or Latino.** Persons having Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- **Asian Americans**. Persons having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- **American Indian and Alaskan Native**. Persons having origins in any of the original people of North America, South America (Including Central America), and who maintain cultural identification through tribal affiliation or community recognition.
- **Native Hawaiian and other Pacific Islanders**. Persons having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Identifying locations of minority and low-income populations and improving the public involvement process is key in accounting for environmental justice in the relation to transportation investments.

Data from the U.S. Census Bureau 2018-2022 American Community Survey (ACS) 5-Year Estimates provide the most recent official source for minority populations. The MPO has used this information to identify population characteristics and geographic distributions of environmental justice populations in the region. Table 2-5 displays the racial distribution within the region, and Figure 2-4 illustrates the percent minority population of the total population by Census Block Groups.

Table 2-5: Minority Populations

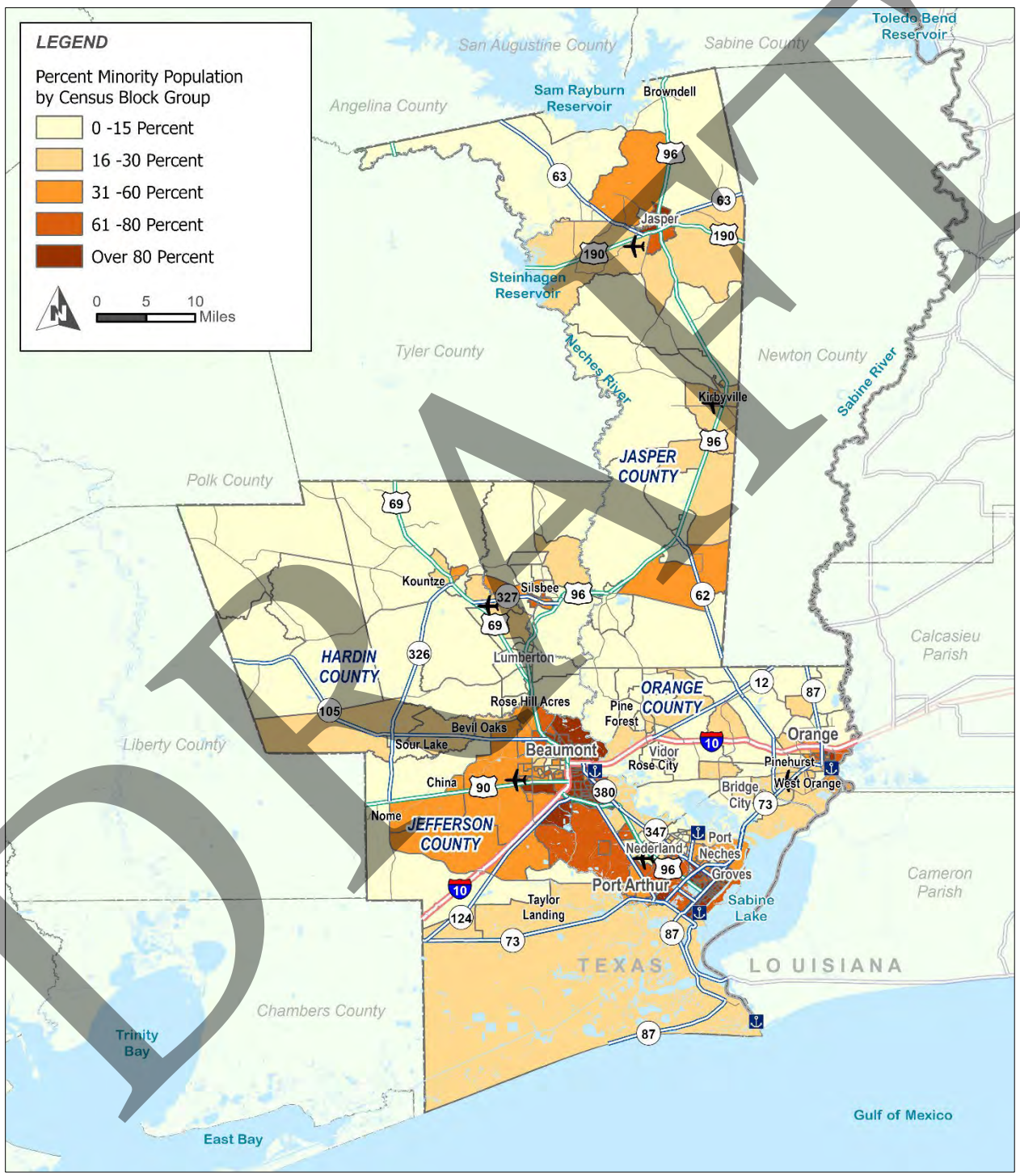
	Hardin County	Jasper County	Jefferson County	Orange County	SETRPC MPA
White alone*	84.03%	73.74%	38.39%	78.55%	55.05%
Black or African American alone*	5.7%	15.24%	33.05%	8.59%	23.24%
American Indian and Alaska Native alone*	0.02%	0.01%	0.14%	0.15%	0.12%
Asian alone*	0.46%	0.39%	3.78%	0.64%	2.46%
Native Hawaiian and Other Pacific Islander alone*	0.00%	0.02%	0.05%	0.06%	0.05%
Some other race alone*	0.13%	0.16%	0.11%	0.10%	0.12%
Two or more races*	3.15%	3.35%	1.89%	3.00%	2.39%
Hispanic or Latino	6.53%	7.09%	22.58%	8.91%	16.57%
Total Minority Population %	15.99%	26.26%	61.60%	21.45%	44.95%

**White alone are individuals who are not Spanish/Hispanic/Latino and identify "White" as their only race*

Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B03002.

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Figure 2-4: Percent Minority Population of Total Population, 2022



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B03002.

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2.5.2 Low-Income Populations

SETRPC defines low-income households as those with income levels below the current Texas Health and Human Services (HHS) Supplemental Nutrition Assistance Program (SNAP) eligibility. Table 2-6 shows the amount of income that most people or families can earn to be eligible for SNAP.

Table 2-6: SNAP Maximum Monthly Income Limits

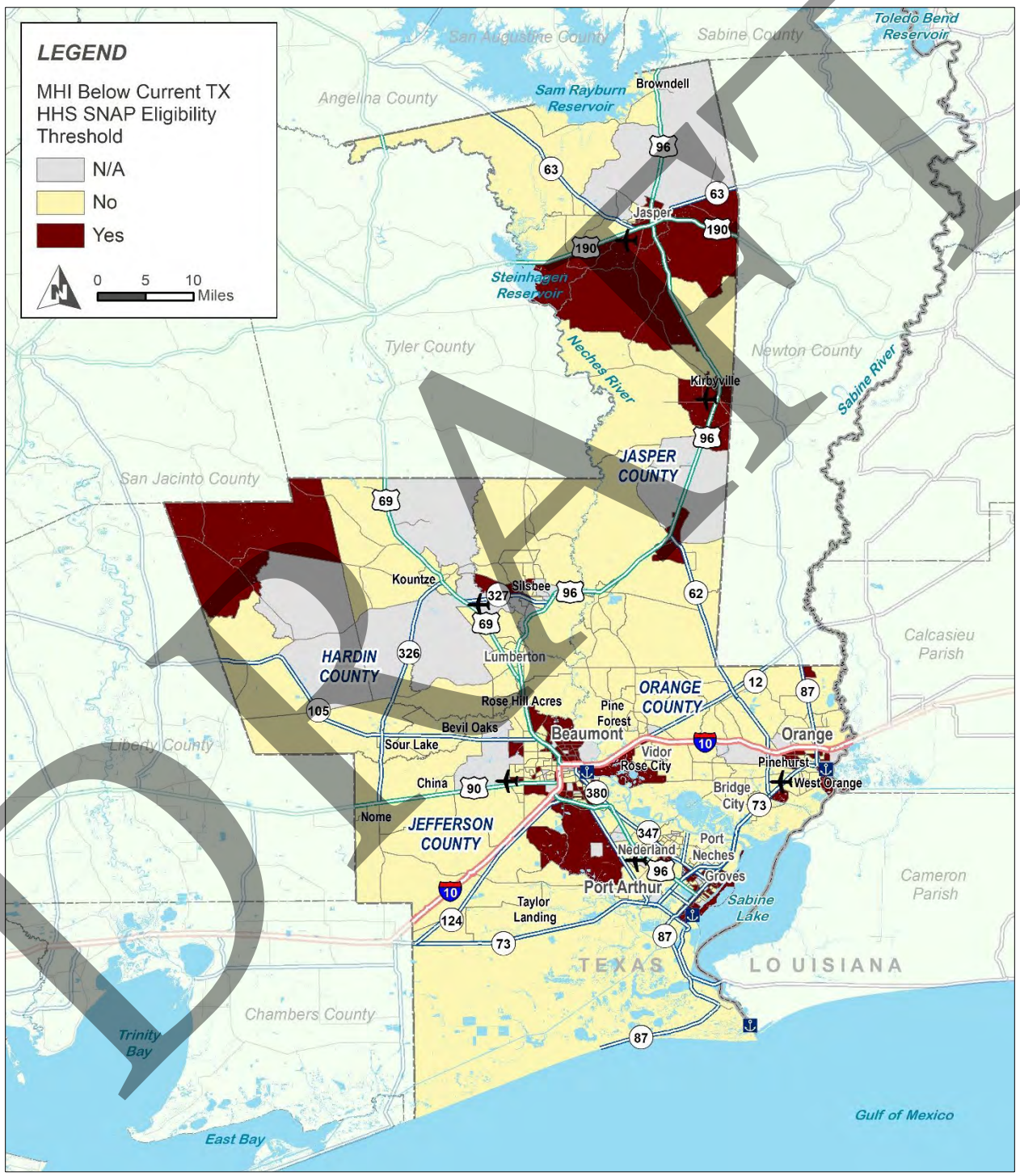
Family Size	Maximum Monthly Income
1	$1,869
2	$2,518
3	$3,167
4	$3,816
5	$4,465
For each additional person, add:	$649

Source: Texas Health and Human Services. SNAP Food Benefits.

Figure 2-5 identifies Census Block Groups in the region where median household income is below the current Texas Health and Human Services (HHS) eligibility threshold for Supplemental Nutrition Assistance Program (SNAP).

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Figure 2-5: Low Income Population - Median Household Income (MHI) Below Current Texas Health and Human Services (HHS) Supplemental Nutrition Assistance Program (SNAP) Eligibility Threshold



Source: U.S. Census Bureau. 2017-2021 American Community Survey 5-Year Estimates.

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2.5.3 Limited English Proficiency and Senior Populations

Executive Order 13166 requires federal agencies and recipients of federal funds to provide special accommodations for persons with Limited English Proficiency (LEP). This ensures that linguistic barriers do not prevent meaningful access to the benefits and opportunities to participate in federally assisted programs. The LEP disadvantage is commonly associated with one's race or national origin and is therefore related to individuals protected for environmental justice purposes.

The total LEP population equals the sum of all individuals who speak a language other than English and speak English less than "very well." Table 2-7 the share of LEP individuals by tabulating LEP populations as a percentage of the total population of the statistical area. Figure 2-6 displays the percent LEP population by Census Block Group in the region.

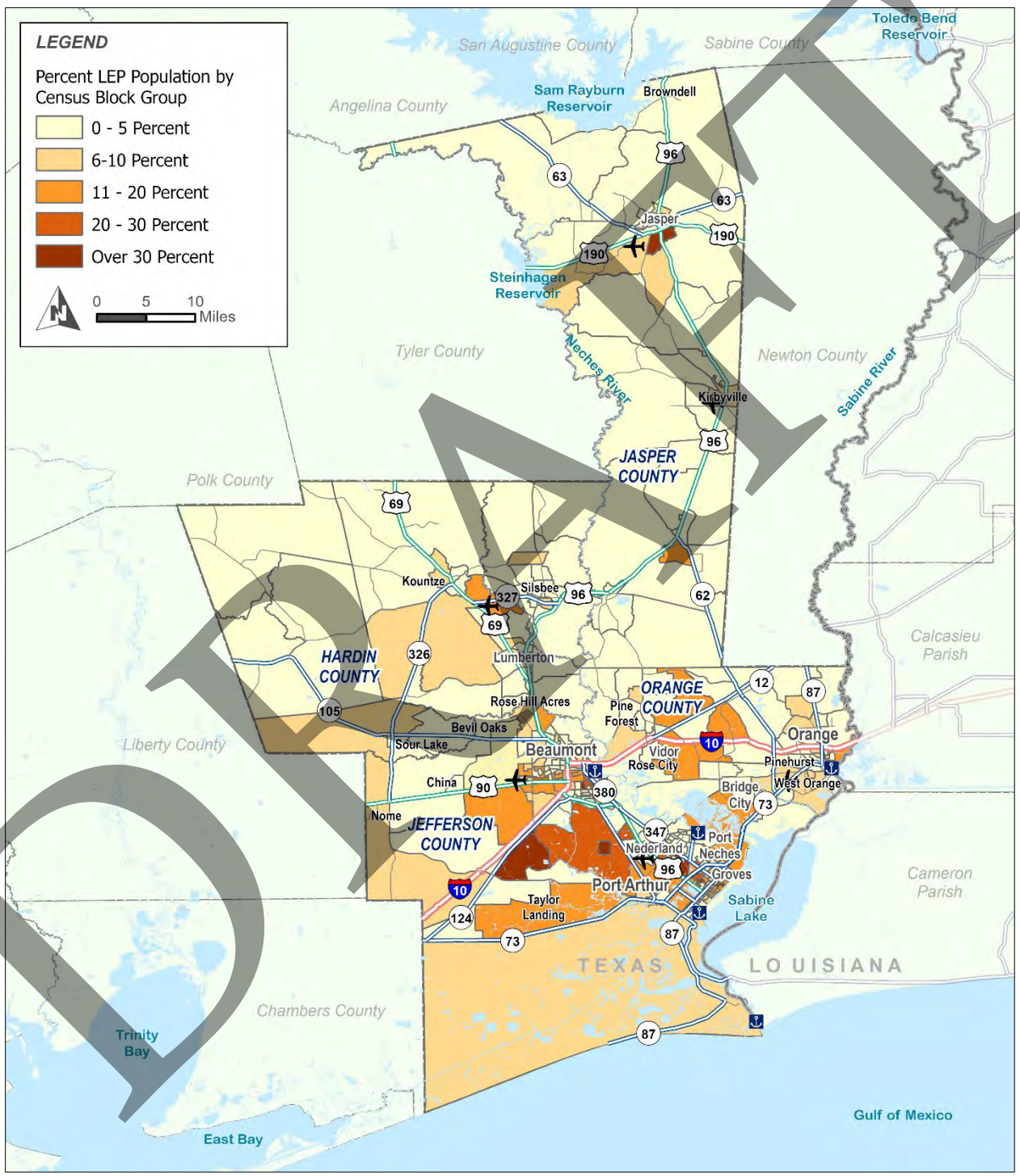
Table 2-7: LEP Population

	Spanish LEP	Other Indo-European LEP	Asian and Pacific Islander LEP	Other LEP	Total LEP
Hardin County	1.68%	0.03%	0.15%	0.03%	1.90%
Jasper County	2.23%	0.38%	0.17%	0.00%	2.77%
Jefferson County	7.15%	0.51%	1.06%	0.09%	8.81%
Orange County	2.19%	0.55%	0.28%	0.00%	3.03%
SETRPC MPA	5.07%	0.44%	0.72%	0.06%	6.29%

Senior population, defined as the population age 65 years and over, tend to have mobility challenges. The senior population is less likely to have the ability to drive a personal automobile and is more likely to be dependent on transit services or other people to travel the region. Senior status can be a disadvantage for minority populations, especially when coupled with a low-income status. Figure 2-7 the senior population by Census Block Group for the SETRPC area.

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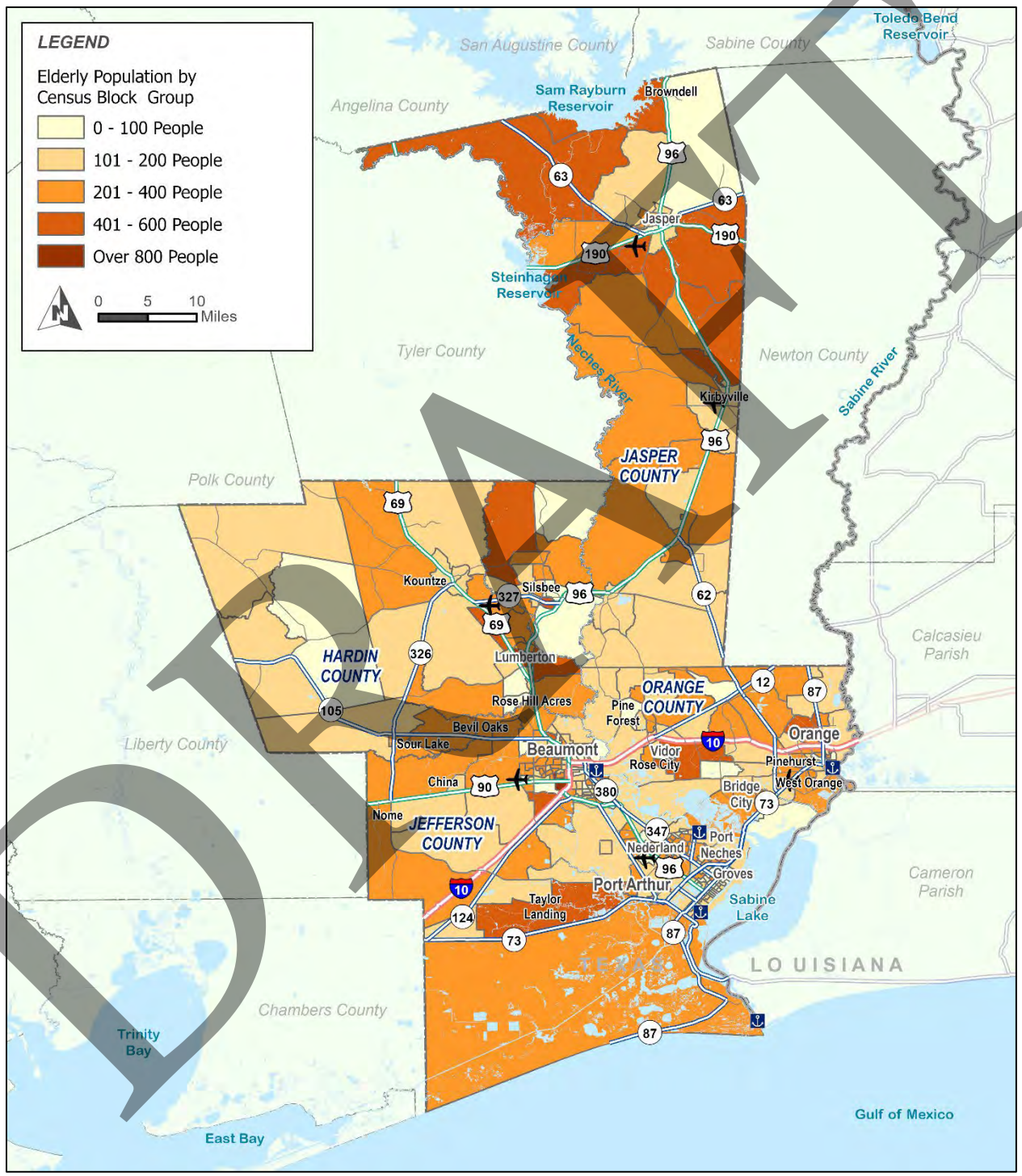
Figure 2-6: Percent LEP Population of Total Population, 2022



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates. Table B16004.

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Figure 2-7: Elderly Population by Census Block Group



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates.

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Chapter 3: Roadway and Bridge

3.0 Introduction

The SETPRC MPA contains 11,847.90 lane miles of public roadways. Of this amount, TxDOT maintains 4,021.48 lane miles, or 33.9% of the regional roadway system. Municipal or county governments in the region maintain 7,767.4 lanes miles or 65.6% of the system. The remaining 58.99 lane miles, or 0.5% of the system, are federal roads. Despite municipal or county governments holding the maintenance authority of most lane miles, 88.5% of daily vehicle miles traveled (DVMT) occur on TxDOT roadways.

3.1 Functional Classification

The MTP-2050 primarily addresses transportation improvements funded by federal funding sources, including roadways that will be constructed, expanded, or rehabilitated. These roadways are part of the "functionally classified roadway system".

The concept of functional classification defines the role that a particular roadway segment plays in traffic flow throughout the network[3]. Roadways are assigned to one of several possible functional classifications within a hierarchy according to the character of travel service each roadway provides. Planners and engineers use this hierarchy of roadways to properly channel transportation movements through a highway network efficiently and cost effectively. Roadways serve two primary travel needs: access into and egress from specific locations and travel mobility. While these two functions lie at opposite ends of the continuum of roadway function, most roads provide some combination of both.

- **Roadway mobility function**. Provides few opportunities for entry and exit and therefore low travel friction from vehicle access/egress.
- **Roadway accessibility function**. Provides many opportunities for entry and exit, which creates potentially higher friction from vehicle access/egress.

Interstates or expressways provide maximum movement of vehicles but allow limited access to adjacent land uses. Arterial streets have lower vehicular capacity and speed but allow direct access to surrounding land uses. Collector and residential streets primarily provide direct access and connections to facilities and land uses. The functional classification system is described in Table 3-1. Figure 3-1 shows the functional classification of roadways in the SETRPC area.

[3] United States Department of Transportation, Federal Highway Administration, Office of Planning, Environment, and Realty. (2013). "Highway Functional Classification: Concepts, Criteria and Procedures, 2013 Edition". Retrieved 29 June 2022, Highway Functional Classifications - Planning - FHWA (dot.gov).

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Table 3-1: Functional Classification System Characteristics

Classification	Level of Mobility	Level of Accessibility	System Relationships
Interstate or Expressways	Connects urban and rural service, connects urban subregions, connects urban areas	No direct land access unless frontage roads are provided. Used for long trips at high speed	Other Interstates or Expressways, principal arterials
Principal Arterials	Connects two or more subregions, compliments expressways in high volume corridors	No direct land access except for major traffic generators. Used for medium to long distance trips at moderately high speeds. Access is subordinate to traffic movement.	Expressways, other principal arterials and high-volume minor arterials and collectors.
Minor Arterials	Connects adjacent subregions or activity centers within a subregion. Provides intracommunity continuity. Ideally does not penetrate neighborhoods.	Land access restricted to major and minor traffic generators in industrial and commercial uses. Used for moderate to short length trips at moderate speed.	Limited expressway interaction, principal arterials, other minor arterials, or facilities that place more emphasis on land access than higher classifications.
Collectors	Connects neighborhoods and connects land uses with the arterial system.	Unrestricted land access to neighborhoods, commercial or industrial areas. Used for collection and distribution to arterial facilities at moderate to low speeds.	Arterials, other collectors, local streets and private driveways providing direct land access.
Local Streets	Connects facilities within neighborhoods, or land uses within transportation facilities.	Unrestricted land access. Used for collection and distribution to collector facilities at low speeds.	Collectors, other local facilities, and private driveways providing direct land access.

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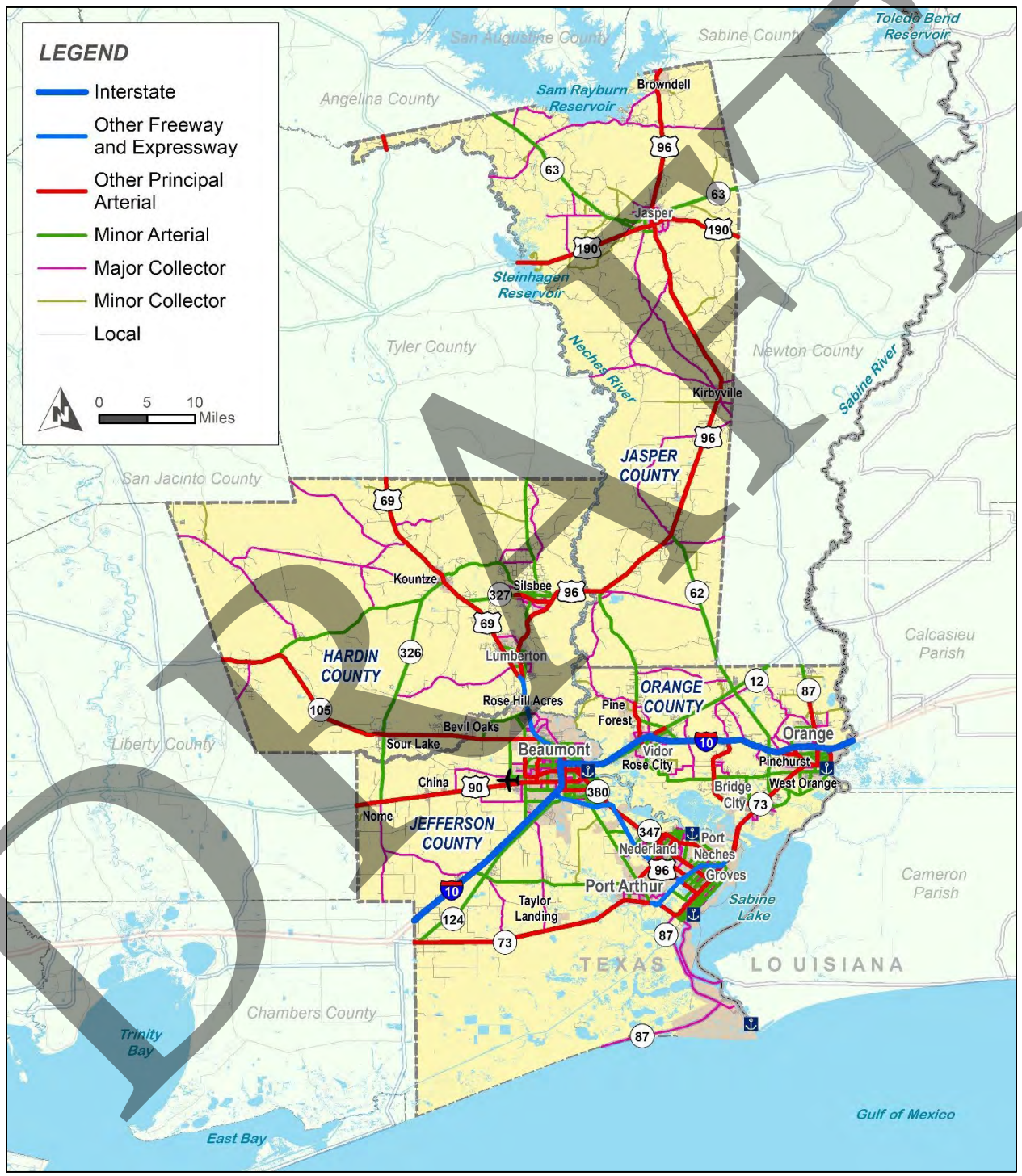
Table 3-2: Functional Classification System Lane Miles and Daily Vehicle Miles Traveled (DVMT), 2020

Functional Classification	Lane Miles	Percent (%) of Total Lane Miles	Daily Vehicle Miles Traveled (DVMT)	Percent (%) of Total DVMT
Interstate	506.6	4%	8,499,945	37%
Other Freeway and Expressway	273.8	2%	3,533,465	15%
Principal Arterial	1,660.1	14%	6,395,480	28%
Minor Arterial	1,079.9	9%	2,041,598	9%
Major Collector	1,418.4	12%	1,489,115	6%
Minor Collector	217.4	2%	52,166	0%
Local	6,691.7	56%	1,130,039	5%
TOTAL	11,847.9	100%	23,141,807.9	100%

Source: Texas Department of Transportation, Transportation Planning and Programming Division. (18 January 2022). "TxDOT Roadway Inventory". Open Data Portal: Your Gateway to TxDOT GIS Data. Retrieved 06 June 2022, TxDOT Open Data Portal (arcgis.com).

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Figure 3-1: Functional Classification of Roadways in the SETRPC Area



Source: Texas Department of Transportation, Transportation Planning and Programming Division. (18 January 2022). "TxDOT Roadway Inventory". *Open Data Portal: Your Gateway to TxDOT GIS Data*. Retrieved 06 June 2022, https://gis-txdot.opendata.arcgis.com.

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3.2 Regionally Significant Corridors

Regionally significant corridors within the jurisdiction of the SETRPC consists of interstate, freeway, arterial, collector, and local roadways. 700 miles of state roadways are maintained by TxDOT and provide regional mobility, while local entities maintain the remaining roadways which provide access within the region.

3.2.1 Interstate



I-10

Traversing the region in an east-west direction, I-10 is a limited access facility with between four and eight travel lanes. The FHWA and the States of Texas and Louisiana have identified the I-10 corridor from San Antonio to New Orleans as a strategic intermodal corridor for freight movement.

3.2.2 U.S. Highways



US69/287

This facility travels in a north-south direction through Hardin and Jefferson counties. It is primarily a four-lane divided, access-controlled facility, except for some portions in Hardin County which have only two lanes with a center turn lane. It connects the ports and intermodal facilities in the area.



US 90

Traveling in an east-west direction as a four-lane divided facility with partial access control on the west side of Beaumont, US 90 passes through Beaumont as College Street and a pair of one-way couplets before it connects to I-10 near the Jefferson/Orange County line.

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3.2.3 State Highways

The following list of roadways is not a comprehensive list of all state highways within the region, but they play an important role in facilitating regional traffic movement.



SH 12

This roadway is a two-lane facility with a center turn lane and traverses in an east-west direction from Vidor to Louisiana.



SH 62

This two-lane, north-south roadway connects Orange County and Jasper County.



SH 73

Traversing east-west as a four-lane divided facility with partial access control, SH 73 acts as a vital transportation link between Port Arthur, Bridge City, and the City of Orange.



SH 347

This four-lane divided roadway connects SH 87 in Port Arthur to US 69 in Beaumont.



SH 87

This two-lane, east-west roadway connects Sabine Pass to the rest of the region. It is coaligned with SH 73 between Port Arthur and the City of Orange.



Spur 380

Known locally as Martin Luther King Jr. Parkway, this four-lane, divided and partially access-controlled roadway provides north-south mobility in southeastern Beaumont

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3.3 Traffic Volume

Traffic volume is an important basis for determining the kinds of improvements needed on a highway or street facility. Traffic volumes are typically expressed in terms of average annual daily traffic (AADT). AADT estimates the average traffic volume across all days for a year for a given location along a roadway. AADT is a basic measurement that indicates vehicle traffic load along a roadway segment. The measure is an indication of how "busy" a given roadway is and is a critical consideration within the transportation planning process.

The AADT for roadways within the MPA were obtained from the TxDOT Roadway Inventory, a dataset maintained by the Transportation Planning and Programming Division. The most recent AADT data is from 2022. From this data, the top ten roadway segments with the greatest AADT within the SETRPC four-county region was determined (see Table 3-3). In the table, a rank of 1 indicates the greatest AADT and a rank of 10 represents the lowest AADT.

As shown in the table, the greatest AADT values in the region are along nine segments of the top ten are located along I-10, primarily in Beaumont and within the vicinity of Orange. Figure 3-2 shows the top 10 roadway segments in addition to AADT values for all major roadways in the MPA.

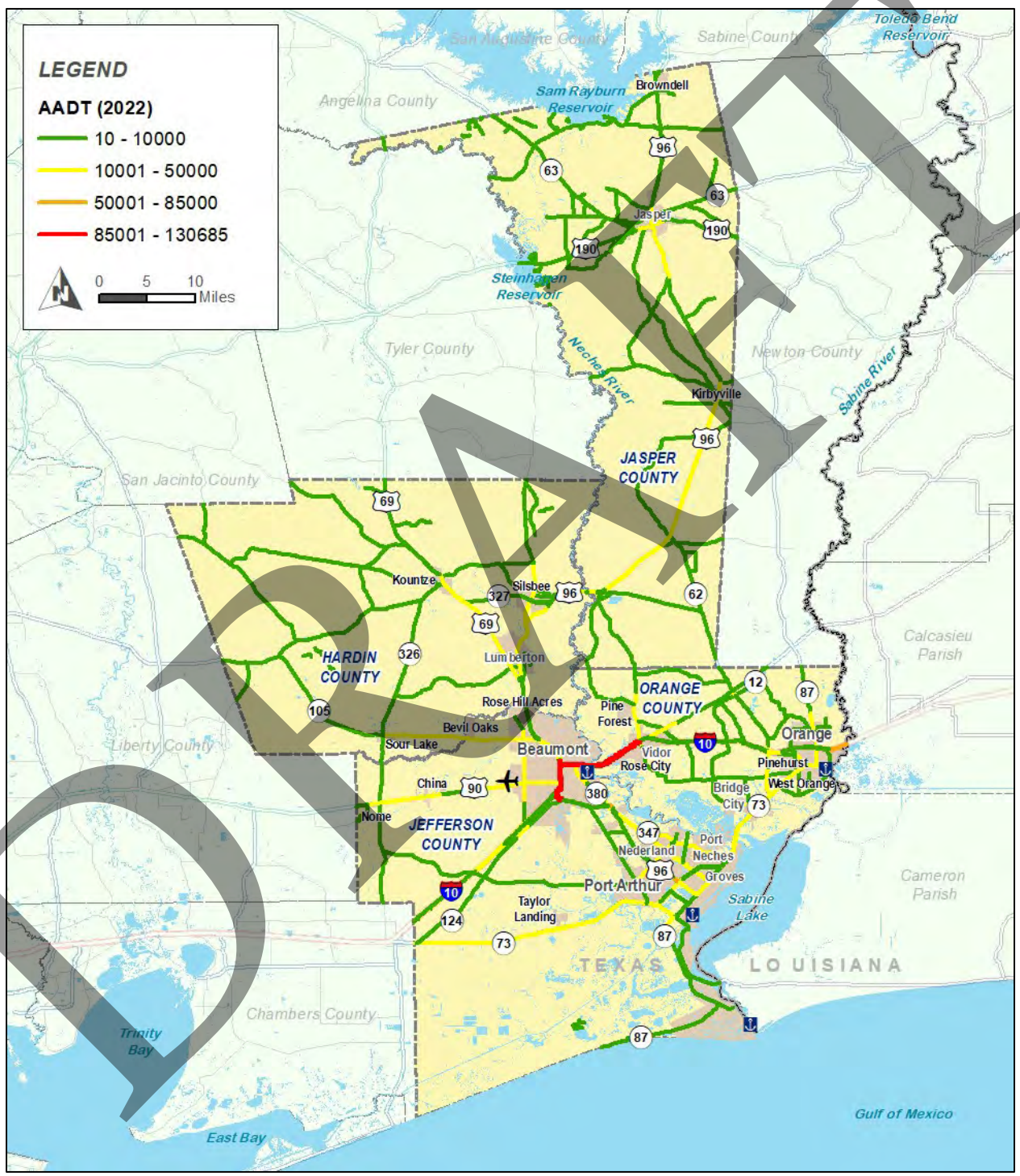
Table 3-3: Top 10 Roadway Segments with the Greatest AADT Values

Rank	Road	Limits	City	AADT (2022)
1	I-10	From US 69 to US 90	Beaumont	130,685
2	I-10	From US 90 (College St) to N 11th St	Beaumont	111,265
3	I-10	From N 11th St to Gulf St	Beaumont	85,825
4	I-10	From Harrison Ave to Delaware St	Beaumont & Rose City	81,672
5	I-10	From Helena St to N Main St	Beaumont	77,338
6	I-10	From I-10 to SH 124	Beaumont	74,563
7	US 69	From Delaware ST to W Lucas Dr	Beaumont	70,335
8	I-10	From SH 124 to W 4th St	Beaumont	68,342
9	I-10	From FM 365 to SH 73	Port Arthur	64,527
10	I-10	From N Main St to S Timber Lane	Vidor	60,517

Source: Texas Department of Transportation, Transportation Planning and Programming Division. (06 November 2023). "TxDOT Roadway Inventory". *Open Data Portal: Your Gateway to TxDOT GIS Data*. Retrieved 11 January 2024, https://gis-txdot.opendata.arcgis.com.

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Figure 3-2: Regional Traffic Volumes, AADT (2022)



Source: Texas Department of Transportation, Transportation Planning and Programming Division. (06 November 2023). "TxDOT Roadway Inventory". *Open Data Portal: Your Gateway to TxDOT GIS Data*. Retrieved 12 January 2024, https://gis-txdot.opendata.arcgis.com.

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3.4 Crash Analysis

TxDOT's Crash Records Inventory System (CRIS) was utilized to conduct a crash analysis for the SETRPC MPA. Table 3-4 identifies the top 10 locations with the highest number of crashes between 2017 and 2021. The most crashes occurred at the intersection of I-10 and US 90 (College Street) in Beaumont. Most of the high crash locations occur at intersections along I-10 and US 69. These top 10 locations with the highest crash counts plus all fatal crash locations for the years 2017-2021 are mapped in Figure 3-3.

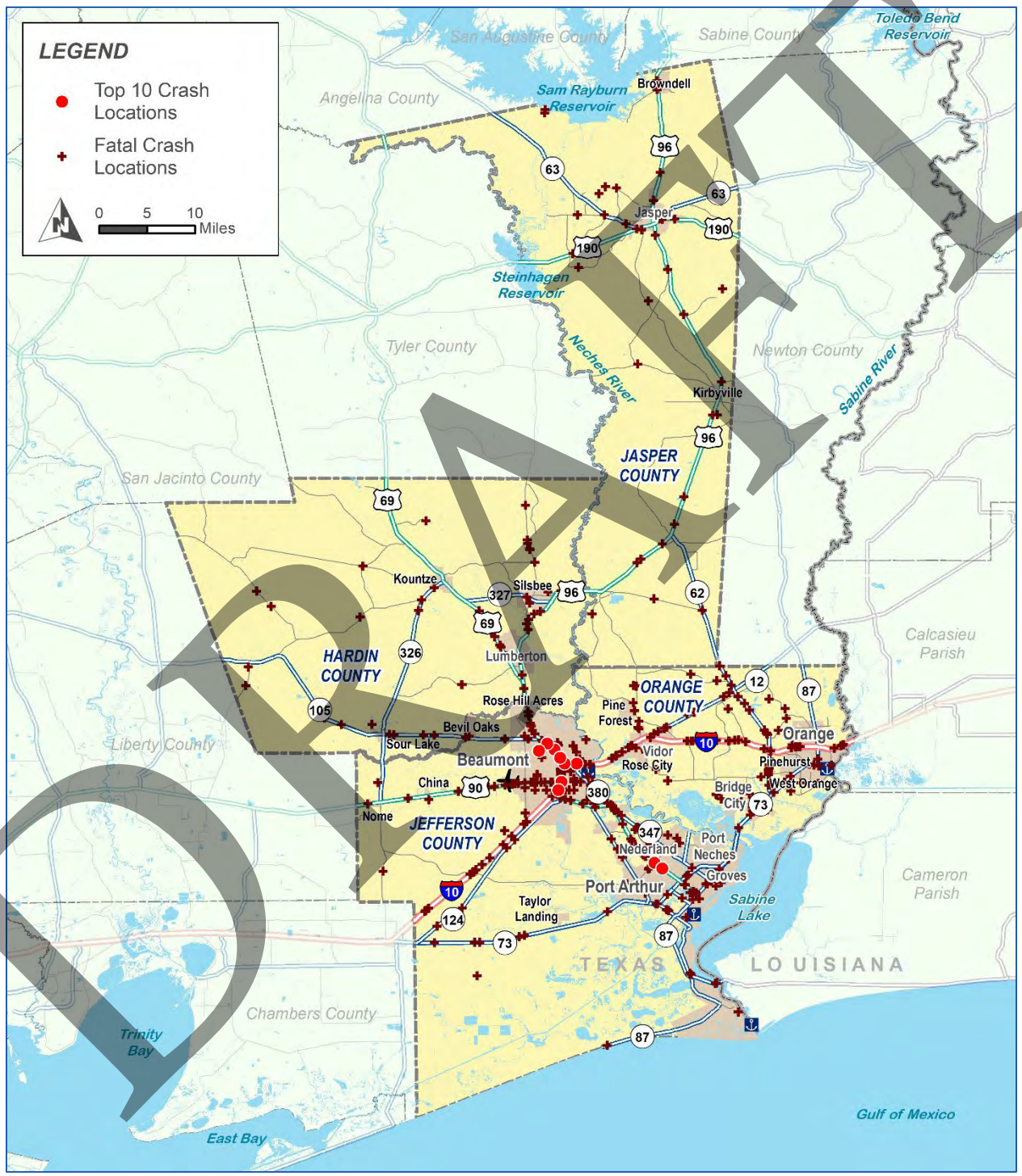
Table 3-4: Top 10 Locations with Highest Crash Counts

Rank	Intersection	City	Crash Count
1	IH 10 and US 90 (College St)	Beaumont	590
2	US 69 and FM 365	Port Arthur	533
3	US 69 and Lucas Dr	Beaumont	331
4	IH 10 and SS 380 (Martin Luther King Jr Pkwy)	Beaumont	253
5	IH 10 and N 11th St	Beaumont	175
6	US 69 and Dowlen Road	Beaumont	159
7	US 69 and 75th St	Port Arthur	156
8	Dowlen Rd and Folsom Dr	Beaumont	156
9	US 69 and Delaware St	Beaumont	152
10	IH 10 and Washington Blvd	Beaumont	53

Source: Texas Department of Transportation, Crash Records Information System. (2022). Data retrieved for calendar years 2017, 2018, 2019, 2020, and 2021 for Jasper, Jefferson, and Orange Counties in Texas. Retrieved 13 July 2022, https://cris.dot.state.tx.us.

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Figure 3-3: Top 10 Crash Locations and Fatal Crash Locations, 2022



Source: Texas Department of Transportation, Crash Records Information System. (2022). Data retrieved for calendar years 2017, 2018, 2019, 2020, and 2021 for Jasper, Jefferson, and Orange Counties in Texas. Retrieved 13 July 2022, https://cris.dot.state.tx.us.

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3.4.1 Safety Performance Measures

Safety performance management is intended to ensure that safety improvements guide funding priorities to advance the national goal of safe roadways. The FHWA established the safety performance measures (PM1) in 2016 to carry out the Highway Safety Improvement Program (HSIP). The five safety performance measures evaluate fatalities and serious injuries on all public roads include:

- Number of Fatalities.
- Rate of fatalities per 100 million vehicle miles traveled.
- Number of serious injuries.
- Rate of serious injuries per 100 million vehicle miles traveled.
- Number of combined non-motorized fatalities and non-motorized serious injuries.

Safety performance targets are provided annually by the States to FHWA for each safety performance measure. Current statewide safety targets address calendar year 2019 and are based on an anticipated five-year rolling average (2015-2019). Texas statewide safety performance targets for 2019 are included in Table 3-5. The SETRPC-MPO adopted the Texas statewide safety performance targets on November 29, 2018.

Safety performance targets are provided annually by the States to FHWA for each safety performance measure. Current statewide safety targets address fiscal year 2024 and are based on an anticipated five-year rolling average (2020-2024). Texas statewide safety performance targets for 2024 are included in Table 3-5. The SETRPC adopted the Texas statewide safety performance targets on February 5, 2026.

Table 3-5: TxDOT Safety Targets

2026 Safety Targets	Number of Fatalities	Rate of Fatalities*	Number of Serious Injuries	Rate of Serious Injuries*	Number of Non-Motorized Fatalities and Serious Injuries
2020	3,898	1.496	14,669	5.629	2,237
2021	4,456	1.563	19,456	6.826	2,620
2022	4,410	1.516	18,887	6.493	2,678
2023	4,291	1.424	18,776	6.229	2,760
2024	4,152	1.350	18,216	5.924	2,726
CY 2026 Target	4,506	1.440	18,884	6.300	2,802
** Rate per 100 million vehicle miles traveled*					

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Table 3-6: SETRPC Safety Performance

Year	Number of Fatalities	Rate of Fatalities*	Number of Serious Injuries	Rate of Serious Injuries*	Number of Non-Motorized Fatalities and Serious Injuries
2017	80	1.66	354	7.35	33
2018	88	1.78	311	6.28	38
2019	73	1.49	263	5.36	48
2020	105	2.39	277	6.31	73
2021	106	2.14	350	7.05	52
** Rate per 100 million vehicle miles traveled*					

Source: United States Department of Transportation, Federal Highway Administration. (2022). *State Highway Safety Report*. Retrieved 05 July 2022, State Highway Safety Report (2021) - Texas - State - Reporting - Transportation Performance Management - Federal Highway Administration (dot.gov).

3.5 Bridges

According to the National Bridge Inventory (NBI), the SETRPC MPA includes 963 bridges. Ownership of these bridges is shown in Table 3-7. TxDOT holds the maintenance responsibility for the majority of these bridges in the county, at 66%.

Table 3-7: Bridge Maintenance Responsibility in SETRPC MPA

Maintenance Responsibility	Number of Bridges	Percent (%) of Total
Texas Department of Transportation	636	66.0%
Hardin County	40	4.2%
Jasper County	37	3.8%
Jefferson County	70	7.3%
Orange County	28	2.9%
Cities	149	15.5%
Local Park, Forest, or Reservation Agency	1	0.1%
Bureau of Fish and Wildlife	2	0.2%
Total	963	100.0%

Source: United States Department of Transportation, Federal Highway Administration. (2022). *National Bridge Inventory (NBI)*. Retrieved 05 July 2022, https://www.fhwa.dot.gov/bridge/nbi.cfm.

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Bridge condition data was also collected from the NBI. The bridge condition by “good”, “fair”, or “poor” by maintenance responsibility for all 963 bridges across the SETRPC MPA is shown in Table 3-8. Over 97% of all bridges in the region are classified as “fair” or “good” condition. Only 2% of bridges are in “poor” condition. Bridges by condition are mapped in Figure 3-4.

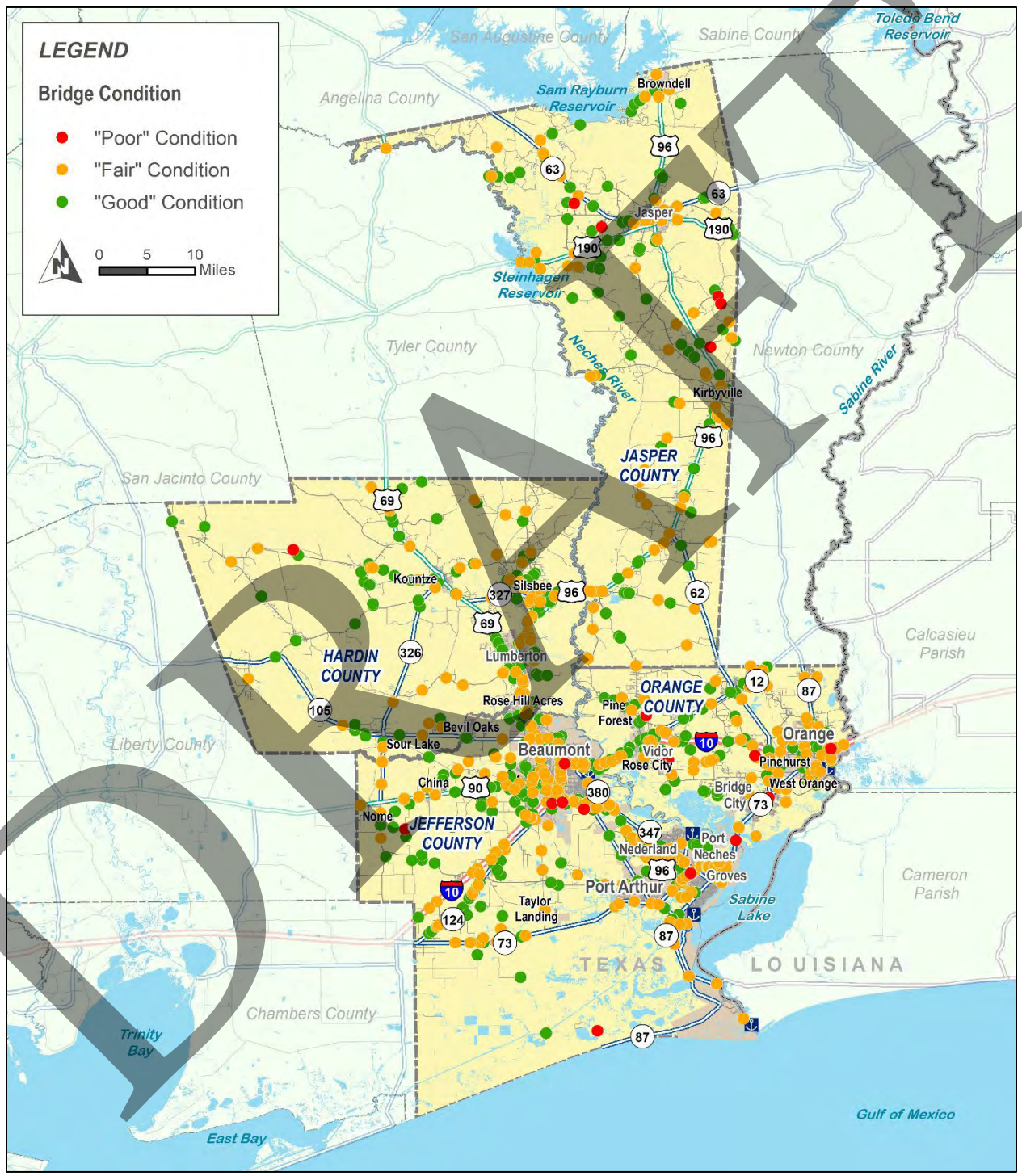
Table 3-8: Bridge Condition in SETRPC MPA

Maintenance Responsibility	"Poor" Condition	"Fair" Condition	"Good" Condition	Total
Texas Department of Transportation	8	339	289	636
Hardin County	1	10	29	40
Jasper County	4	14	19	37
Jefferson County	2	24	44	70
Orange County	3	14	11	28
Cities	1	68	80	149
Local Park, Forest, or Reservation Agency	0	1	0	1
Bureau of Fish and Wildlife	1	0	1	2
Total	20	470	473	963

Source: United States Department of Transportation, Federal Highway Administration. (May 2022). *National Bridge Inventory (NBI)*. Retrieved 05 July 2022, https://www.fhwa.dot.gov/bridge/nbi.cfm.

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Figure 3-4: Bridge Condition



Source: United States Department of Transportation, Federal Highway Administration. (May 2022). *National Bridge Inventory (NBI)*. Retrieved 05 July 2022, https://www.fhwa.dot.gov/bridge/nbi.cfm.

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3.6 Recommendations and Strategies

Southeast Texans heavily rely on automobiles as their primary mode of transportation due to auto-oriented land use development patterns. As population increases, the regional roadway system needs substantial investment to sustain this growth in demand. Many roadways need rehabilitation and improvements due to declining pavement conditions and poor service. However, funding levels are not keeping pace with investment needs.

Strategies to relieve pressure on the system include preserving the system, increasing operational efficiency, enhancing safety, managing future travel demand, promoting alternative transportation, improving freight movement, enhancing travel and tourism, reducing stormwater effects, and improving reliability and resilience.

3.6.1 Roadway Construction

The SETRPC-MPO is committed to investing in regional roadway network projects to meet the demand for automobile use. These projects aim to preserve the existing system, enhance efficiency and safety, and improve overall quality. The focus is on improving traffic flow, safety, and economic development, particularly on key regional corridors like I-10 and US 69. However, limitations exist due to natural and man-made barriers, funding processes, environmental requirements, and government regulations.

TxDOT's Unified Transportation Program (UTP) is guiding the development and construction of transportation projects in the SETRPC area over a 10-year period. The program authorizes funding for twelve funding categories governed by Title 43, Texas Administrative Code, Chapter 16. Major priorities for the Beaumont District include preventative maintenance and rehabilitation, metropolitan and urban projects, and improved connectivity to local ports.

3.6.2 System Preservation

The MPO is committed to preserving the existing transportation system and maintaining it in good condition. Adequate resources are directed toward system preservation, which includes routine maintenance, preventive maintenance, and rehabilitation activities. The Maintenance Division of TxDOT oversees the preservation, upkeep, and restoration of state-owned roads in the SETRPC area, pwith much of its budget allocated to preventive maintenance and rehabilitation. Roadway maintenance activities can be categorized into routine, preventative, and special.

TxDOT monitors the surface condition of all roadways within its Pavement Management Information System, which is updated every two years to help prioritize maintenance projects. Bridges also require scheduled maintenance and inspection to ensure they can safely carry increasing traffic volumes and loaded trucks. TxDOT provides off-system bridge data to local engineering departments and low-rate loans through the State Infrastructure Bank, paying half the share of bridge rehabilitation and replacement through the Highway Bridge Program.

3.6.3 System Efficiency

Transportation System Management (TSM) strategies aim to enhance the safe and efficient movement of people and vehicles within the existing transportation system. These strategies often involve road improvements, traffic optimization, or traffic calming in residential areas.

TxDOT oversees the operations of major highways through its Transportation Management Center (TMC), which monitors and distributes information from various ITS technologies. Traffic calming efforts include traffic law enforcement, public awareness, and educational programs, as well as physical measures to calm traffic flows and encourage safer roadways.

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Access management techniques improve roadway capacity, mobility, and safety by limiting vehicular traffic accessibility. Intermodal connectivity is also important, with international and domestic ports, petroleum refineries, and industrial parks playing a significant role in the regional economy.

The MPO will work with planning partners to explore the development of a regional truck route network with associated policies and guidelines.

3.6.4 Travel Demand Management

Travel Demand Management (TDM) is a strategy to reduce travel demand, particularly single-occupancy private vehicles, by promoting alternative transportation modes and redistributing trip timing. It can lead to better environmental outcomes, improve public health, and build stronger communities and more prosperous cities. Strategies like limiting driving, leaving cars at home, and combining trips can also promote TDM in the region.

Other strategies to reduce manage travel demand and reduce congestion include flexible work options, transit support, and bicycle and pedestrian facilities. Communication technologies and flexible work schedules can reduce vehicle usage on roadways during traditional peak hours. Transit should be reliable and accessible, with employer-provided passes and guaranteed rides. Bicycle and pedestrian facilities with safe pathways can encourage changes to non-automobile travel mode choices. Schools can reduce vehicular traffic by providing safe environments that are conducive walking and cycling.

3.6.5 Land Use and Urban Design

The integration of transportation improvements and land use development, especially mixed-use development, is crucial for a region's overall development. The MPO works with stakeholders to promote this integration. The FAST Act requires states and MPOs to consider the Urban Street Design Guide and the Highway Safety Manual when designing new streets and standards. The Urban Street Design Guide and Highway Safety Manual are tools for creating safer, more livable, and economically thriving streets. These guides help maintain local characteristics while reinforcing a safer environment for all users.

3.6.6 Travel and Tourism

The Beaumont area is a popular destination for tourists due to its unique natural resources, such as fishing opportunities, camping, and hiking facilities, bird watching, and cultural activities. The region also boasts over 15 museums, botanical gardens, and numerous historical sites. The MPO maintains a webpage with travel and tourism information at https://www.setrpc.org/travel-and-tourism/.

Tourism is crucial to the state of Texas and the southeast Texas region, with an estimated $4.2 billion in taxes and $74.4 billion in direct travel spending in 2017. The Beaumont region receives approximately $719 million in direct travel spending annually, reducing taxes by $360 for every household.

The region's visitor centers, the Ben J. Rogers Regional Visitors Center and the Texas Travel Information Center, support tourism by promoting smart transportation solutions and addressing traffic needs during peak tourism seasons and special events. In addition to fostering interagency cooperation, assessing travel demand, and generating solutions to meet the particular requirements of tourism and related travel demand, the SETRPC-MPO is working to establish strategies to solve infrastructure, access, and environmental challenges.

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Chapter 4: Bicycle-Pedestrian

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4.0 Introduction

The SETRPC region recognizes the importance of establishing a bicycle and pedestrian network suitable for people of all ages and abilities. A well connected and cohesive active transportation network provides a safe and convenient option for travel while advancing health, environmental, equity, and transportation goals. As the SETRPC region continues to grow, so will the demand for active transportation.

4.1 Bicycle Facilities

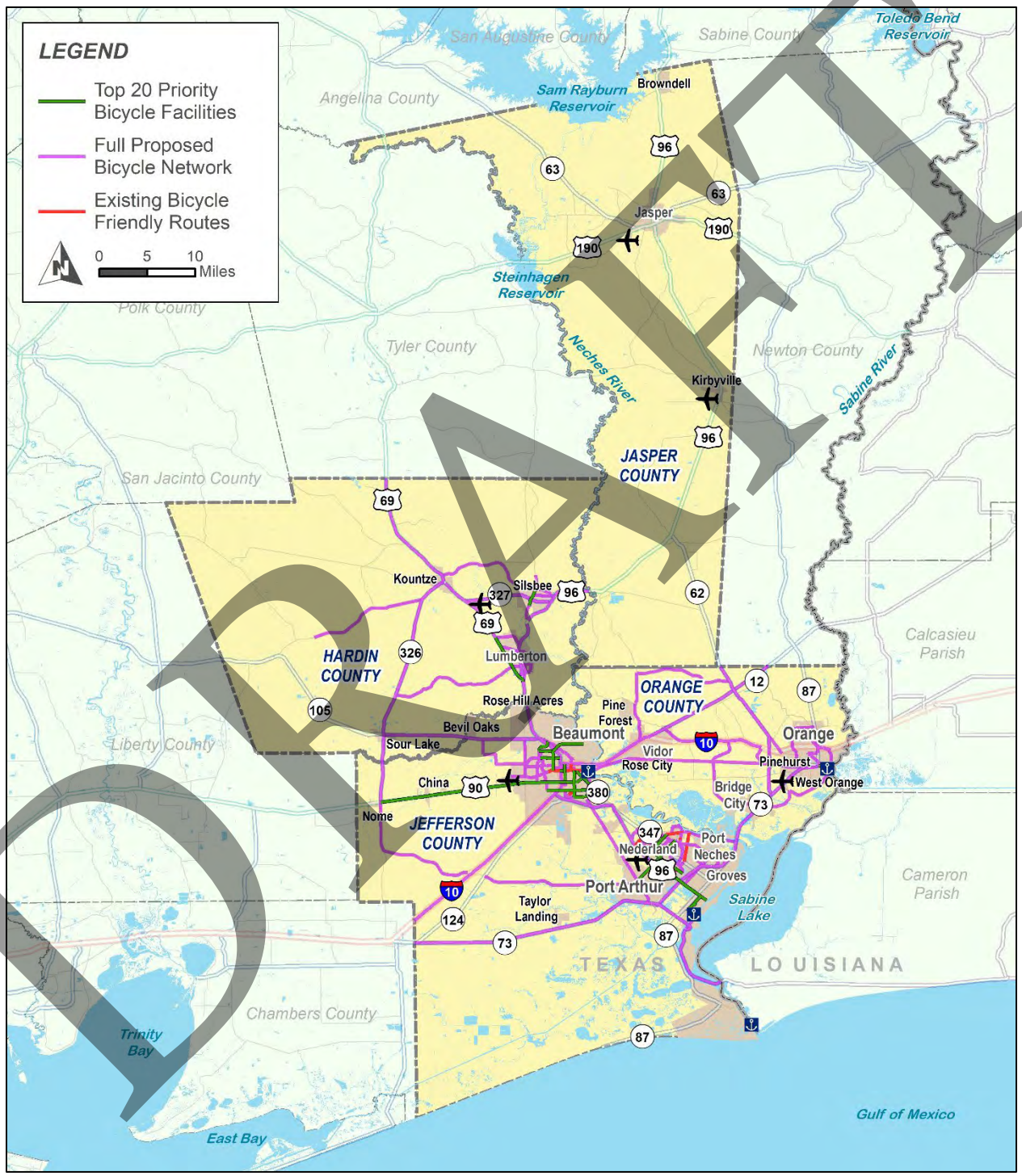
Bicycle infrastructure is limited in SETRPC counties. Within the four counties, there are 16.2 miles of bike-specific infrastructure, which includes 9.4 lane miles of bike lanes and 6.8 miles of off-street shared-use path [4]. In addition to this existing bicycle infrastructure, "bicycle-friendly" roads exist in the MPO. During public outreach meetings conducted for the SETRPC Southeast Texas Bicycle Plan (2040), members of the public identified roads within the MPO that are considered "bicycle friendly," defined as "roads that have…light vehicular traffic, or potential for future bicycle facilities." The identified bike friendly roads were chosen based on individual perception and experience. Figure 4-1 shows the location of the bicycle infrastructure across the MPO, bicycle friendly roads, and the proposed bike network.

Currently, bike infrastructure is only located within the urban areas of the MPO. Existing off street separated bikeways within the MPO include the approximately 6.8-mile Kountze Hike and Bike Trail. The MPO has approximately 9.4 miles of on-street striped bike lanes as listed below:

- Calder Avenue from W Circuit Drive to N 18th Street
- Calder Avenue from N 11th Street to N Main Street
- 7th Street from I-10 to Lauren Avenue
- Rolfe Christopher Drive from Jim Gilligan Way to S M L King Jr Parkway

[4] Southeast Texas Regional Planning Commission. Southeast Texas Bicycle Plan (2040). Retrieved 20 June 2023. SET-Bicycle-Plan.pdf (setrpc.org)

Figure 4-1: Existing and Proposed Bicycle Facilities



Note: Figure 4-1 does not include bicycle facilities for Jasper County.

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Currently, up to 1.2% of the SETRPC population commute via bicycle and 0.7% commute by walking. The small proportion of bike commuters could be partially attributed to the limited bicycle infrastructure, which exists only within the nonrural areas of the region. The use of bikes as a transportation mode is low in the proximity of Lamar University, located within Jefferson County.

Only 1.7% of residents within the four-county MPO have a commute time of less than ten minutes, while 66.1% commute longer than 30 minutes and 22.7% have a commute longer than an hour. Long commute times can partially explain the lack of bicycle infrastructure and bicyclists.

Users of bikes as a transportation mode who are vulnerable, including women, people aged 65 years and more, and younger than five should also be considered. A total of 49.7% of the SETRPC-MPO population is comprised of women. Overall, 15.4% of the population is 65 years of age or older, and 6.7% of the population is 5 years of age and younger.

Although infrastructure in the SETRPC-MPO primarily supports vehicle travel, 5.4% of households in the region do not have access to a vehicle and 12.5% of households are living under the poverty line. While bicycling is not a heavily used transportation mode in the SETRPC-MPO, some clusters within the MPO show a larger use of bicycling as a commuting mode. For example, between 10 and 17.6% of commutes within the two census tracts that include majority of the City of Jasper are completed by bicycle. About 19.6% of households in the same area do not have access to a vehicle, and between 53.6% and 88.0% of households are in poverty. The establishment of a safe and cohesive bicycle network would offer a more affordable and equitable transportation means for these households and others across the MPO.

4.2 Recommendations and Strategies

The SETRPC-MPO is promoting the development of underutilized transportation modes, such as walking and bicycling, to improve multimodal transportation networks. These low-cost, environmentally friendly modes offer relaxation, recreation, exercise, and nature enjoyment. The SETRPC region, which predominantly uses cars, has limited bicycle and pedestrian infrastructure investments. However, TxDOT and several cities are constructing new facilities to address this issue. Bicycle facilities include existing off-road trails, designated lanes or signed routes, and bicycle-friendly roadways.

Crashes

TxDOT's Highway Safety Performance Plan (HSPP) aims to reduce crashes, injuries, and property damage by focusing on performance measures, many of these measures are specific to bicycle and pedestrian safety. Strategies include increasing public education, improving road and street walkability, collecting data on pedestrian injuries, and identifying problem areas. However, no specific projects under HSPP are currently in place for SETRPC area.

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Barriers in the Bicycle and Pedestrian Network

The Neches River presents a natural barrier and only three roadways, I-10, US 96, and SH 73, provides a means to cross the river. It can be hazardous for bicyclists and pedestrians to use these high-speed, car-dominated facilities. Bicycle and pedestrian connections across these barriers are recommended.

Land Use and Transportation

The MPO advises integrating land use planning and transportation planning in order to develop walkable and bicycle-friendly communities. The most favorable land uses are dense, compact, concentrated mixed-use developments that include a variety of services and facilities. Policies should include defined lanes for bicyclists, public rights-of-way for pathways, and specific requirements for pedestrian and bicycle facilities in town centers, transit corridors, and employment centers. Government entities should develop standards, policies, and guidelines to support a safe, walkable, and bicycle-friendly environment. The cities of Beaumont, Port Arthur, and Orange have already implemented such ordinances.

Complete Streets

Complete Streets are streets designed for everyone, ensuring safe access for pedestrians, bicyclists, transit riders, and motorists of all ages and abilities. It encourages street connectivity and applies to new and retrofit projects, requiring high-level approval for exceptions. Examples include sidewalks, bike lanes, special bus lanes, accessible public transportation stops, frequent crossings, median islands, pedestrian signals, curb extensions, narrower travel lanes, and roundabouts. Complete streets solutions complement the community's context and establish performance standards with measurable outcomes.

Connectivity and Accessibility

The MPO is working to address gaps in the pedestrian and bicycle network through connecting schools, transit stops, grocery stores, government offices, medical complexes, parks, and employment centers. Bicycle parking should be provided at all public buildings and encouraged at privately owned facilities. Neighborhood connections can be achieved using local and collector streets, trail connectors, and traffic control devices.

Link to Transit

Public transit facilities should be pedestrian-friendly, accommodating bicyclists, and accessible from nearby neighborhoods. Transit riders often walk a short distance to start or complete their trips, making pedestrian and transit modes essential for urban transportation. Increasing linkages between these modes is crucial, especially ensuring sidewalks connect to transit stops. Linking bicycle trips with bus trips expands service areas and enhances bicycle utility. BMT plans to install bicycle parking racks at shelter and busy stops, while PAT's buses have bicycle carrier racks.

Coordination

The SETRPC region requires coordinated bicycle and pedestrian planning among various entities, including counties, cities, school districts, and educational institutions, to improve infrastructure. Local governments and regional coordinators play crucial roles in coordinating issues and projects, ensuring a well-connected and high-quality network.

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Rail-trails

Rail-trails are public paths created from former railroad corridors, ideal for various activities like biking, walking, inline skating, and horseback riding. These conversions can stimulate local economies by increasing tourism and generating local business. Abandoned rail corridors in central Hardin County, downtown Port Arthur, and along SH 124 in western Jefferson County are being explored for rail-trails conversion by the MPO.

Safe Routes to School

Schools can cause traffic congestion, especially when parents drive their children to school. Cities should collaborate with school districts to design improvements to minimize conflicts between pedestrians, bicyclists, and motorists. School districts should consult with local governments about transportation circulation and ensure safe pedestrian and bicycle access.

Safe Routes to School (SRTS) is a federal program aimed at promoting bicycle and pedestrian safety. The MPO will work with local cities and ISDs to develop Safe Routes to School projects.

Preservation and Maintenance

TxDOT and local municipalities allocate funds for routine maintenance of bicycle and pedestrian facilities, ensuring the state of good repair to maximize their use and ensure their smooth and debris-free surfaces.

Public Awareness and Safety

Educating motorists, bicyclists, and pedestrians about their rights and responsibilities on public roadways can encourage safe coexistence, particularly among youth. Public awareness programs can also educate motorists about sharing the road with nonvehicular traffic. The SETHBC hosts safe cycling events, such as a Bicycle Safety Rodeo and presentations, in local elementary schools.

Marketing

Marketing campaigns can encourage bicycling and walking by promoting reasons to use these modes, including safety reminders. A coordinated approach to public information and awareness programs, including events like bicycle- or walk-to-work days, fund-raising walks, and local events like the South East Texas Hike and Bike Coalition's (SETHBC's) regular rides, can yield the best results.

Materials like route maps and websites can also be created to inform people about bicycle-compatible roads, pedestrian-friendly areas, and other bicycle and pedestrian amenities.

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Funding

Funding for bicycle and pedestrian facilities is crucial for their implementation. There are various federal, state, and local funding programs available to improve the non-motorized transportation system. Major funding programs include the National Highway System (NHS) Funds, Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement (CMAQ) Program, National Recreational Trails Fund, National Scenic Byways Program, Surface Transportation Block Grant Program (STBGP), Texas Transportation Alternatives Program, State Bridge Program, and local funding sources.

- NHS funds are available for the construction of bicycle facilities on land adjacent to any highway on the NHS, while STP funds encompass a broader range of transportation projects.
- CMAQ funds are available for projects and programs in areas that are nonattainment or maintenance for the national ambient air quality standards according to the 1990 CAAA.
- The Surface Transportation Block Grant Program provides funding for planning and constructing new pedestrian and bicycle facilities.
- Local funding sources can also support the development of bicycle and pedestrian facilities, such as requiring developers to incorporate bicycle and pedestrian facilities in their proposed development or contributing to local projects as a condition for project development.

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Chapter 5: Transit

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5.0 Introduction

Public transportation is a vital part of the region's multimodal transportation system, providing essential services to the elderly, disabled, and individuals who are unable to or choose not to drive. Increased use of transit also has benefits for the environment by reducing air pollution and fuel consumption.

This chapter covers the existing public transportation system in the SETRPC region, including facilities, services, and gaps. In addition, this chapter identifies issues with the system and proposes strategies and policies to address these issues and the overall demand for public transportation in the area.

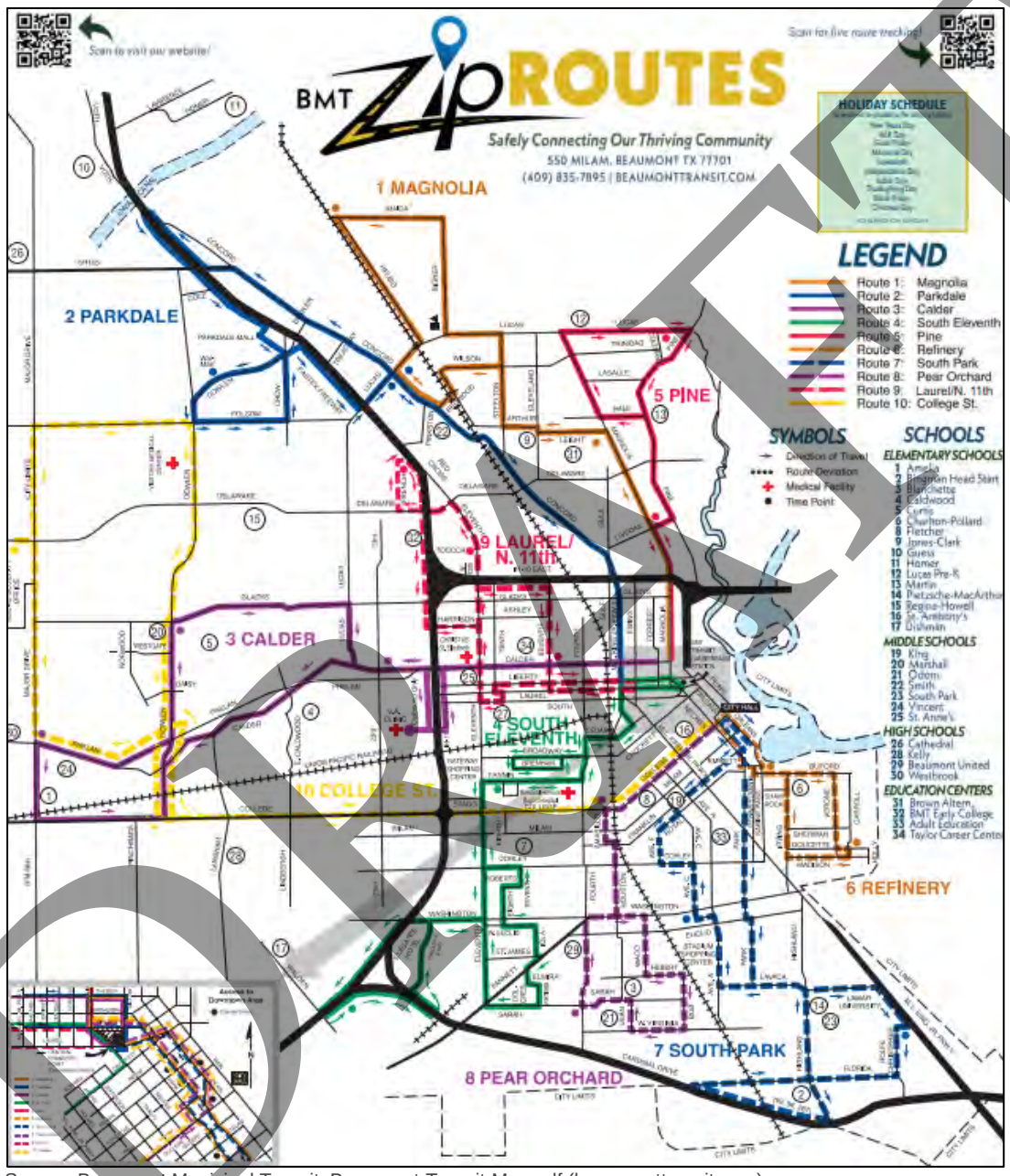
5.1 Existing Transit System

5.1.1 Fixed Route Service

Beaumont Municipal Transit (BMT), branded as Beaumont ZIP, operates ten local fixed bus routes throughout Beaumont. As shown in Figure 5-1, the routes converge at BMT's transfer facility in downtown Beaumont to provide easy transfers to other routes. Fares for adults are $1.50 for all routes, with discounted fares of $0.75 for senior citizens ages 65 and older, people with disabilities, and youth of ages 6 to 18. Children under 6 can ride for free, with up to three children per fare-paying adult. Monthly passes allowing unlimited rides each month are also available.

Port Arthur Transit (PAT) operates five local fixed bus routes in Port Arthur (Figure 5-2). Adult fares are $1.50, and a discounted fare of $0.75 is offered to senior citizens, people with disabilities, Medicare cardholders, and youth of ages 6 to 18. Children 5 years old and younger ride for free with a paid adult. Free transfers are available for 1.5 hours. PAT also offers daily, weekly, and monthly passes.

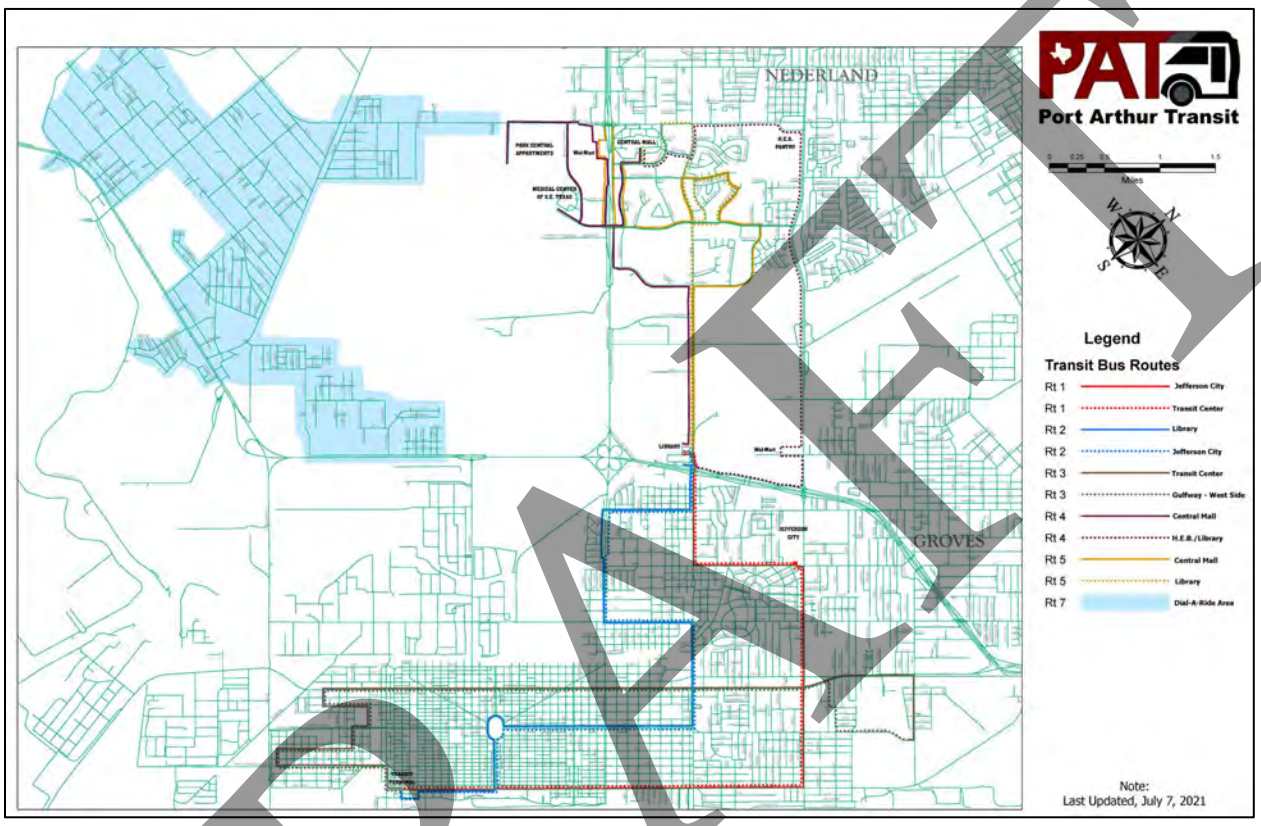
Figure 5-1: BMT Transit Routes



Source: Beaumont Municipal Transit: Beaumont-Transit-Map.pdf (beaumonttransit.com)

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Figure 5-2: PAT Transit Routes: PAT Transit Routes



Source: Port Arthur Transit

5.1.2 Demand Response Service

BMT and PAT provide curb-to-curb paratransit services to people with disabilities who are unable to use the fix-route system. These services are available within the BMT and PAT service areas. Residents outside the BMT and PAT service areas are served by the following agencies:

- **Nutrition and Services for Seniors (NSS).** A non-profit entity providing low-cost transportation for elderly residents in Hardin County and western Jefferson County.
- **Orange Community Action Association (OCAA)**. A transportation service available to all residents in the City of Orange for shopping, medical appointments, work, education, and any other trip purposes.
- **Orange County Transit (OCT).** A curb-to-curb service offered to Orange County residents. Transportation is available to any location in Orange County and to destinations in Beaumont and Port Arthur.
- **South East Texas Transit (SETT).** A curb-to-curb service providing transit to residents in Hardin County, rural western Jefferson County, and Orange County. Service is also available in mid-Jefferson County for people with disabilities and seniors aged 60 and older.

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5.1.3 Private Transportation Providers

Amtrak's Sunset Limited line runs from New Orleans, Louisiana to Los Angeles, California and includes a stop at the Beaumont Station in Beaumont, Texas. The line provides regular intercity passenger rail service to Beaumont and is accessible by BMT's services.

Greyhound offers intercity bus service to and from the Beaumont Vidor, Orange, and Port Arthur bus stations in the MPA. This service also allows residents to travel to destinations outside the region without having to drive or fly.

Private ridesharing services such as Uber and Lyft are available in the region. These services provide ride-hailing through a peer-to-peer model. Users can request rides to destinations across the region through a smartphone application. Ridesharing offers individuals another mode of travel throughout the region beyond traditional public or private transportation options.

Sun Travel provides bus and limousine services through southeast Texas, including within the region. Sun Travel offers daily shuttles from Beaumont to airports, conferences, and regional events. Each shuttle can accommodate 56 passengers.

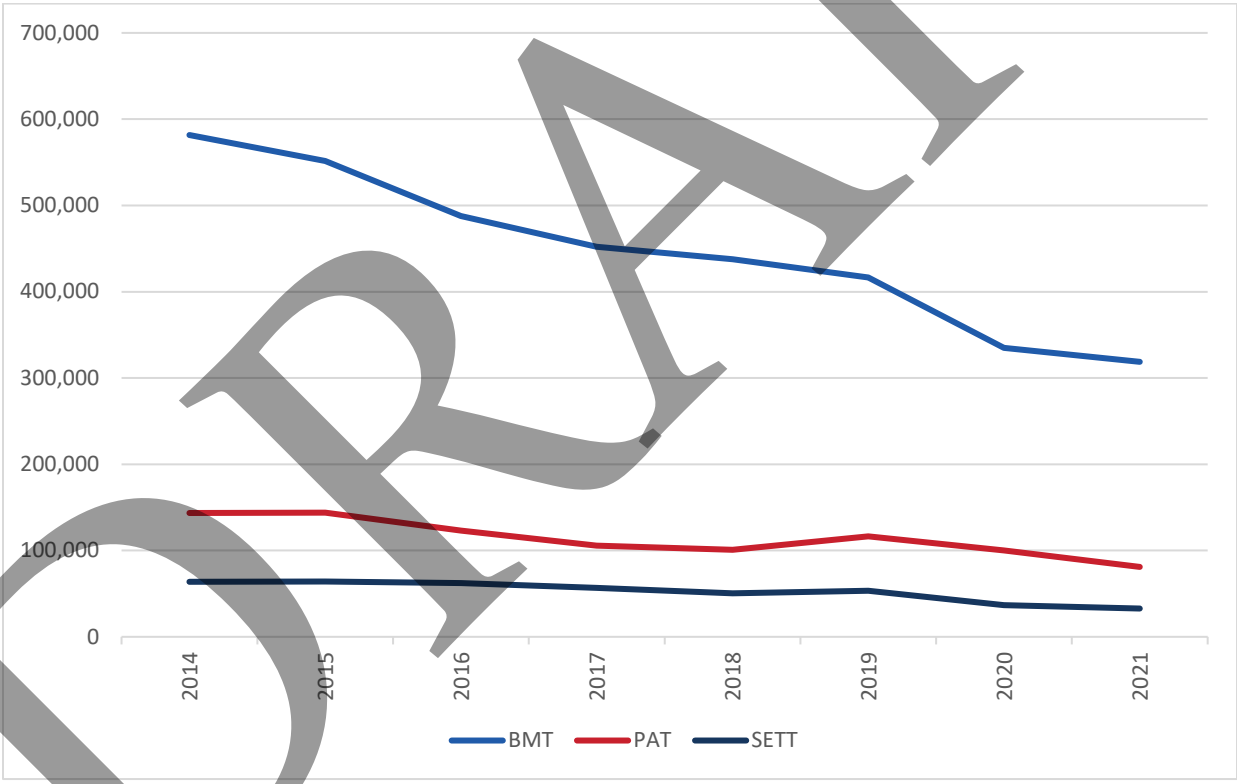
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5.1.4 Ridership

Transit utilization is typically defined as the number of unlinked passenger trips served, which reflects the total number of passengers who board public transportation vehicles. In the SETRPC region, BMT, PAT, and SETT report their annual ridership data to the FTA's National Transit Database (NTD).

From 2014 to 2021, ridership for BMT, PAT, and SETT declined by 45%, 44%, and 49%, respectively (Figure 5-3). This is likely due to several factors, including the availability of alternative transportation options, the cost of public transportation, and overall health of the economy as well as impacts from Hurricane Harvey in 2017 and the COVID-19 pandemic beginning in 2020. Transit agency ridership for the three agencies between 2014 and 2021 is shown in Figure 17.

Figure 5-3: Transit Ridership by Agency



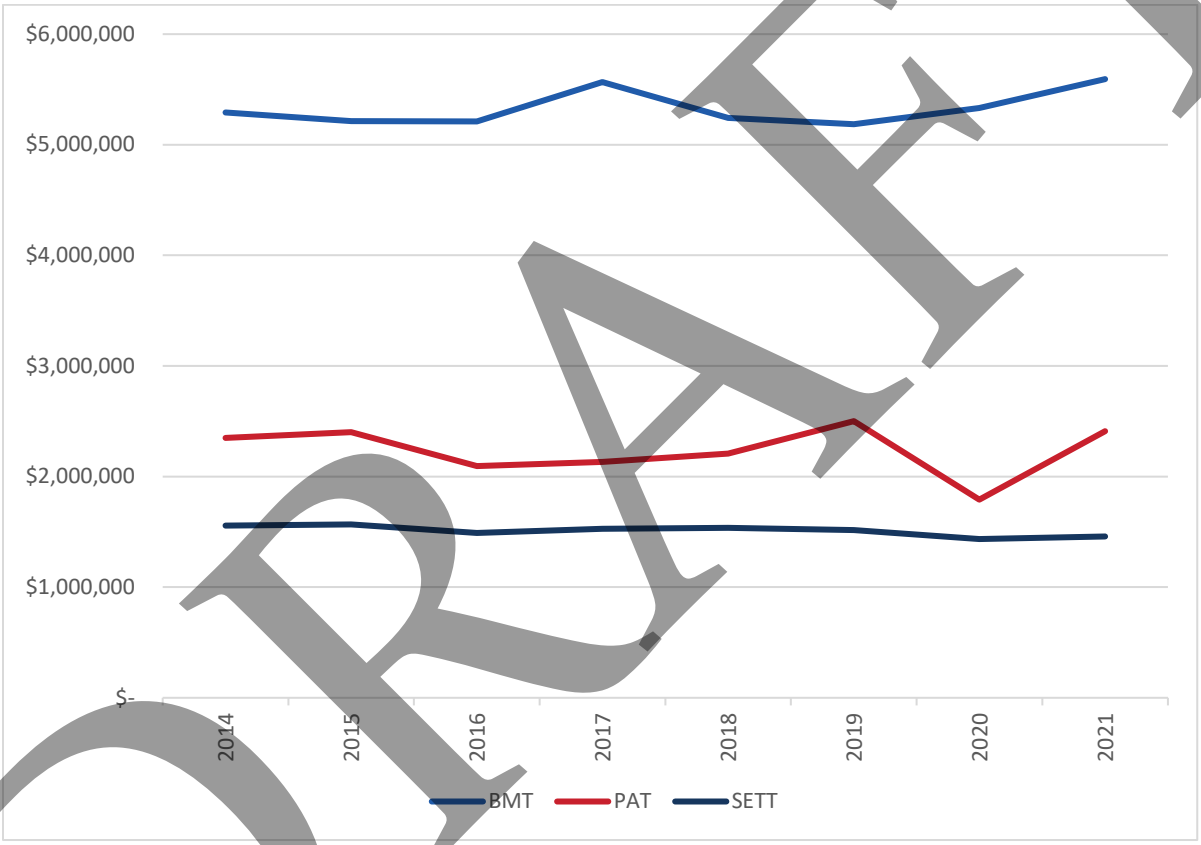
Source: Federal Transit Administration National Transit Database.. 2022. Retrieved 20 June 2023.. The National Transit Database (NTD) | FTA (dot.gov)

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5.2 Operating Cost and Funding

Between 2014 and 2021, the annual cost of operating BMT's and PAT's fixed route and demand response services increased by approximately 6% and 3% respectively. The cost of operating SETT's demand response service decreased by 6% (Figure 5-4). %. Operating costs for the three agencies are shown in Figure 20.

Figure 5-4: Transit Agency Operating Costs

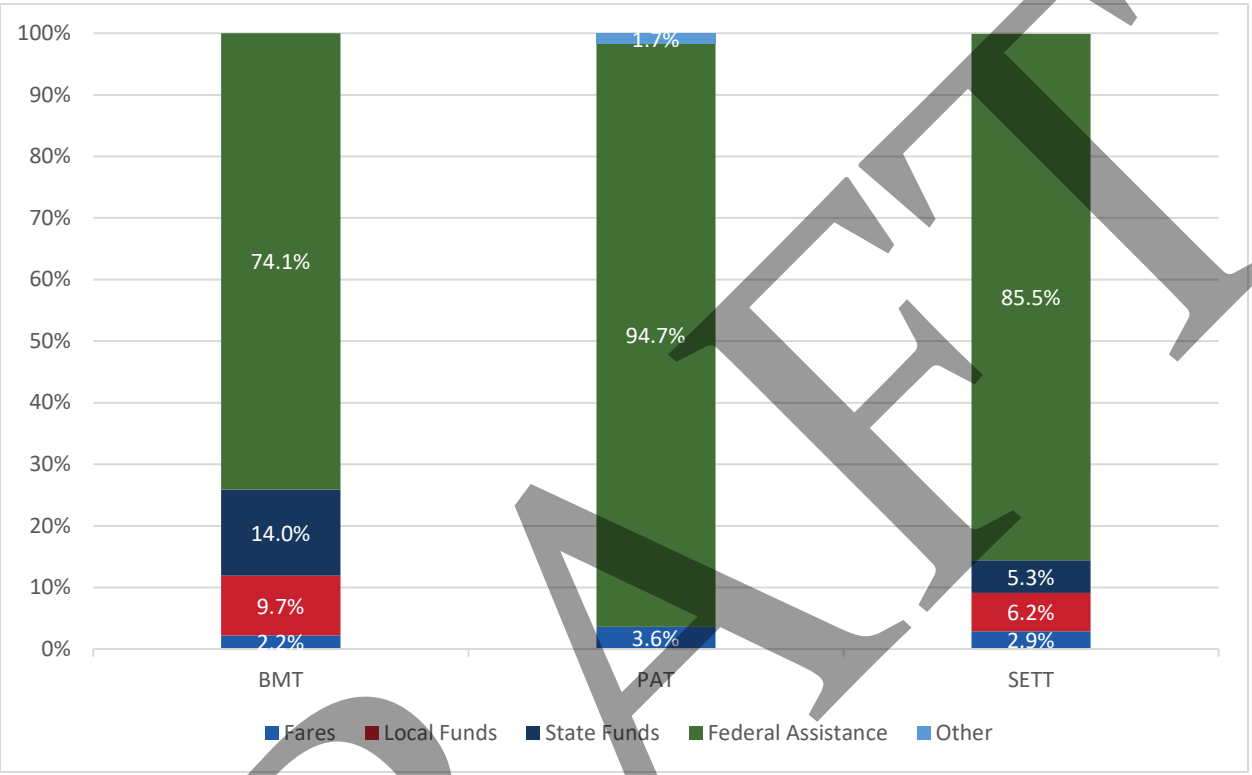


Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

BMT, PAT, and SETT are primarily funded through federal funds. In 2021, approximately 74% of BMT's operating expenses were supported by federal assistance, while state funds covered 14%, local funds covered 9.7%, and fares covered 2.2%. PAT received 94.7% of its operating expenses through federal assistance, with fare revenue accounting for 3.6% and other sources accounting for 1.7%. Federal assistance comprised 85.5% of SETT's operating expenses in 2021. Of the remaining expenses for SETT, 5.3%, 6.2%, and 2.9% were covered by state funds, local funds, and fares, respectively as shown in Figure 5-5.

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Figure 5-5: Transit Funding Sources by Agency



Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. [The National Transit Database (NTD) | FTA (dot.gov)]

5.3 Performance Measures

Performance measures are an important part of any successful transit system. These measures are tools that help us understand how well a system is performing. They can be used to track progress towards goals, identify areas for improvement, and make informed decisions about the future. To calculate performance measures, transit performance variables must first be collected. The following performance variables are used to calculate performance measures:

- **Annual passenger trips (APT):** The number of passengers who board operational revenue vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from origin to destination.
- **Passenger miles traveled (PMT):** The cumulative sum of distances travelled by each passenger who boards an operational revenue vehicle.
- **Vehicle revenue miles (VRM):** The total number of miles per year that all vehicles travel from the time they pull out to go into revenue service to the time they pull in from revenue service.
- **Vehicle revenue hours (VRH):** The total amount of time in hours for a year that all vehicles travel from the time they pull out to go into revenue service to the time they pull in from revenue service.

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To monitor the service performance of the three transit providers, the following performance measures are assessed from the performance variables:

- **Service effectiveness:** Annual passenger trips (APT) per vehicle revenue mile (VRM) and vehicle revenue hour (VRH); the higher the ratio, the better the service effectiveness.
- **Service efficiency:** Operating expenses per VRH and VRM; the lower the ratio, the better the service efficiency.
- **Cost effectiveness:** Operating expenses per APT and passenger mile; the lower the ratio, the better the cost effectiveness.

5.3.1 Service Effectiveness

Service effectiveness is a measure of transit utilization describing the level of ridership on system. Increasing the number of riders per mile (or per hour) of service increases the overall service effectiveness. BMT, PAT, and SETT all experienced a decrease in ridership in both 2020 and 2021 due to the COVID-19 pandemic. Service effectiveness for BMT, PAT, and SETT for 2014-2021 is shown in Table 5-1,

Table 5-2, and Table 5-3 respectively. Service effectiveness for BMT, PAT, and SETT for 2014-2021 is shown in Tables 5-1 and 5-2.

Table 5-1: BMT Service Effectiveness

Year	BMT Fixed Route		BMT Demand Response	
	APT per VRM	APT per VRH	APT per VRM	APT per VRH
2014	0.76	10.27	0.25	2.76
2015	0.74	10.12	0.23	2.79
2016	0.65	8.85	0.24	2.79
2017	0.62	8.58	0.25	2.81
2018	0.59	8.02	0.16	2.02
2019	0.56	7.67	0.15	1.97
2020	0.46	6.31	0.13	1.54
2021	0.43	6.04	0.14	1.91

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

Table 5-2: PAT Service Effectiveness

Year	PAT Fixed Route		PAT Demand Response	
	APT per VRM	APT per VRH	APT per VRM	APT per VRH
2014	0.50	7.69	0.15	1.88
2015	0.50	8.17	0.18	2.07
2016	0.40	6.49	0.18	2.15
2017	0.36	10.02	0.16	2.16
2018	0.37	6.02	0.15	2.00
2019	0.42	6.93	0.14	1.99
2020	0.35	5.70	0.15	1.86
2021	0.24	4.17	0.15	1.45

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

Table 5-3: SETT Demand Response Service Effectiveness

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Year	APT per VRM	APT per VRH
2014	0.12	2.12
2015	0.13	2.17
2016	0.13	2.22
2017	0.12	2.16
2018	0.18	2.91
2019	0.10	1.95
2020	0.09	1.69
2021	0.07	1.35

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

5.3.2 Service Efficiency

Service efficiency is measured by dividing the operating expenses by revenue miles and by revenue hours. Decreasing the operating expenses per VRM or VRH indicates increasing efficiency of transit service. Between 2014 and 2021, the service efficiency of BMT has generally declined while the service efficiency of PAT has increased. SETT has generally had a consistent level of service efficiency from 2014 to 2021. The respective service efficiency of each transit agency is shown in Table 5-4, Table 5-5, and Table 5-6. Service efficiency for BMT and PAT is shown in Tables 5-4 and 5-5.

Table 5-4: BMT Service Efficiency

Year	BMT Fixed Route		BMT Demand Response	
	Operating Expense per VRM	Operating Expense per VRH	Operating Expense per VRM	Operating Expense per VRH
2014	$5.82	$78.91	$12.83	$140.60
2015	$5.87	$80.39	$10.23	$122.33
2016	$5.78	$78.75	$11.04	$128.80
2017	$6.14	$84.35	$14.72	$168.23
2018	$5.75	$78.47	$8.12	$104.13
2019	$5.62	$77.20	$8.05	$107.83
2020	$6.00	$83.10	$9.06	$105.97
2021	$6.55	$91.96	$7.63	$102.34

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

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Table 5-5: PAT Service Efficiency

Year	PAT Fixed Route		PAT Demand Response	
	Operating Expense per VRM	Operating Expense per VRH	Operating Expense per VRM	Operating Expense per VRH
2014	$7.74	$117.94	$3.43	$43.20
2015	$7.16	$116.18	$5.68	$65.04
2016	$6.33	$102.16	$4.12	$50.46
2017	$7.11	$197.88	$3.46	$47.91
2018	$7.64	$125.77	$4.00	$53.48
2019	$8.58	$141.93	$3.84	$53.40
2020	$5.65	$93.04	$4.15	$52.28
2021	$6.52	$113.73	$7.24	$70.50

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

5.3.3 Cost Effectiveness

The cost effectiveness of a transit service is measured by the operating expense of the service per passenger mile or per passenger trip. Decreasing operating expenses per passenger mile or trip indicates an improvement in the cost effectiveness of service. The respective cost effectiveness of each transit agency is shown in Table 5-6, Table 5-7, and Table 5-8.

The cost effectiveness of a transit service is measured by the operating expense of the service per passenger mile or per passenger trip. Decreasing operating expenses per passenger mile or trip indicates an improvement in the cost effectiveness of service. Cost effectiveness for the three transit agencies is shown in Tables 5-6 through 5-8.

Table 5-6: BMT Cost Effectiveness

Year	BMT Fixed Route	BMT Demand Response
	Operating Expense per UPT	Operating Expense per UPT
2014	$7.68	$50.88
2015	$7.94	$43.84
2016	$8.90	$46.12
2017	$9.83	$59.77
2018	$9.78	$51.60
2019	$10.06	$54.87
2020	$13.18	$69.02
2021	$15.22	$53.48

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

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Table 5-7: PAT Cost Effectiveness

Year	PAT Fixed Route Operating Expense per UPT	PAT Demand Response Operating Expense per UPT
2014	$15.34	$23.01
2015	$14.22	$31.38
2016	$15.74	$23.46
2017	$19.74	$22.21
2018	$20.89	$26.69
2019	$20.48	$26.80
2020	$16.33	$28.13
2021	$27.26	$48.65

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

Table 5-8: SETT Cost Effectiveness

Year	Operating Expense per UPT
2014	$24.45
2015	$24.45
2016	$23.99
2017	$26.95
2018	$30.38
2019	$28.41
2020	$39.23
2021	$44.46

Source: Federal Transit Administration National Transit Database 2022. Retrieved 20 June 2023. The National Transit Database (NTD) | FTA (dot.gov)

5.4 Recommended Strategies

A variety of strategies and practices exist to support the successful operation of a public transit system. In order to address the transit-related challenges of the SETRPC region, the following "toolbox" of policies, strategies, and actions are recommended. These strategies should be better integrated into regular planning functions in order to strengthen the role of transit in the regional multimodal transportation environment.

5.4.1 Regional Public Transportation Coordination Plan

Transit service providers within the SETRPC region should coordinate and collaborate as much as possible to reduce the occurrence of repeated services. In cooperation with TxDOT, under the provision of Chapter 461 of House Bill (HB) 3588, the SETRPC created the Regional Public Transportation Coordination Plan (RPTCP). The RPTCP is a collaborative product that responded to the requirements laid out in MAP-21 (developed under previous federal transportation authorization bill) and is focused on eliminating waste in and ensuring efficiency and maximum coverage of the provision of public transportation services. SETRPC's most recent RPTCP was developed in 2011 through a process that engaged the public and representatives of public, private, and non-profit transportation and human services providers within the southeast Texas region. The RPTCP identified efforts for regional service coordination, created a transportation coordination plan, and established an action plan for priority projects.

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A steering committee provides guidance to the SETRPC on the planning process, oversees transportation coordination planning activities, provides input for each member's respective agency/organization, and serves as an advocate for the regional public transportation coordination planning process. The steering committee members are representatives from public transportation providers, health and human services agencies, workforce agencies, interested organizations, local officials, and state agencies.

5.4.2 Marketing

Transit service providers should develop a comprehensive marketing program to promote transit usage and to attract additional riders. Even though multiple transit providers operate within the SETRPC region, their service may not be well known among residents and visitors. Marketing programs should advertise the extent of transit amenities and educate the region on the benefits of using mass transit. The program can target existing or potential rider groups like college students and residents of new developments. The SETRPC will continue to increase awareness of not only its rural transportation program, but also the other types of transit services offered in the region.

5.4.3 Continually Reevaluate Transit Operations

To maintain a healthy transit system, it is necessary to continually assess overall system and route-level performance. Understanding the tradeoffs involved in changing the location of routes, the frequency of service, and the extent of service hours is important in making strategic decisions about allocating resources. BMT and PAT should also continually evaluate transit coverage as it relates to growth from new development within their respective jurisdictions. As development occurs, BMT and PAT should determine the feasibility of providing coverage to newly developed areas. Expanding system coverage to new areas may attract additional riders, but at the same time may lower the level of service to areas or destinations in higher demand. As such, it is important to continually monitor the location of popular destinations and new residential, commercial, and civic development.

Providing a reliable service can greatly improve system operations and, in turn, increase ridership. Furthermore, simple concepts, such as longer spacing between bus stops and transit priority at signalized intersections, can help improve transit speed. Both BMT and PAT are constantly looking for opportunities to expand and improve their operations. The SETRPC-MPO will continue to work with all regional transit service providers to increase operational efficiency and to maximize services for transit patrons.

5.4.4 System Preservation and Maintenance

Maintenance is an important activity for the operation of a transit system because it extends the useful life of vehicles, equipment, and facilities. Such maintenance is also critical for passenger comfort and transit service reliability. Vehicles in poor condition (e.g., torn seats, broken wheelchair lifts, or poor temperature control) affect the comfort of transit riders. On-street boarding locations that fall into disrepair affect safety and accessibility. Vehicle breakdowns greatly inconvenience transit patrons. BMT and PAT perform regular interval maintenance to maintain their buses in good condition.

Even with regular, routine maintenance, transit vehicles reach the end of their useful service life. Although BMT and PAT preserve and maintain their bus fleets on a routine basis, they still must invest in new vehicles and equipment.

5.4.5 Transit Amenities

Offering certain amenities to transit users may greatly enhance the transit experience and further promote transit usage. Park-and-ride facilities in strategic locations can act as important anchors to the regional transit system, serving as satellite hubs for local, intercity, and regional transit services. Enhanced transit centers with amenities such as weather protection, passenger information, and vending machines provide

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additional incentives for regional and local riders. Furthermore, transit stops with bus shelters, signage, and passenger information enhance the attractiveness, comfort, and safety of the transit system. The MPO will work with local jurisdictions on improving existing facilities and identifying opportunities for the construction of new ones.

5.4.6 Intelligent Transportation Systems (ITS) for Transit

ITS enhancements should be considered when exploring ways to increase the service efficiency of the transit system. For example, technology that enables signal preemption for buses increases the speed of transit vehicles. Instant traveler information technology informs patrons about when the next bus will arrive. Such programs represent cost effective investment that increases the efficiency and attractiveness of the system.

5.4.7 Alternate Fuel Vehicles

By converting transit vehicles to run on alternate fuel, numerous benefits can be realized. Alternate Fuel Vehicles (AFVs) produce lower emissions and fewer toxic contaminants than gasoline and diesel vehicles. Alternate fuels like propane cost significantly less than gasoline or diesel, which helps to reduce vehicle and system operating costs. The MPO actively promotes the use of AFVs.

In 2005, PAT was the first transit agency in the region to convert its fleet to run on propane. However, one of the obstacles to converting to AFV is that vehicles can only be refueled at special service stations that require supporting fueling infrastructure. In 2009, the City of Port Arthur opened a propane refueling station in downtown Port Arthur on the southwest side of Dallas Ave, across the street from the Transit Terminal. This $490,000 project, funded primarily by an FTA grant, replaces a one-pump fueling station that had led to bottlenecks as the city's propane-powered buses and trucks sought to refuel. The new station features a 6,500-gallon above ground propane tank, storage unit, three covered fueling stations, and a paved alley. BMT has converted a majority of its fleet to CNG fuel and recently received Congestion Mitigation and Air Quality Improvement (CMAQ) funding to convert the remaining buses to CNG fuel.

In August 2018, Port Arthur Transit was awarded $2,225,000 in FTA funding to purchase battery-powered electric buses and charging equipment. The electric 10-vehicle fleet launched in August 2019.

5.4.8 Integrating Transit Improvements into Roadway Design

In a true multimodal transportation system, the transit system cannot be considered independently. Rather, it must be considered in a larger context and in conjunction with all other transportation modes. For example, a bus requires a roadway upon which to operate; these roadways require adequate surfaces, conditions, and other design features which can accommodate larger-sized transit vehicles.

Furthermore, transit users are also most likely pedestrians at some point during their trip, and therefore must also have adequate sidewalks, transit stops, safe street crossings, and proper lighting to conduct their travel safely and efficiently. The MPO will continue to coordinate with state and local entities to develop transit-friendly roadway improvements that accommodate efficient transit operations and transit amenities.

5.4.9 Land Use and Development Standards

Transit service requires pedestrian connections to and from transit stops, a reasonable density of activities, and applicable development design standards. To achieve transit productivity, all three elements should be provided. Pedestrian connections to transit must be direct and the sidewalk system must have continuity. Street crossings to transit stops must be safe. Productive transit service requires high-density land development patterns which link residential areas and employment, retail, and service

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centers. New developments need to be designed to be transit friendly by providing convenient access to transit services. BMT plans to install bike parking racks at all shelter stops and bus stops. All of PAT's buses have bike carrier racks to transport transit riders' bicycles.

Conventional commercial site designs often place barriers such as landscaping and parking lots between buildings and the sidewalk. Residential development patterns tend to be automobile-oriented and make pedestrian access to bus stops difficult. Discontinuous or poorly maintained sidewalks also contribute to the problem. The MPO will encourage and recommend local entities to develop pedestrian access standards for new development and redevelopment projects that provide better access to transit stops.

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Chapter 6: Airports

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6.0 Introduction

Airports constitute an important element of the regional intermodal transportation system. Air transportation provides a global reach for the fast movements of people and goods, offering significant advantages for long-distance travel and transport. The increasing importance of service industries in the southeast Texas economy contributes to the demand for air travel and package delivery. In addition, airports are essential during emergency situations when moving resources and people into and out of the region. This section discusses existing conditions of the region's airports, issues of concerns and needs, and strategies to improve these needs, so that the SETRPC area may fully benefit from airport services. Figure 6-1: Airports in SETRPC RegionFigure 6-1 shows airports in the SETRPC area.

6.1 Jack Brooks Regional Airport

Jack Brooks Regional Airport (JBRA), formerly the Southeast Texas Regional Airport, located between Beaumont and Port Arthur along US Highway 69/96/287 in Jefferson County, serves as the regional commercial airport. JBRA is the only airport in the region that provides passenger transport. Table 6-1 shows detailed information about JBRA.

Figure 6-1: Airports in SETRPC Region



Source: Texas Department of Transportation, Transportation Planning and Programming Division. (18 January 2022). "Airports". *Open Data Portal: Your Gateway to TxDOT GIS Data*. Retrieved 06 June 2022, https://gis-txdot.opendata.arcgis.com.

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Table 6-1: Existing Conditions of Jack Brooks Regional Airport

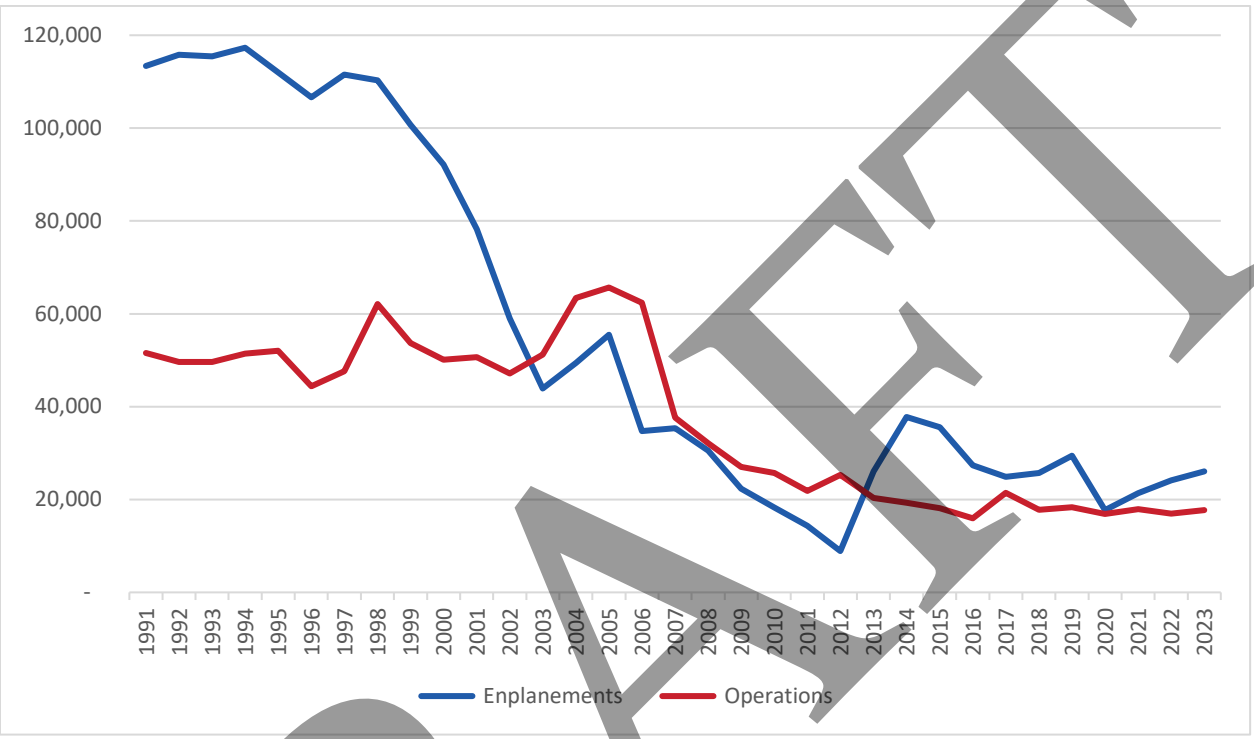
CHARACTERISTICS	
Location ID	BPT
Year Established	1944
Type of Airport	Non-hub Primary
Land Area (Acres)	1799
Ownership	Jefferson County
Facility Use	Open to the Public
Operating Hours	4:00 AM - 11:00 PM (Sunday - Friday) 4:00 AM - 10:00 PM (Saturday)
Distance from Beaumont Central Business District	9 Miles
Roadway Access	Direct Access to US 69/96/287 from Jerry Ware Drive
Airlines	American Airlines (American Eagle)
Daily operations	2 Flights to and from Dallas, Texas
FACILITY INFORMATION	
Terminals	1 Commercial Terminal - 45,000 Square Feet 1 General Aviation Terminal - 20,000 Square Feet
Hangars	5
Runways	2
Taxiways	8
Parking Lots	3 lots, 1,250 available parking spaces for both terminals and general aviation area
OTHER INFORMATION	
Air Traffic Control Tower (FAA Operated)	Flight Instruction, Aircraft Rental
Aircraft Rescue and Fire Fighting (Index A)	Fueling 100L, Jet-A
Customs Landing Rights	Hangars, T-Hangars, and Tiedowns
Foreign Trade Zones	Car Rental Agencies Onsite 85+ Acres Available for Development

Source: FAA Airport Data and Information Portal. 2022. Retrieved 20 June 2023. Airport Data and Information Portal (faa.gov)

The Federal Aviation Administration (FAA) updates its Terminal Area Forecast (TAF) every year to assist in planning, budgeting, and staffing requirements. The TAF data contains both historical and forecast data, which the Aviation Policy and Planning Office (APO) produces every year covering airports in the National Plan of Integrated Airport Systems (NPIAS). For each airport, the data are divided into historical and future enplanements, and local operations. Enplanements are the number of passengers boarding a plane and are usually related to commercial flights. An operation is either a landing or takeoff at an airport by fixed wing and rotary aircraft. Historical enplanements and operations have fluctuated at JBRA for the past decade, the most recent notable decline resulting from the COVID-19 pandemic in 2020. Historical enplanements and operations for JBRA are shown in Figure 6-2.

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Figure 6-2: Jack Brooks Regional Airport Historical Enplanements and Operations



Source: FAA Airport Data and Information Portal. 2022. Retrieved 20 June 2023. Airport Data and Information Portal (faa.gov)

6.2 General Aviation Airports

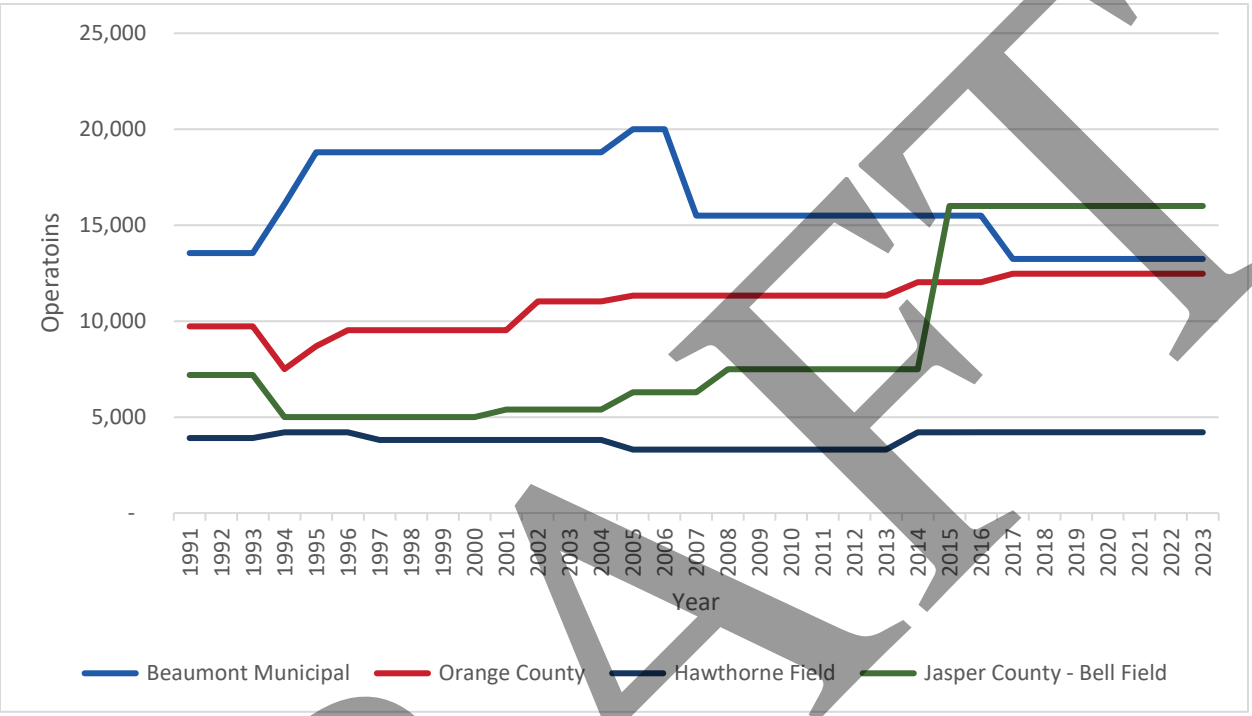
The SETRPC Region has five general aviation airports, which do not offer passenger operations, including:

- **Beaumont Municipal Airport:** Owned by the City of Beaumont, the airport is located at 455 Keith Road on the west side of the City of Beaumont and is bounded by US 90 to the south and Phelan Boulevard to the north.
- **Orange County Airport:** Owned by Orange County, the airport is located about three miles southwest of the City of Orange along SH 87.
- **Hawthorne Field:** Owned by Harding County, the airport is located between Kountze and Silsbee at the junction of SH 327 and US 69/287.
- **Jasper County – Bell Field**: Owned by Jasper County, the airport is located about four miles southwest of the City of Jasper just off US 190.
- **Kirbyville:** Owned by Jasper County, the airport is located approximately 3 miles southwest of Kirbyville, TX.

Operations at the five general aviation airports have remained relatively stable since 1991; Jasper County – Bell Field has experienced an uptick in operations over the past 10 years. Historical operations are shown in Figure 6-3**.**

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Figure 6-3: Historical Operations at General Aviation Airports



Source: FAA Source: FAA Airport Data and Information Portal. 2022. Retrieved 20 June 2023. Airport Data and Information Portal (faa.gov)

6.3 Recommendations and Strategies

Continued investment in SETRPC area airports is necessary to maintain and enhance the region's ability to attract businesses and general aviation customers. As such, this plan recommends the continued support, development, and operation of all the airports in the SETRPC region. Specifically, strategies related to accessibility, safety and security, system preservation, and land use can help enhance the existing airports and help promote economic development.

6.3.1 Accessibility

Without safe and efficient ground access to regional airports, the SETRPC area will not be able to take full advantage of available airport services. SETRPC area airports may also grow attractive to the region's air cargo carriers, as the cost and time associated with nearby major airports in Houston, such as George Bush Intercontinental (IAH) and Houston Hobby (HOUS), increases. Future growth in demand for air cargo services may require roadway improvements to facilitate increased trucking activity to and from the airport. The MPO will continue to work with its regional planning partners to improve access to and from the airport to encourage and enhance passenger and freight movement.

6.3.2 Safety and Security

The Federal Aviation Administration (FAA) is responsible for overseeing and regulating all aspects of civil aviation in the United States, including private and commercial air transportation. The FAA enhances air transportation safety through such programs as their Aviation Safety Reporting System, an online database for voluntarily submitting aviation safety incidents, and the FAA Safety Team, which promotes safety principles and practices through training, outreach, and education. Additionally, the FAA actively

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works with the Transportation Security Administration (TSA), which is responsible for screening passengers, air cargo, and baggage at airports.

As part of the Aviation and Transportation Security Act passed after the tragedies of September 11, 2001, the TSA was established to secure the nation's transportation system. TSA oversees and coordinates with state, regional, and local organizations to secure highways, railroads, buses, mass transit systems, ports, and airports. In addition to screening passengers, TSA officers must also screen all commercial luggage and packages for explosives and other threats before they can be placed aboard airplanes. Besides the more obvious TSA officers, other layers of security screening include intelligence gathering and analysis, checking passenger manifests against watch lists, random canine team searches at airports, federal air marshals, federal flight deck officers, as well as additional security measures that are both visible and invisible to the public. The SETRPC area's airports will continue to follow the rules, regulations, and safety measures set forth by the FAA.

Regional airports are essential during emergency response to natural and man-made disasters. During natural disaster events like Hurricane Harvey in 2017, resources were transported into the region by air as roadway transportation was disrupted by floodwaters.

6.3.3 Land Use

Airports and the land around them are sensitive and valuable resources. One of the greatest concerns that might arise in the future will be the pressure brought about by inappropriate land use that threatens and limits the operations of an airport. Individually, many incompatible land use decisions may appear to have a negligible impact, but collectively, and over time, poor land use decisions can lead to the restriction of airport activity, thereby reducing or eliminating associated benefits. When preparing future land use plans or planning future growth, it is important that the type and density of land use and its cumulative impacts be given careful consideration so that appropriate decisions are made for the airport, its context, and its environment. The MPO will work to stay aware of current and proposed land use and zoning near airports to ensure that they are compatible with airport operations.

6.3.4 System Preservation and Maintenance

Maintaining aviation infrastructure ensures that existing facilities perform at their best for as long as possible. Airports rely on a variety of public and private funding sources to finance their capital development, including airport bonds, federal and state grants, passenger facility charges (PFCs), and airport generated income. Airports in the region receive annual funding from the federal government. Funding through the "Airport Improvement Program" is available for a wide variety of airfield improvements, including preservation and maintenance. The JBRA recently received approval to impose a PFC of $4.50 per enplaned passenger.

The Beaumont Municipal Airport also has a variety of improvements planned, including: the rehabilitation of runways, taxiways, and the north apron; reconstruction of the south apron; drainage improvements; and installation of an automated weather observation system, a rotating beacon, and a new landing light system. All these projects will be funded through the FAA and the City of Beaumont's capital improvement funds. In the SETRPC region, JBRA and the other general aviation airports will continue to follow the system preservation and maintenance procedures set forth by the FAA.

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Chapter 7: Freight

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7.0 Introduction

Transportation is a vital engine that drives every economy. Transportation systems link key regional economic centers with national and international markets which, in turn, improves regional economic competitiveness. Improvements in the freight system can lower the costs of transportation by decreasing the amount of time required for the movement of goods. Lower transportation costs can be passed on to consumers in the form of lower prices, to workers as higher wages, and to business owners in the form of increased profits. Additionally, convenient commutes for workers can lead to increased labor productivity in the workplace.

7.1 Freight Infrastructure

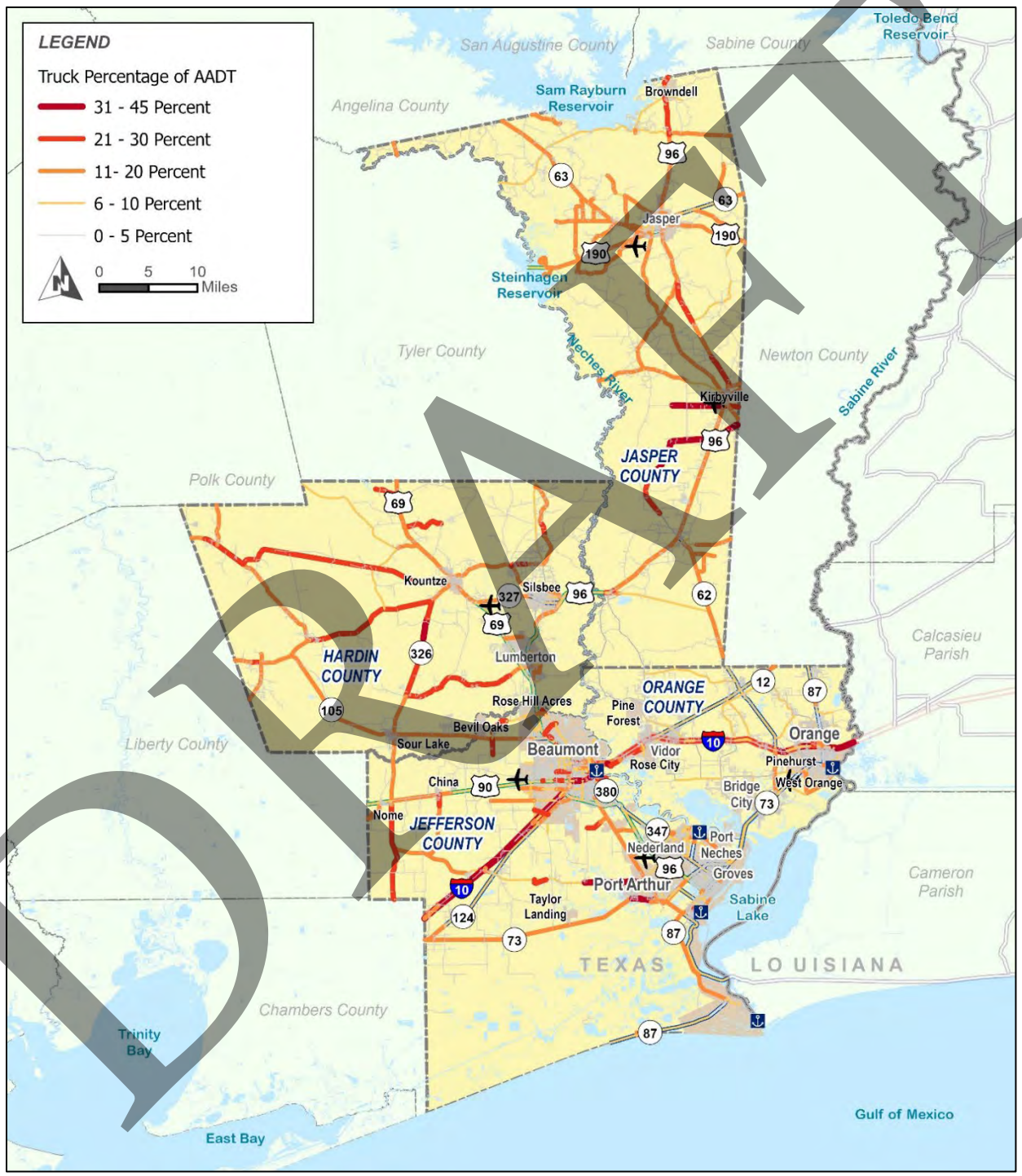
The SETRPC regional freight transportation system is a combination of highways, railroad, waterways, airports, and pipelines. Each of these freight modes is critical to the movement of goods and economic competitiveness of the region.

7.1.1 Trucks

The regional truck network is composed of one interstate highway, several state highways, several arterials and collectors, and local roads that provide last mile access to major freight generators. Key truck routes include I-10, US 69/96, and US 90. State routes such as SH 73, SH 347, and SH 87 provide access to the Port of Port Arthur and landside linkages to the Sabine-Neches Waterway. The regional truck network serves as a vital link between nodes of goods production, consumption, interchange, and re-handling locations such as ports, intermodal facilities, truck/pipeline terminals, industrial parks, warehouse and distribution centers, and manufacturing facilities.

Truck traffic represents a major contributor to the AADT for several designated truck routes within the SETRPC region. Figure 7-1 shows the percentage of AADT on roadways that is attributed to truck traffic. As shown in the map, a large percentage of the AADT of I-10 consists of trucks. This is to be expected because I-10's primary function is to facilitate long-distance travel and trade.

Figure 7-1: Truck Percentage of AADT



Source: Texas Department of Transportation, Transportation Planning and Programming Division. (06 November 2023). "TxDOT Roadway Inventory". *Open Data Portal: Your Gateway to TxDOT GIS Data*. Retrieved 12 January 2024, https://gis-txdot.opendata.arcgis.com.

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7.1.2 Rail

Rail is the only freight mode that relies almost exclusively on private funding for both infrastructure and operations. Freight rail is an important mode for the SETRPC region as many of the commodities that are processed and shipped via the region are rail oriented. The Neches River rail bridge is the only rail crossing over the Neches River in the SETRPC region. The bridge is the second most congested railroad choke point in Texas.

Railroads are classified by the US Surface Transportation Board based on their annual operating revenues. The railroad classification is determined by the following operating revenue thresholds as of 2017:

- **Class 1:** $477,621,226 or more
- **Class 2:** Less than $447,621,226 and greater than $35,809,698
- **Class 3:** $35,809,698 or less

These revenue thresholds are periodically updated to account for inflation. The most recent update was in 2017. The five railroad companies operating in the region are listed below and shown in Figure 7-2.

- Burlington Northern Santa Fe (BNSF) Railroad.
- Kansas City Southern (KCS) Railroad
- Union Pacific (UP) Railroad
- Sabine River and Northern (SRN) Railroad
- Timber Rock Railroad (TIBR)

The railroads in the SETRPC area range from high-frequency, heavy-tonnage main lines to rarely serviced short line operations. Railway operations play a major role in the economy of southeast Texas, so an efficient and effective rail freight system is necessary for the continued economic success of the region. Railroads provide transportation to and from the ports of Beaumont and Port Arthur, where much of the commodity base is rail oriented (e.g. bulk liquids, grains, military cargo). An estimate of 90 percent of the region's port-related tonnage moves in and out by rail. This massive share of railroad transportation makes the railroad links to the ports vital to their operations.

7.1.3 Ports and Waterways

A comprehensive system of ports and waterways exists in the region. The region is home to the "Golden Triangle" ports: the Port of Beaumont, the Port of Orange, and the Port of Port Arthur. Vessel access to these ports is provided by the Sabine River, the Neches River, Sabine Lake (also known as the Sabine-Neches Waterway), and the Gulf Intracoastal Waterway. Figure 7-3 shows the network of Ports and Waterways within the region. The Port of Beaumont, the Port of Port Arthur, the Gulf Intracoastal Waterway, the Neches River, the Sabine Neches Waterway, Sabine Pass, and the Gulf Deep Water Access are designated within the interim National Multimodal Freight Network (NMFN).

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Figure 7-2: Railroads

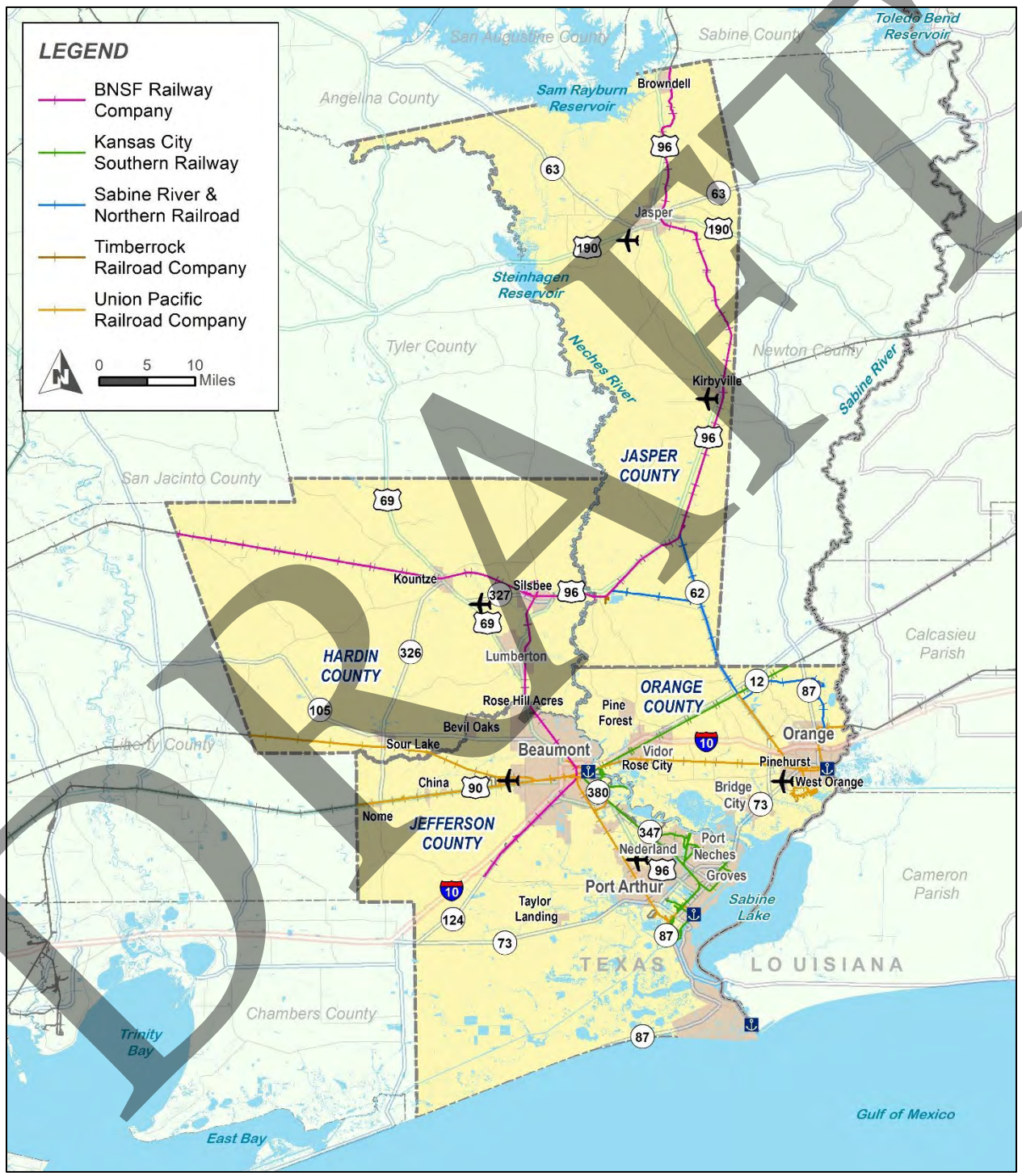
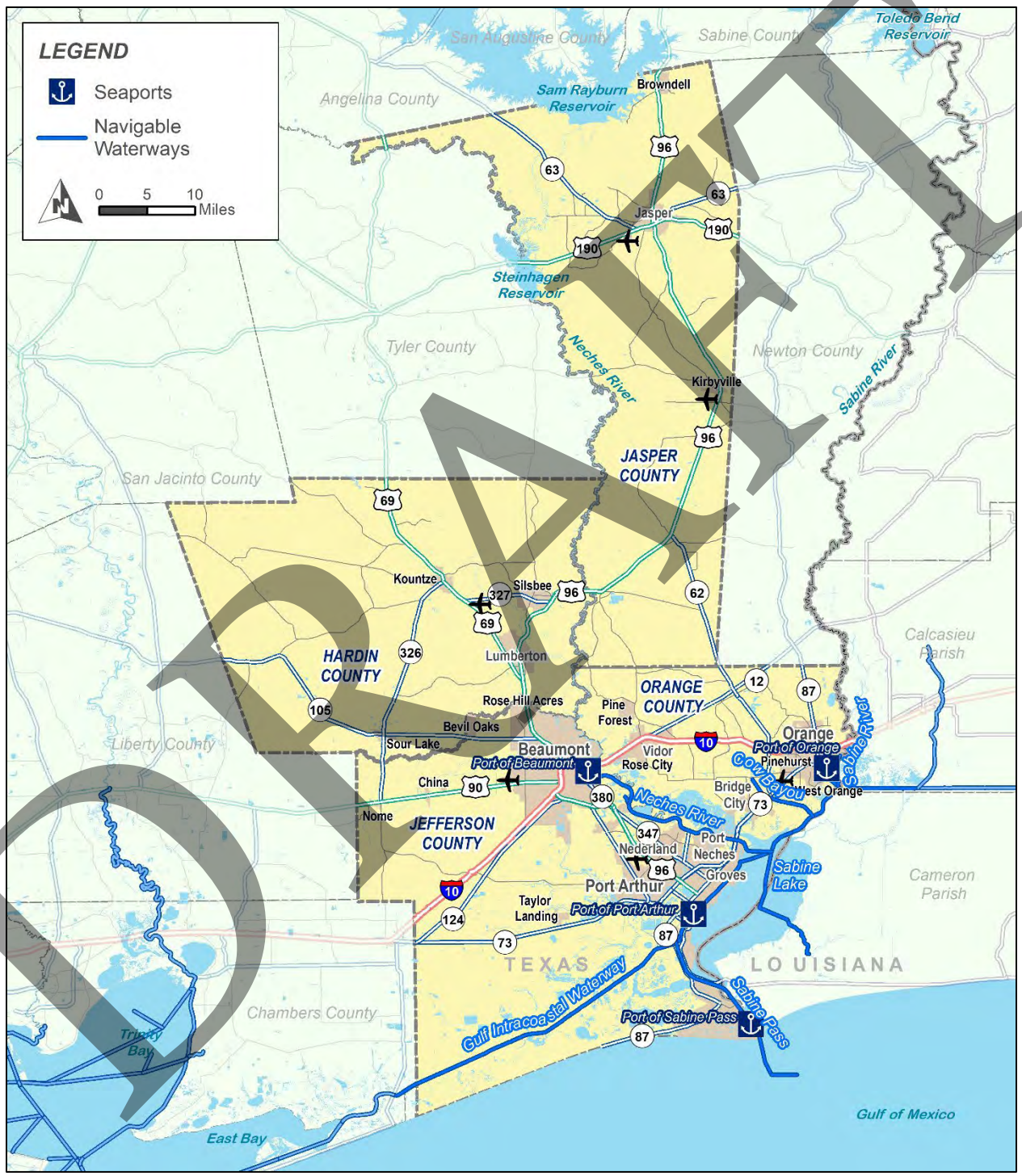


Figure 7-3: Ports and Waterways



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7.1.3.1 Port of Beaumont

The Port of Beaumont is located 84 miles east of Houston and 270 miles west of New Orleans, accessible from the Gulf of Mexico and the Intercoastal Waterway by the federally maintained Sabine-Neches Waterway. Beaumont is connected to the Mississippi River by the Gulf Intercoastal Waterway, allowing access to the inland waterway system servicing major cities located along the Mississippi River.

In October 2018, the US Commerce Department awarded the Port of Beaumont Navigation District a grant in the amount of $5 million to reconstruct three docks in support of the Port's Main Street Terminal 1 Dock Project. The improvement will support additional cargo which will increase economic activity and business growth within the region. This investment is estimated to create or retain 15,750 jobs and generate $9.8 million in private investment.

7.1.3.2 Port of Orange

The Port of Orange is located on the Sabine-Neches Waterway, it operates as a successful landlord port, complementing activities at larger ports on the Sabine-Neches Waterway and in the region. The port is also used for lay berthing. In 2013, the Port of Orange handled 837,869 tons of cargo. However, more recently the port has not handled any freight due to the loss of a key tenant and has instead focused on barge lay berthing, repairs, and new construction. The annual economic impact of the Port of Orange is $41.3 million.

The Port of Orange is connected to railroad by the Orange Port Terminal Railway which provides switching service to UP and BNSF. The port is accessible to I-10 and SH 87 for trucking. On-site, the port provides 2,300 feet of docking space at a depth of 30 feet, four berths, and eight warehouses. The Port of Orange provides services onsite, dry dock services, and shipyards that can accommodate new barge construction and repairs.

7.1.3.3 Port of Port Arthur

The Port of Port Arthur is located directly on the Gulf Intracoastal Waterway, only 19 miles from the Gulf of Mexico. The port has a channel depth of 40 feet and a width of 450 feet. The port is a military strategic port within the National Port Readiness Network. Recently, the port has emerged as a major break-bulk port for forest products, project cargo, steel, and military redeployments. Onsite, the port provides 48,159 square feet of shed storage space and 68,798 square feet of open storage space. The Port of Port Arthur can accommodate up to 150 rail cars dockside. Commodities the port handles are mostly rail oriented, including bulk liquids, wood pellets, military cargo, iron, steel, dry bulk, bagged cargo, bailed cargo, and project cargo. The KCS railroad provides a direct connection to the port. However, the port also moves about 35,000 outbound tons per year by truck with access to I-10 and US 90A. Diesel fuel moving through the port has destinations on the West Coast of South America (e.g., Ecuador, Chile) as well as the Caribbean. Many of the port's energy exports, including to the west coast of South America, are made possible by the expanded Panama Canal.

7.1.4 Air Cargo

JBRA covers an area of approximately 1,800 acres and has two paved runways. Renovated in 2009, the terminal facility is 24,000 square feet. American Eagle, a regional branch of American Airlines, operates flights daily to Dallas/Fort Worth International Airport. Over 30,000 passengers a year take flights from JBRA. JBRA averages 75 aircraft operations per day.

Atlantic Southeast Airlines is the only carrier that provides cargo services. However, the volume and tonnage of freight movements are limited. According to the 2007 Airport Master Plan feeder service by the larger express package carriers such as Federal Express and UPS, represents a viable potential for increasing air cargo at the airport. Additional airports in the region that are open to the public for personal aviation include Hawthorne Field in Kountze, Beaumont Municipal Airport, and Orange County Airport.

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7.1.5 Pipelines

Often unseen, the SETRPC area is served by a vast network of underground transmission lines for natural gas and refined resources. The region is crisscrossed with thousands of miles of pipelines that transport natural gas, oil, and petroleum products like ethylene. Many major transcontinental pipelines pass through or terminate within the SETRPC region, including the Keystone XL and Colonial Pipelines. Several pipelines from the Permian Basin terminate in Port Arthur, where natural gas is liquefied for export to Europe or Asia. Many pipelines also exist solely to move materials such as crude oil from ship to shore for refining, or vice versa for export. Due to proprietary concerns, very little public data exists about pipeline performance. Nonetheless, pipelines are critical for the safe and efficient operation of the area's petrochemical industry.

7.2 Recommendations and Strategies

Freight transportation needs are multimodal and regional, often crossing jurisdictional boundaries. To identify recommendations and strategies for the freight transportation system in the region, the SETRPC's recent Freight Mobility Plan (2022) was reviewed and summarized.

7.2.1 Recommended Freight Projects

The Regional Freight Mobility Plan recommended new and potential freight projects to address identified needs based on stakeholder feedback and data analysis. The recommended projects are presented as project packages – high-priority projects were combined with other closely located projects to create project packages.

Three of the top five project packages focus on I-10, the primary freight corridor in the SETRPC region. Other key access corridors include SH73/SH 82, SH 87, and US 69. Mobility improvement is a key need for these corridors, while SH 87 bridges west of SH 82 have infrastructure vulnerability issues. Other locations to improve in the short term include US 69, SH 327, and US 69 from Tram Road to Lumberton. Additionally, the Regional Freight Mobility Plan notes that monitoring mobility and safety conditions along US 90, an interregional connectivity corridor, is important, even though it is not part of the high-priority project packages. The recommended project packages from the Freight Mobility Plan are included in Table 7-1.

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Table 7-1: SETRPC Freight Mobility Plan - Recommended Project Packages

Project Package	Project Package Extents
1	I-10 from US 90 BUS to MLK Jr Drive
2	SH 73/SH 82 from Ta lor Bayou to Texas-Louisiana Border
3	I-10 from Jefferson County line to US 69
4	I-10 from SH 380 to Old US 90
5	SH 347 from SH 87 to FM 366
6	SH 87 from SH 73 to SH 82
7	SH 380 from US 69 to I-10
8	SH 87 bridges west of SH 82
9	US 69 from US 96 to Wheeler Road
10	US 69 from SH 73 to SH 347
11	SH 327 from S. 19th Street to US 96
12	Washington Boulevard from I-10 to San Antonio Street
13	US 69 from Tram Road to Lumberton
14	Phelan Boulevard from N. Major Drive to I-10
15	Calder Avenue from Phelan Boulevard to US 90
16	9th Avenue from SH 73 to FM 365
17	FM 365/SH 124 Intersection
18	SH 73 Bridge between Labelle Road and Boondocks Road
19	SH 73 Bridge on Mayhaw Bayou
20	SH 124 Bridge at 1.6 miles northeast of SH 73

Source: SETRPC Freight Mobility Plan, 2020

7.2.2 Recommended Freight Policies, Programs, and Studies

In addition to recommended project packages, the SETRPC Freight Mobility Plan also identifies recommendations for policies, programs, and future studies to support freight activity across the SETRPC region.

7.2.2.1 Policy Recommendations

The proposed policies include initiatives to improve freight service and funding, support for critical urban and rural freight corridors, increase public awareness of the economic importance of freight, maintain access for legal loads on freight corridors, reduce traffic delays, maintain design standards for freight delivery zones, and safeguard vulnerable communities and infrastructure from incidents.

The Freight Mobility Plan highlights the need for continuous identification of freight transportation needs and solutions, coordination between public and private sector entities, and support for workforce training programs and disadvantaged private sector entities.

Additionally, the Freight Mobility Plan emphasizes the assistance for non-highway modes of freight transportation and the balancing of water-based and rail freight services.

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7.2.2.2 Program Recommendations

The proposed program recommendations for the SETRPC region aim to address freight transportation challenges by coordinating with other transportation providers like TxDOT and the Army Corps of Engineers. The recommendations include upgrading US69/US96 to interstate standards, increasing vertical clearance to 18.5' on Texas Highway Freight Network corridors, and deepening channels on waterways. Specific needs include cost-effective roadway design to address drainage issues, strategic asset management for weather events, and accommodating larger vessels on waterways.

7.2.2.3 Recommendations for Future Studies

The Freight Mobility Plan recommends areas for policy or program decisions and future projects or studies related to freight issues. The recommendations include identifying potential "last mile" heavy/oversized cargo haul corridors, truck size, and weight restrictions, and "truck-friendly" route signage locations. Information and communications technologies should be used to inform land and waterside infrastructure, traffic, and weather conditions to freight users. Innovative funding strategies should be identified to support future freight investments. Best practices for weather issues on water-based freight transportation, truck parking demand, and engineering solutions at critical regional at-grade crossings should be identified.

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Chapter 8: Environment

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8.0 Introduction

Safer roadways and interchanges, reconstructed bridges, and new multimodal facilities serve to improve the regional transportation system, but the construction process and land acquisition associated with certain transportation projects could impact the surrounding land uses, natural environment, and community assets.

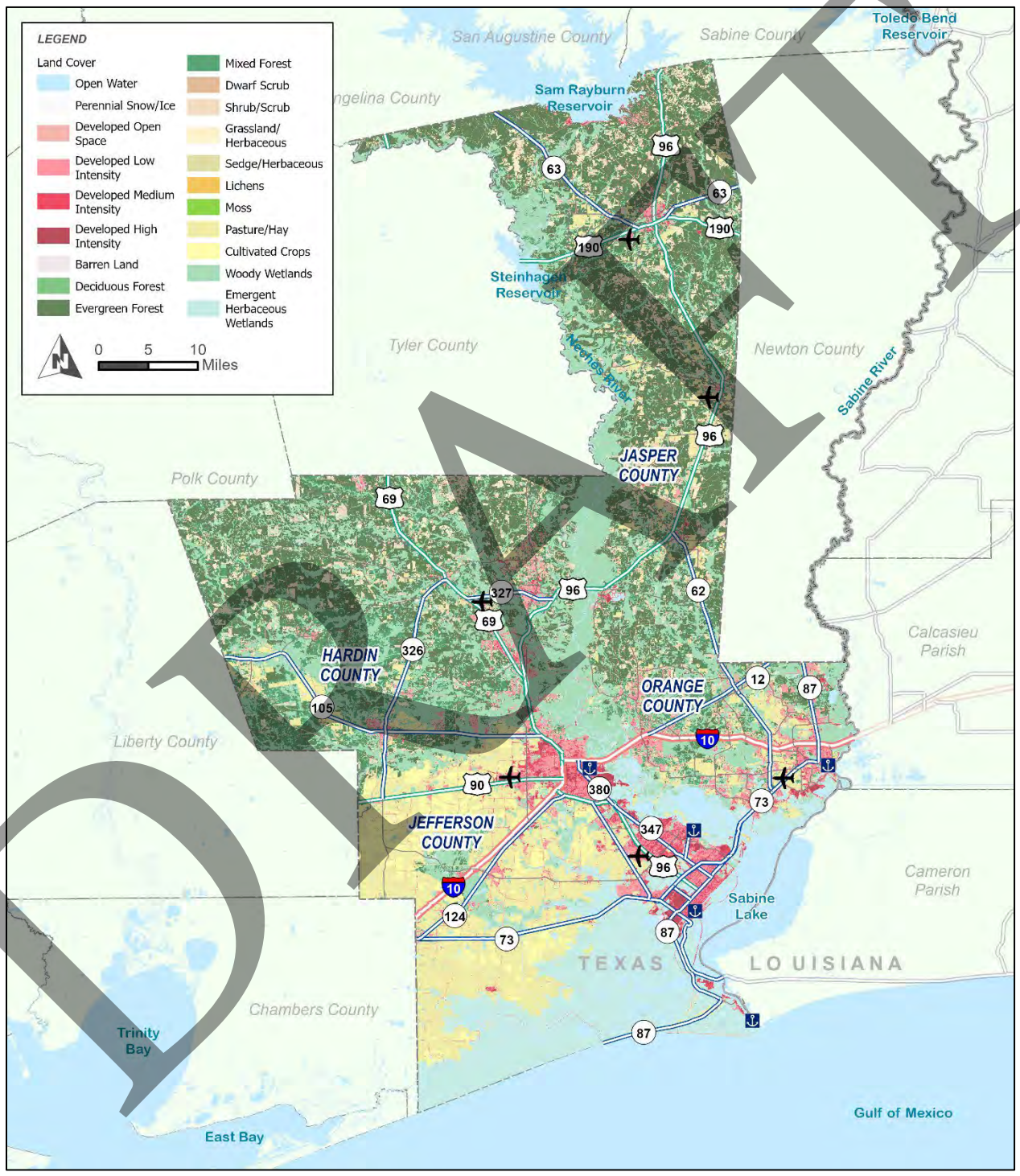
This chapter documents the existing land use patterns and environmental and cultural resources in the SETRPC region, assesses potential impacts on these assets and resources from development patterns and improvement projects identified in this MTP, and examines possible strategies to prevent or mitigate these impacts.

8.1 Existing Land Use

Land use and development is another major factor that could impact the environment. As the region grows, more land development may be required to support its growth. Furthermore, land use also directly influences the way the transportation system is developed. The location, density, and design of the activities carried out by residents of the region impact the amount of travel and travel modes on highways, roads, and other similar pathways in a transportation system.

For example, a school located within a neighborhood would more likely have children walking to it than would a school located along a major highway. Land use developments often create opportunities for expansion of the transportation network but could also hinder improvements. Therefore, it is important to consider both land use and transportation in conjunction to ensure the overall environmental health of a region. Figure 8-1 illustrates the existing land use pattern in the SETRPC region.

Figure 8-1: Existing Land Use Patterns



Source: National Land Cover Database. U.S. Geological Survey (2023).

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8.1.1.1 Jefferson County

The southern part of Jefferson County is largely marshland and lakes, much of which is contained within wildlife reserves and parks, reaching to the beaches overlooking the Gulf of Mexico. Waterways are also prevalent throughout the county. The Gulf Intracoastal Waterway, the Neches River, and Sabine Lake in lower Jefferson County provide shipping routes for industrial maritime operations and pleasure craft. The numerous bayous, rivers, and lakes in the region also support recreational boating and water sport activities.

Beaumont, Port Arthur, Port Neches, Nederland, and Groves are the major cities in Jefferson County. These larger cities generate most of the economic activity within the county and house the majority of residents. Land use in the central areas of these cities are predominantly commercial, with some industrial use. Other industrial uses are located on the periphery of the cities. Industrial activities include oil refining, oil and gas drilling, and other types of petrochemical operations; port facilities and maritime shipping operations; marine construction and repair; and sulfur, salt, sand, and gravel mining. Commercial land use in the city center is mostly service oriented businesses and small retail shops.

Areas on the periphery of these cities consist of residential and commercial districts as well as some agricultural areas. Residential areas are primarily low-density single-family residential units, while agricultural areas consist of pastures, ranches, and rice farms. Commercial districts consist of large shopping or strip malls with an assortment of "big box" stores and restaurants.

Institutional land uses are also prevalent in Jefferson County. Federal and state prisons are located in the central portion of the county, while hospital facilities are located in Beaumont and Port Arthur. Jefferson County includes the small communities of Bevil Oaks, Nome, Taylor Landing, and China, which are primarily residential in nature, with a few small shops. Land use in rural areas of Jefferson County is mostly agricultural and consists of rice farms, ranches, and crawfish farms. Large tracts of land in these areas are also set aside for use as drainage or irrigation canals.

8.1.1.2 Orange County

The southeastern half of the county is comprised of gulf prairies and marshes, while the northwestern half consists of piney woods. Orange County contains many waterways and canals that are used to support local irrigation and drainage needs. Natural habitats and important environmental resources have also been reserved along natural wetlands and waterways, such as the TxDOT wetlands mitigation bank at Blue Elbow Swamp along the Sabine River and I-10 and the Shangri La Botanical Gardens Center along Adams Bayou.

The larger cities in Orange County include Bridge City, Orange, Pinehurst, Vidor, and West Orange. The predominant land use in these cities is a mix of industrial and commercial in the central areas. Industrial activities in these cities include petrochemical facilities, oil wells, and gas drilling; port facilities and other associated industrial maritime operations; clay, sand, and gravel mining; sawmills, and other forestry production operations. Commercial districts in Orange County consist of a few "big box" stores and various retail and service businesses in small strip malls. All cities in Orange County have large residential districts concentrated along their outer edges. Rural areas in Orange County include the communities of Mauriceville, Orangefield, Pine Forest, and Rose City. These small communities act as suburbs to larger cities in the SETRPC area. Land use within these cities is almost exclusively residential, with a few small businesses concentrated in their centers or next to major roadways. Land uses outside these areas are dedicated to rice farming, forestry, or petrochemical operations.

8.1.1.3 Hardin County

Hardin County, in the Big Thicket of southeast Texas, is part of the larger east Texas timberlands region. The dense pine and hardwood forests of the Big Thicket dominate the county's land area, providing

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residents and tourists with recreational activities. Pine Island and Little Pine Island Bayous join Village and Cypress Creeks to drain the area into the Neches River, which forms the eastern county line.

In terms of development, Hardin County is mostly rural, and includes the incorporated communities of Kountze, Lumberton, Silsbee, and Sour Lake. Land use within these cities is predominantly residential, with a few small businesses. While these cities serve as suburbs to the larger cities in Jefferson County, each continues to have a strong local economy supported by several local industries. Both Silsbee and Kountze have rail yards, while Lumberton has a retail district along US 96 and a large forest product manufacturing facility. Lumberton and Silsbee are experiencing a growing number of commercial businesses located along US 69, US 96, and SH 327. In the rural areas of Hardin County, land is dedicated to agriculture and forestry, as well as ranches. Industrial land use is also located in rural areas and includes paper manufacturing and sawmills.

8.1.1.4 Jasper County

Jasper County transferred from the Deep East Texas Council of Governments to the South East Texas Regional Planning Commission in 2021. The county comprises 907 square miles of the east Texas timberlands, with elevations ranging from 25 to 400 feet above sea level. Along the northern edge and the bottom third of the county, the terrain is generally undulating while the rest of county is generally flat. Like Hardin County, mixed pine and hardwood forests cover much of the landscape in Jasper County. Principal water sources include the Sam Rayburn Reservoir, Lake B.A. Steinhagen, Neches River, and Angelina River.

Major cities in the county are, the City of Jasper, the county seat, Kirbyville, and Browndell. Other communities in the county include Buna, Evadale, and Sam Rayburn among others. Land use in the cities is generally residential in nature, with small businesses along the main streets. In the City of Jasper, tourism is a developing economic sector due to destinations such as Sam Rayburn Lake, Martin Dies Jr. State Park, and other national forests in proximity to the city. The establishment of the Jasper Airport Industrial Park has also contributed to a growing industrial sector in the area. Land use in rural areas of Jasper County is mostly forested or agricultural with large tracts of land used for timber, oil, and natural gas operations.

8.2 Natural and Cultural Assets

8.2.1 Natural assets

Natural assets in the SETRPC region include rivers, wetlands, bayous, public parks, beaches, and wildlife areas. These environmental features are critical to the regional ecosystem and contribute to the attractiveness of the region. However, transportation projects may contribute to their degradation. Hence, developing in harmony with natural and geographical features, instead of against them, is a smart investment strategy for a sustainable future. For instance, recent hurricanes have caused severe flooding along roadways and other transportation infrastructure in the region due to its location along the Gulf Coast. Transportation projects and roadway improvements should therefore avoid floodplains. Figure 8-2 provides a broad overview of natural resources located within the SETRPC region based on available GIS data. This inventory does not identify the various levels of potential impacts and does not waive the responsibility of a project sponsor to complete a more-in depth environmental assessment.

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8.2.2 Cultural and Community Assets

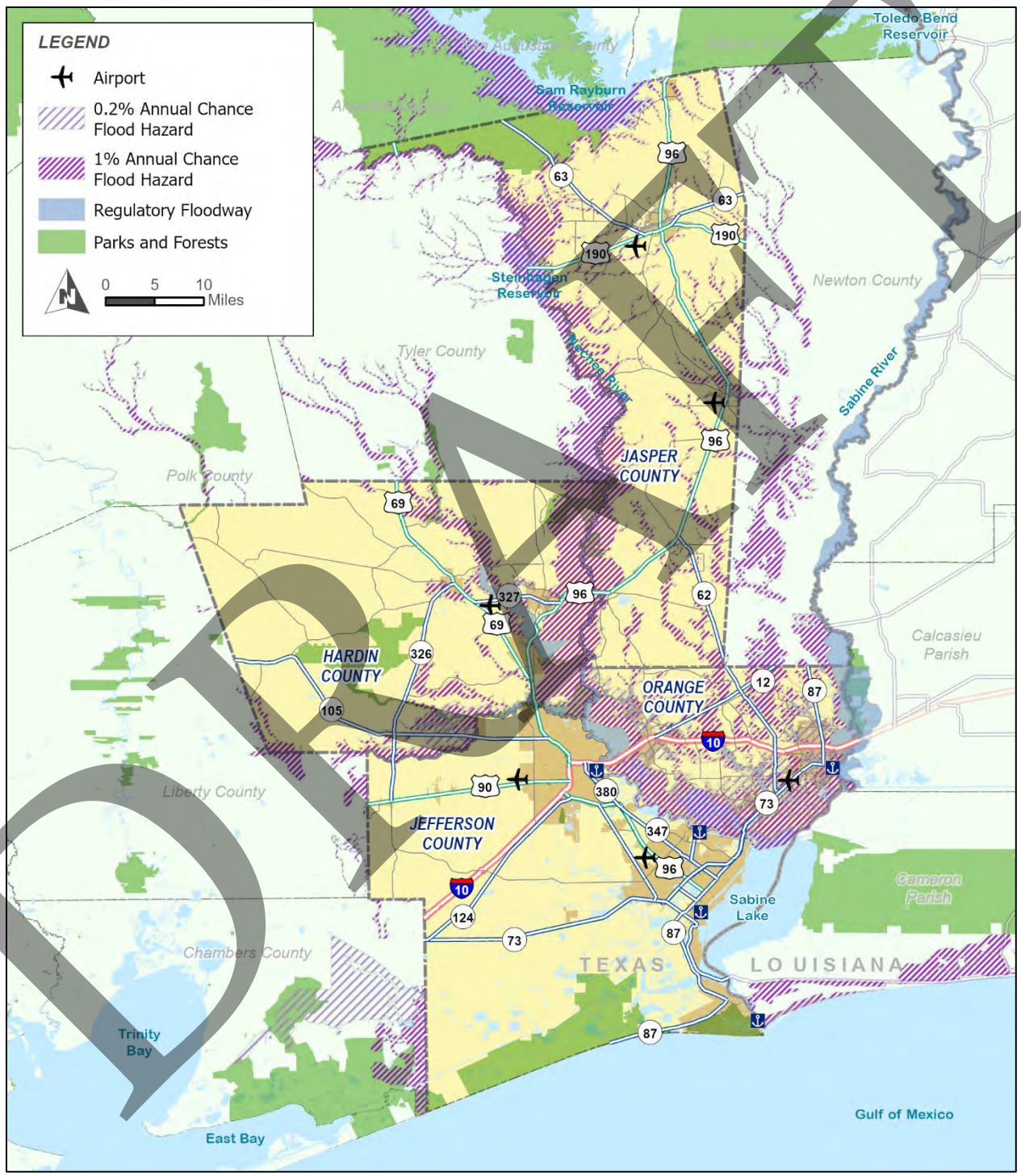
Cultural and community resources are significant and meaningful assets that serve the needs of a community and enrich its identity. For the purposes of this analysis, cultural and community resources comprise schools, libraries, museums, historic sites, airports, and cemeteries among others that are found within the region. These assets should be preserved and protected, as they are popular recreation and tourism destinations for residents and visitors of all ages, as well as important community landmarks and critical service facilities. Depending on the type of facility, careful consideration and planning for transportation projects and investments should be undertaken to avoid negative impacts to the community.

Most cultural and community resources in the region are located within city boundaries. Schools consist of both public and private facilities and higher education facilities including Lamar University, Lamar Institute of Technology, Lamar State College-Orange, and Lamar State College-Port Arthur. Parks or recreational facilities include pocket parks and larger regional parks, as well as community centers, convention or exhibition halls, performing arts centers, country clubs, golf courses, and stadiums. Figure 8-3 illustrates the cultural and community resources located in the SETRPC region including historic landmarks, museums and libraries, schools, and cemeteries.

Historic sites include those deemed historically significant at either the local, state, or national level. Under Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended in 1976, 1980, and 1992) and Section 4(f) of the Department of Transportation Act of 1966, the Federal Highway Administration (FHWA) is required to identify, evaluate, and protect properties of historical significance. The National Register of Historic Places (NRHP), as administered by the National Park Service, is the official list of the nation's historic landmarks and sites considered historically important and worthy of preservation. Planning for transportation projects and investments should consider and avoid impacts to these sites.

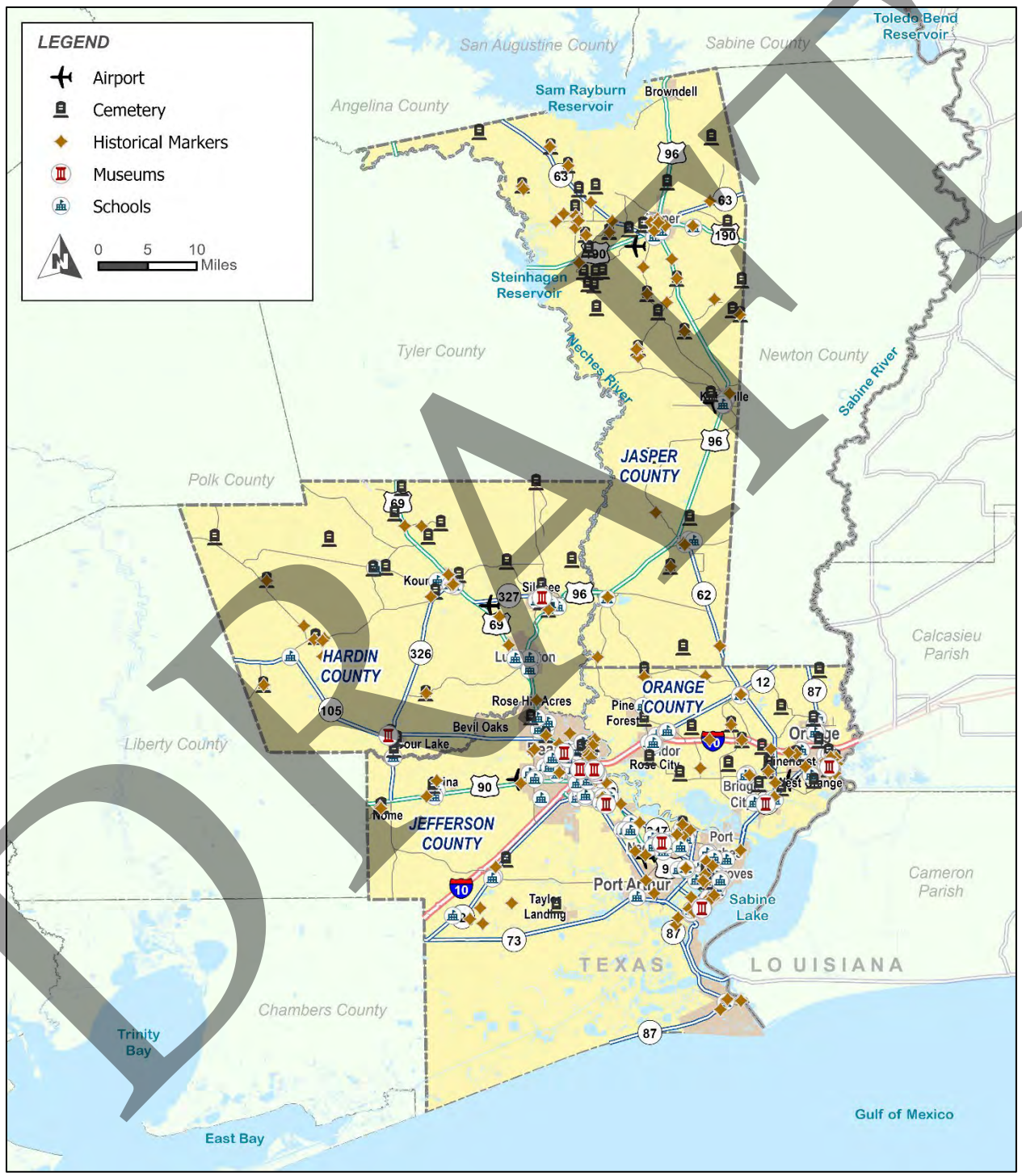
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Figure 8-2: Inventory of Natural Resources and Flood Hazard Areas



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Figure 8-3: Inventory of Cultural and Community Resources



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8.3 Air Quality

Air quality continues to play a key role in metropolitan transportation planning. The National Ambient Air Quality Standards (NAAQS) are federal standards that set allowable concentrations and exposure limits for certain pollutants. Primary standards aim to protect public health, while secondary standards protect public welfare. Examples of public welfare include damage to crops, vegetation, and buildings. Air quality standards have been established for the following six criteria pollutants: ozone, carbon monoxide, particulate matter, nitrogen dioxide, lead, and sulfur dioxide. If monitored levels of any of these pollutants violate the NAAQS, the Environmental Protection Agency (EPA), in cooperation with the State of Texas, will designate the contributing area as being in "nonattainment" of air quality standards.

In the early 1980s, SETRPC formed an Air Quality Advisory Committee (AQAC) to develop an integrated approach to manage the region's air quality. The AQAC is a diverse, broad-based group composed of local elected officials, private industry, government, chambers of commerce, unions, residents, and environmental groups. In 1989, the AQAC successfully obtained voluntary funding from area industries and established an on-going Regional Meteorological and Air Quality Monitoring Network.

To improve air quality in the region, the AQAC is continuing its effort to:

- Inform the public about the immediate and long-range air quality concerns that face southeast Texas.
- Advise elected public officials and the public about the impact of federal clean air legislation.
- Help identify air quality problems that affect economic growth and develop solutions.
- Work with the Texas Commission on Environmental Quality (TCEQ) to develop air quality plans for southeast Texas.

8.3.1 Emissions

Air pollution in the SETRPC region includes transported air pollutants that combine with locally produced emissions to produce ozone levels that have previously exceeded the NAAQS. An analysis of air movements reveals that high ozone levels in the SETRPC region would not have occurred if air pollution from outside the SETRPC region had not been transported into the region. Variations in temperature, wind speeds, and air mass movements also contribute to the frequency and severity of ozone in southeast Texas. Air quality emissions are broken down into four major categories as shown in Table 8-1.

Table 8-1: Emission Sources

Source	Description
Point	Generated by industrial operations and comprise the majority (59%) of NOx emissions and 9% of VOC emissions in the SETRPC region
Area or Non-road	Produced from engines, trains, planes, boilers, solvents, paints, dry cleaning facilities, and construction equipment and comprise 15% of all NOx and 5% of all VOC emissions in the SETRPC region.
On-road or Mobile	Come from cars and trucks and make up 25% and 3% of NOx and VOC emissions, respectively.
Biogenic	Naturally produced as a result of plant photosynthesis, the amount of which is based on the quantity and type of vegetation in the area. While biogenic emissions only comprise 1% of NOx emissions, they account for 83% of VOC emissions in the SETRPC region.

Source: Texas Commission on Environmental Quality

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8.3.2 Attainment Status

The Beaumont-Port Arthur ozone maintenance area (Hardin, Jefferson, and Orange Counties) was redesignated from nonattainment to attainment-maintenance for the 1998 eight-hour ozone National Ambient Air Quality Standard (NAAQS), effective November 19, 2010. The area was initially designated attainment/unclassifiable for the subsequent 2008 and 2015 eight-hour ozone NAAQS and remains in attainment for both standards. When the 1997 eight-hour ozone NAAQS was revoked by the EPA, transportation conformity requirements for that standard were also revoked (effective April 6, 2015). Due to its designation as attainment/unclassifiable for the 2008 and 2015 eight-hour ozone NAAQS, the Beaumont-Port Arthur area has not been subject to transportation conformity requirements since 2015.

On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit issued an opinion in the case South Coast Air Quality Management District v. EPA, 882 F.3d 1138 (South Coast II). The case was a challenge to EPA's 2008 eight-hour ozone NAAQS state implementation plan (SIP) requirements rule (80 FR 12264), which revoked the 1997 eight-hour ozone NAAQS as part of implementing the more stringent 2008 eight-hour ozone NAAQS. The court's decision vacated parts of the EPA's 2008 eight-hour ozone NAAQS SIP requirements rule, including waiving requirements for transportation conformity for maintenance areas under the revoked 1997 eight-hour ozone NAAQS. In response to the South Coast II decision, the EPA published Transportation Conformity Guidance for the South Coast II Court Decision on November 29, 2018. The guidance document was published to assist affected areas as they reestablished compliance with transportation conformity requirements under the revoked 1997 eight-hour ozone NAAQS. Based on the November 2018 guidance, affected areas may demonstrate conformity if the following requirements are met:

- Use of latest planning assumptions.
- Interagency consultation.
- Fiscal constraint for the MTP and TIP.
- Timely implementation of transportation control measures (TCM), if applicable.

8.3.3 Current Initiatives

The SETRPC-MPO recognizes the value of air quality standards and is cognizant of the importance in maintaining the region's attainment status. The MPO's air quality efforts work to keep southeast Texas elected officials and residents informed of the importance of clean air issues through the following air quality data and educational programs.

8.3.3.1 Air Quality Monitoring

With funding from industries in the region, the SETRPC operates an air monitoring network made up of numerous air monitoring stations located throughout Hardin, Jefferson, and Orange counties. With real-time data from those sites, the agency maintains a comprehensive database that provides information on the air quality of the region. The Texas Commission on Environmental Quality (TCEQ), through a data marketing agreement with SETRPC, utilizes the real-time data to help forecast Ozone Action Days and to develop air quality plans for southeast Texas.

8.3.3.2 Ozone Action Day

This voluntary program is designed to increase public awareness by encouraging individuals to reduce ozone producing activities. The program promotes voluntary actions like reducing excess idling in drive-through lanes, refueling vehicles after 6 PM, postponing the use of small gasoline engines like lawnmowers until early evening, combining several trips into one, keeping vehicles properly maintained, and sharing a ride to work or school. The Ozone Action Day program involves local industries, small businesses, and local governments that work together to improve air quality in the SETRPC region.

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8.3.3.3 Clean Cities

The SETRPC-MPO and TxDOT initiated the Clean Cities Program, a locally based partnership between government and industry. The program is coordinated by the US Department of Energy with the goal of expanding the use of alternative fuels and vehicles. The Clean Cities Coalition promotes public awareness of alternative fuels by informing and educating city/county officials, school districts, ports, special purpose districts, major and small private fleet operators, and residents about the benefits of alternative fuels.

8.4 Climate Change

Although there is currently no official mandate concerning how climate change should be addressed in the MPO planning process, FHWA's Texas Division office recommends that MPOs include a short discussion on Greenhouse Gases/Climate Change in their MTPs. In 2021, the FHWA and the FTA jointly issued a letter that stated that regional offices should work with State DOTs, MPOs, and public transportation providers to ensure that transportation plans and infrastructure investments help achieve the national greenhouse gas (GHG) reduction goals of 50-52 percent below 2005 levels by 2020, and net-zero emissions by 2050. According to the FHWA report *Integrating Climate Change into the Transportation Planning Process*, there is general scientific consensus that the earth is experiencing a long-term warming trend and that human induced increases in atmospheric GHGs may be the predominant cause. In 2021, the EPA estimated that approximately 28 percent of GHG emissions in the US come from transportation, and 81 percent of the transportation sector's emissions are generated by road use.

Recognizing the adverse contributions of the transportation sector to climate change, the federal government has launched multiple programs to build a more sustainable transportation system. Investments to expand transit services, promoting active mobility options, and introduce cleaner fuels and transitioning to more fuel-efficient vehicles are some of the strategies under the U.S. National Blueprint for Transportation Decarbonization launched in 2023 that contribute to reducing emissions of mobile source air pollutants and greenhouse gases. Public education regarding the effects of auto-dependent land use and the impact of development patterns that require excessive commuting or other auto travel may also contribute to greater recognition, over time, of the connection between individual lifestyle choices and climate change. As fuel prices continue to rise, the need to reduce fossil fuels and turn to renewable sources and conservation measures has never been greater.

The SETRPC region is particularly vulnerable to hurricanes and tropical storms, which cause severe flooding in the region. As global temperatures continue to rise, the intensity of these climate events is expected to increase. The U.S. DOT Climate Action Plan published in 2021 indicated that climate variability poses threat to the overall transportation system. Impacts of climate change on the transportation system include accelerated deterioration of roadways, flooding, and damage to highways, weakened structures such as bridges, rail and runway buckling, and reduced water levels in rivers that could affect the passage of ships. Given these threats, it is critical to ensure that the regional transportation infrastructure and operational systems are resilient to the impacts of climate change.

8.4.1 Climate Mitigation

Climate mitigation involves reducing GHG emissions and stabilize levels of GHG that already exist in the atmosphere. In the transportation sector, four primary strategies contribute to climate mitigation:

8.4.1.1 Improve System and Operational Efficiencies

Traffic flow improvements can be achieved through Intelligent Transportation Systems (ITS), route optimization, and improved intermodal links and system connectivity. Other system efficiencies could be achieved by switching to more energy-efficient modes. The City of Beaumont recently upgraded existing

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traffic control equipment and installed fiber optic communications, linking several signals to an Advanced Traffic Management System.

8.4.1.2 Reduce Vehicle Miles Traveled (VMT)

Implementing land use strategies that concentrate development can lessen the need to drive. Providing HOV lanes, offering transit options, constructing pedestrian and bicycle facilities, and promoting travel demand management programs and telecommuting can also reduce the number of vehicle trips. Pricing mechanisms such as road pricing, mileage-based car insurance, and gas taxes can motivate people to drive less. SETRPC-MPO promotes carpooling and rideshare activities.

8.4.1.3 Transition to Lower GHG Fuels

Replacing gasoline and diesel with fuels such as biodiesel and natural gas can reduce the levels of GHG emissions over their lifecycle – from production and refining to distribution and final use. In the SETRPC region, the MPO promotes the use of alternative fuel vehicles.

8.4.1.4 Improve Vehicle Technologies

Promotion of the development of more fuel-efficient vehicles, such as plug-in electric hybrids, via policy decisions such as the stringent Corporate Average Fuel Economy (CAFE) standards, can improve air quality and reduce toxic emissions. Tax credit programs can also encourage the purchase of more fuel-efficient vehicles. BMT and PAT, the fixed route transit agencies in the SETRPC area, utilize natural gas and propane, respectively, to fuel their fixed route buses.

SETRPC-MPO is engaged in many activities and programs and anticipates that these efforts will need to be increased as climate change intensifies. Initiatives such as Ozone Action Day, the Regional Public Transportation Coordination Plan, and the Alternative Fuels program will reduce greenhouse gas emissions in the region. As more consistent methods to measure GHG emissions are developed, and as legislative and regulatory mandates emerge, the MPO is poised to address them accordingly. In the meantime, the MPO will continue to work with its regional planning partners to make transportation decisions that conserve and optimize non-renewable resources, promote the use of renewable resources, and implement strategies to decrease greenhouse gases and air pollutants.

8.4.2 Environmental Justice

Environmental justice refers to the fair treatment of minority and low-income populations who may suffer unduly from programs, policies, and other activities. Historically, impacts of climate change tend to disproportionately affect these population groups due to their socioeconomic status and the vulnerable environments that they are exposed to. Hence, it is vital to evaluate environmental justice in any transportation plan.

In summary, all population groups will benefit from the planned transportation improvements in the region, including increased mobility within the community resulting from greater transportation options. However, all segments of the population who live adjacent to roadway construction projects may endure short-term construction-related impacts related to visual changes, noise, and alterations to access.

8.5 Impact Mitigation Strategies

8.5.1 NEPA Impact Mitigation

The FAST Act requires MTPs to include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including those that may have the greatest potential to restore and maintain the environmental functions affected by the plan. In addition, the FAST

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Act requires an expanded focus on resiliency of the transportation system as well as activities to reduce stormwater runoff from transportation infrastructure.

Potential environmental mitigation activities must be developed in consultation with federal, state, tribal, wildlife, land management, and regulatory (resource) agencies. The SETRPC-MPO is committed to minimizing and mitigating the negative effects of transportation projects on the natural and built environment to preserve the region's quality of life. In doing so, the MPO recognizes that not every project will require the same type or level of mitigation.

Some projects involve major construction with considerable earth disturbance, while others, like intersection improvements, street lighting, and resurfacing projects, involve minor construction and minimal, if any, earth disturbance. The mitigation efforts used for a project should be dependent upon how severe the impact on environmentally sensitive areas is expected to be.

The National Environmental Policy Act (NEPA) suggests mitigation in the following five steps:

11) **Avoiding the impact altogether** by not taking a certain action or parts of an action.

12) **Minimizing impacts** by limiting the degree or magnitude of the action and its implementation.

13) **Rectifying the impact** by repairing, rehabilitating, or restoring the affected environment.

14) **Reducing or eliminating the impact** over time by preservation and maintenance operations during the life of the action.

15) **Compensating for the impact** by replacing or providing substitute resources or environments.

Source: 40 CFR 1508.20

Effective mitigation starts at the beginning of the environmental process, not at the end. Mitigation must be included as an integral part of the alternatives development and analysis process. Table 8-2 below details possible mitigation activities and measures that could be considered when dealing with environmental impacts. Many of the measures are considered by the SETRPC-MPO during the project development phase. Each project will need to be reviewed to ensure that the appropriate mitigation strategy is applied during the planning and implementation phases.

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Table 8-2: Mitigation Measures

Resource	Mitigation Measures
Agricultural Areas	Avoidance, minimization, compensation (could include preservation, creation, restoration, in-lieu fees, riparian buffers); design exceptions and variances; environmental compliance monitoring*.
Air Quality	Transportation control measures; transportation emission reduction measures; adoption of local air quality mitigation fee program; development of energy efficient incentive programs; adoption of air quality enhancing design guidelines.
Cultural Resources	Come from cars and trucks and make up 25% and 3% of NOx and VOC emissions, respectively.
Endangered and Threatened Species	Naturally produced as a result of plant photosynthesis, the amount of which is based on the quantity and type of vegetation in the area. While biogenic emissions only comprise 1% of NOx emissions, they account for 83% of VOC emissions in the SETRPC region.
Forested and Other Natural Areas	Avoidance, minimization; replacement property for open space easements to be of equal fair market value and of equivalent usefulness; design exceptions and variances; environmental compliance monitoring.
Neighborhoods, Communities, Homes, and Businesses	Avoidance, minimization; context sensitive solutions for communities (appropriate functional and aesthetic design features).
Parks and Recreation Areas	Avoidance, minimization, mitigation; design exceptions and variances; environmental compliance monitoring.
Wetlands, Flood Zones, and Water Resources	Avoidance, minimization; design exceptions and variances; environmental compliance monitoring.

* Environmental compliance monitoring is a process of oversight designed to determine conformity with environmental legal mandates, regulations, lease stipulations, and conditions of approval. Conditions of approval include mitigation measures and other requirements imposed on applicants.

8.5.1.1 Project Screening

The proposed project recommendations for the SETRPC MTP 2050 were evaluated to determine the impacts on the natural resources, cultural resources, and environmental justice populations of the region. This analysis involved overlaying project alignments and locations onto a series of GIS layers representing sensitive natural and cultural resources, and sociodemographic data. Environmental resources and populations that were directly or indirectly impacted were noted. As projects are programmed, additional evaluations of impacts will need to be conducted at the project level. Impacts should be mitigated through an alternatives analysis process.

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8.5.2 Stormwater Mitigation

Stormwater is defined as rainfall runoff that flows across the ground and impervious surfaces such as roads, parking lots, and buildings. Stormwater includes overland water flow and the water flow in ditches. When measures are not taken to reduce or mitigate the stormwater from surface transportation, assets are at risk of disruption and damage.

Urbanization, including transportation activities, increases stormwater volume and velocity by increasing the rate of stormwater runoff from an impervious surface. Rapid runoff from impervious surfaces increases the propensity of flooding, soil erosion, sedimentation, stream bank erosion and channel enlargement, and pollution of waterways.

For the State of Texas, the TxDOT *Hydraulic Design Manual: Storm Water Management* provides guidelines to reduce or mitigate the impacts of stormwater from surface transportation. This manual provides recommended stormwater management measures that are both structural and nonstructural including:

- Erosion control to minimize erosion and sediment transport.
- Stormwater detention and retention systems to reduce peak runoff rates and improve water quality.
- Sedimentation and filtration systems to remove debris, suspended solids, and insoluble pollutants.
- Vegetation buffers to reduce transport of pollutants.

The manual recommends best management practices to manage stormwater runoff including detention and retention ponds, rock filter dams, silt fences, and vegetation to filter and slow the flow of water. As the SETRPC region continues to develop, policies and design standards will become increasingly important to manage stormwater runoff from surface transportation.

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Chapter 9: Safety, Security, and Resiliency

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9.0 Introduction

The safety, security, and resiliency of the regional transportation system has increasingly become a crucial component of the metropolitan planning process. MPOs are responsible for coordinating and communicating with federal, state, and local agencies and officials involved with the planning of the safety, security, and resiliency of the transportation system for users of both motorized and nonmotorized transportation modes.

9.1 Safety and Security

Safety may be defined as the freedom from unintentional harm. When planning for transportation system safety, it is important to consider how the system can operate efficiently while maintaining the safety of all system users. Projects or programs intended to improve safety of the transportation system include police surveillance programs, intelligent transportation systems (ITS), and geometric design improvements at high crash locations.

Security may be defined as the freedom from intentional harm. Security of critical infrastructure is increasingly important for the SETRPC area. Planning for transportation security includes preventing, managing and responding to threats against the regional transportation system. These threats could include a variety of events, such as natural disasters, terrorism, or hazardous spills, all of which endanger the lives of people and important transportation infrastructure. In the SETRPC region, safety and security of the transportation system is coordinated within various agencies at the federal, state, and local levels. These are discussed in the following subsections.

9.1.1 Texas Strategic Highway Safety Plan

The Texas Strategic Highway Safety Plan (SHSP) identifies safety needs and directs investment to the reduction of highway fatalities and serious injuries on public roads. The SHSP was produced by reviewing national crash initiatives and emphasis areas from key publications and professional organizations, examining Fatal Analysis Reporting System (FARS) crash data, and consulting with various stakeholders throughout Texas. Under the FAST Act, regular updates to the SHSP are required.

The most recent version of the SHSP was published in 2022. It includes the following seven emphasis areas: distracted driving; impaired driving; intersection safety; occupant protection; post-crash care; roadway and lane departures, vulnerable road users and speeding.

9.1.2 TxDOT Beaumont District

The TxDOT Beaumont District works on behalf of the State and in coordination with the SETRPC-MPO to carry out transportation safety and security planning tasks and activities. It partners with other state, federal, and local entities to enhance safety on the regional roadway system through a variety of focused traffic safety programs. TxDOT also collects crash data from law enforcement agencies and evaluates the cause of crashes and fatalities to develop projects that make the roadways safer. If crashes are infrastructure related, TxDOT plays a vital role in improving road design and configurations through roadway improvement projects. The SETRPC-MPO continues to work with federal, state, and local agencies to evaluate the safety of the regional roadway system and identify, develop, fund, and construct projects to improve roadway safety. The SETRPC-MPO will also work to maintain awareness of various security initiatives in the region.

9.1.3 Homeland Security and Emergency Management Planning Division of the SETRPC

The Homeland Security and Emergency Management Planning Division (HSEMPD) was established by the SETRPC in 2003 in response to the needs of local elected officials and first responders for coordinating regional initiatives that enhance security and emergency preparedness. Although the HSEMPD does not serve in an emergency operations capacity, the HSEMPD assists local emergency response officials with the development and implementation of plans that effectively respond to natural and manmade disasters. The HSEMPD assess and analyzes local needs, facilitates regional compliance with federal and state requirements, procures and manages grants and contracts, and coordinates with other regions in Texas. The HSEMPD provides the following functions for regional emergency management:

- **Regional Mitigation Action Plan (RMAP).** Utilizing a grant from the Texas Department of Emergency Management (TDEM), the SETRPC led the development of the RMAP for the SETRPC area. The Federal Emergency Management Agency (FEMA) requires regions to maintain an RMAP for local jurisdictions to continue receiving federal and/or state funds for disaster mitigation. The RMAP for the SETRPC area was approved by FEMA in 2007 and updated in 2017.
- **Emergency Planning.** HSEMPD provides technical support to jurisdictions creating, expanding, and/or enhancing emergency management plans. It serves as a liaison with state officials regarding emergency planning and mutual aid.
- **Homeland Security Coordination, Planning, and Funding.** The TDEM serves as the state administrative agency for federal Homeland Security funds. The Emergency Management Planning Advisory Council (EMPAC) and the Law Enforcement Terrorism Prevention Program (LETPP) serve to oversee the Homeland Security funds allocated to the SETRPC region.
- **Advocacy.** HSEMPD facilitates advocacy activities among local first responders to ensure the maximum amount of state and federal Homeland Security funds are directed to fulfill regional needs. A risk-based funding formula developed by local jurisdictions working collaboratively with the SETRPC was accepted by the TDEM through HSEMPD advocacy efforts.
- **Training.** HSEMPD holds an annual emergency management exercise to practice regional preparedness and emergency response. The division also provides training to local officials regarding mitigation action plans required by state and federal regulations.

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- **South East Texas Regional Interoperable Plan (SETRIP).** The SETRIP identifies short term, intermediate, and long-term regional interoperable equipment needs to ensure first responders can communicate in the event of a multi-jurisdictional or regional disaster. Southeast Texas Alerting Network (STAN) is a messaging and notification system that informs the population of the SETRPC area of emergencies and other important events in the area. Through STAN, emergency management officials can notify registered individuals about emergencies, industry, or weather events occurring in the SETRPC region.
- **Southeast Texas Regional Alerting and Information Network Portal (SE Texas RAIN):** SE Texas RAIN was established by a regional coalition of county judges following Hurricane Harvey in 2017 to improve public access data on rainfall, streamflow, and stream and reservoir levels in major streams, bayous, and reservoirs for Hardin, Jasper, Jefferson, Newton, and Orange Counties. The purpose of the SE TEXAS RAIN website (http://www.setexasrain.org) is to provide information in a user-friendly format directly to the public to assist them in making informed decisions during threatening weather conditions.
- **Sabine-Neches Chief's Association (SNCA).** The SNCA is a mutual aid organization comprising public and private organizations that collaborate to achieve preparedness, prevention, response, and recovery coordination during emergency situations and disasters.

9.1.4 Regional 9-1-1 System

9-1-1 is a three-digit telephone number that has been set aside to be used in the event of an emergency as a means of calling for police, fire, or emergency medical assistance. The SETRPC implemented an Enhanced 9-1-1 system within the region in December 1991. The SETRPC continues today to serve as the primary agency for the administration, maintenance, and oversight of the 9-1-1 system. Currently, preparations are being made to integrate video reporting of incidents through cell phone cameras, which will help response teams render assistance. The SETRPC 9-1-1 Network is also responsible for address maintenance in the unincorporated areas of the region.

9.1.5 Emergency Evacuation

Hurricanes and tropical storms often make landfall and cause damage to the Texas Gulf Coast. Hurricanes range in size and intensity, and the accompanying high winds, storm surge, and rainfall cause significant damage to public infrastructure, private property, and even loss of life.

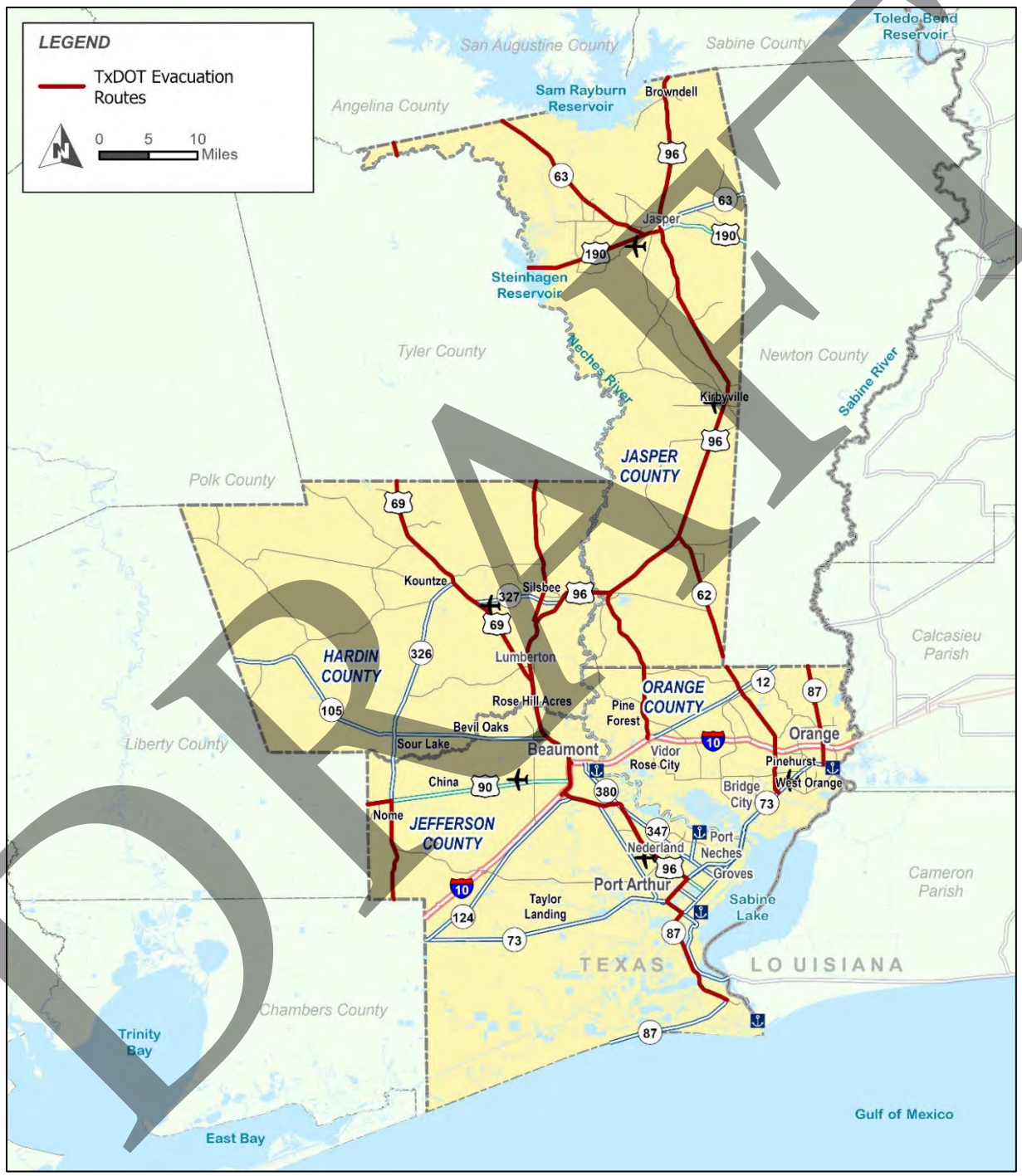
The coastal counties of Jefferson, Orange, and lower portions of Hardin are vulnerable to extensive flooding during hurricanes. The safe and timely evacuation of coastal and floodplain areas is crucial to ensure public safety. In August 2017, Hurricane Harvey landed in Texas and remained in place over southeast Texas for days, dumping trillions of gallons of rain and causing unprecedented flooding. The SETRPC area experienced significant damage and massive disruptions to the transportation system.

In 1994, the Texas Transportation Commission established the Hurricane Evacuation Task Force to increase safety, access, and mobility for the transport of people and goods during emergency situations. With the assistance of state and local agencies, and after holding public meetings, the Task Force established a regional network of roadways comprising the hurricane evacuation route system as an element of the Gulf Coast Regional Evacuation Plan. Additionally, the Task Force created a separate funding category for evacuation route improvements located in the Gulf Coast Districts.

TxDOT maintains designations of evacuation routes from coastal regions of the state for times of hurricane threats. The TxDOT designations for evacuation routes in the region are shown in Figure 9-1. The SETRPC-MPO website maintains links to Jefferson, Hardin, and Orange County emergency management offices on the MPO website at http://www.setrpc.org/divisions/hsemp/links/**.**

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Figure 9-1: TxDOT Evacuation Routes



Source: TxDOT Open Data GIS Porta. *Evacuation Routes.* [TxDOT Evacuation Routes | TxDOT Evacuation Routes | TxDOT Open Data Portal (arcgis.com)]

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9.2 Resiliency and Reliability

The risks associated with climate change and extreme weather events such as flooding, severe heat, and intense storms have emerged as significant concerns for transportation system resiliency and reliability. Transportation systems are already experiencing costly climate related impacts that cause disruption and damage to roads, bridges, rail systems, and other transportation infrastructure. In the future, these impacts are expected to intensify in magnitude, duration, and frequency. Preparing for the uncertainties in a changing climate is essential to ensure the safety and security of the population which the transportation system serves.

The MAP-21 and the FAST Act have addressed the issue of improving the condition and resiliency of transportation assets. The FAST Act, however, requires transportation agencies to take resiliency into consideration during the transportation planning processes. The updated metropolitan and statewide transportation planning regulations require MTPs to assess capital investment and other strategies that reduce the vulnerability of the existing transportation infrastructure to natural disasters.

9.2.1 Vulnerability Assessment

In December 2017, the Federal Highway Administration (FHWA) published the *Vulnerability Assessment and Adaptation Framework, 3rd Edition*. The Framework serves as a guide for MPOs and other transportation agencies to evaluate vulnerability of transportation infrastructure and systems to extreme weather and climate effects. The framework serves to assist transportation agencies and MPOs to integrate climate adaptation considerations into the decision-making process. The SETRPC-MPO has applied the guidelines provided by the framework to evaluate vulnerability of the transportation system to extreme weather and climate effects in the region. The FHWA Framework consists of the following steps:

- Set objectives and define study area.
- Compile data.
- Assess vulnerability.
- Identify, analyze, and prioritize adaptation options.
- Incorporate assessment results into decision-making.

For the purposes of this MTP-2050, the SETRPC-MPO assessed regional vulnerability to flooding through a process informed by the FHWA Framework.

9.2.1.1 Objective and Study Area

The objective of this vulnerability assessment is to identify transportation infrastructure vulnerable to flooding within Jasper, Jefferson, Orange, and Hardin counties at a systems-level using a GIS approach.

9.2.1.2 Compile Data

Using a GIS approach for this vulnerability assessment, GIS data was compiled for FEMA SFHAs, storm surge inundation areas, TxDOT roadways, Texas railroads, bridges, Texas airports, and regional ports.

9.2.1.3 Assess Vulnerability

An indicator-based vulnerability assessment approach was applied to the SETRPC region to determine vulnerable transportation infrastructure from available data. This approach provides a big picture understanding of system-wide vulnerabilities and identifies where additional resources could be used to further distinguish asset-specific vulnerabilities.

Using a GIS approach, transportation infrastructure (TxDOT roadways, railroads, airports, and ports) located within NOAA's National Storm Surge Risk maps were identified. These transportation assets are

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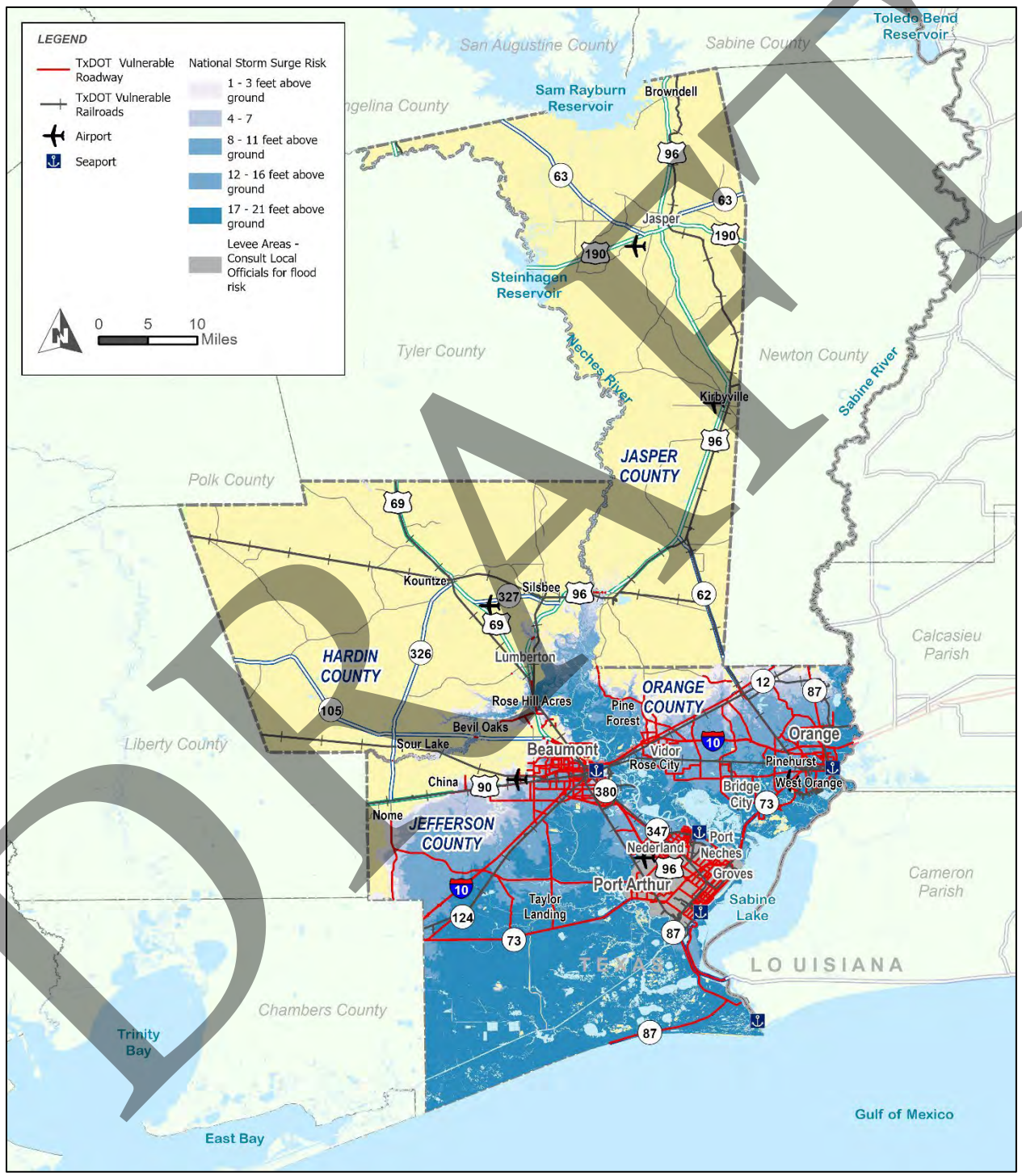
at risk of disruption during extreme flooding events, as shown in Figure 9-2. The Port of Beaumont, Port of Port Arthur, Port Neches, The Sabine Pass Port Authority, and the Port of Orange; Beaumont Municipal Airport, Jack Brooks Regional Airport, and Orange County Airport; and multiple segments of TxDOT roadways and railroads are located within the storm surge risk areas.

A different GIS approach was used to assess the risk of bridges from flooding. Using National Bridge Inventory (NBI) data, bridges at risk for flooding were identified. Figure 9-3 shows the bridges at risk of flooding within the SETRPC area. The bridge flood ratings are defined as:

- **Critical:** The bridge has flooded at a frequency of at least once every 3 years or less.
- **Concern:** The bridge has flooded at a frequency of at least once every 3 to 10 years.
- **Slight Concern:** The bridge has flooded at a frequency of at least once every 11 to 100 years.
- **Remote Concern:** The bridge has flooded at a frequency of at least once every 100 years or greater.

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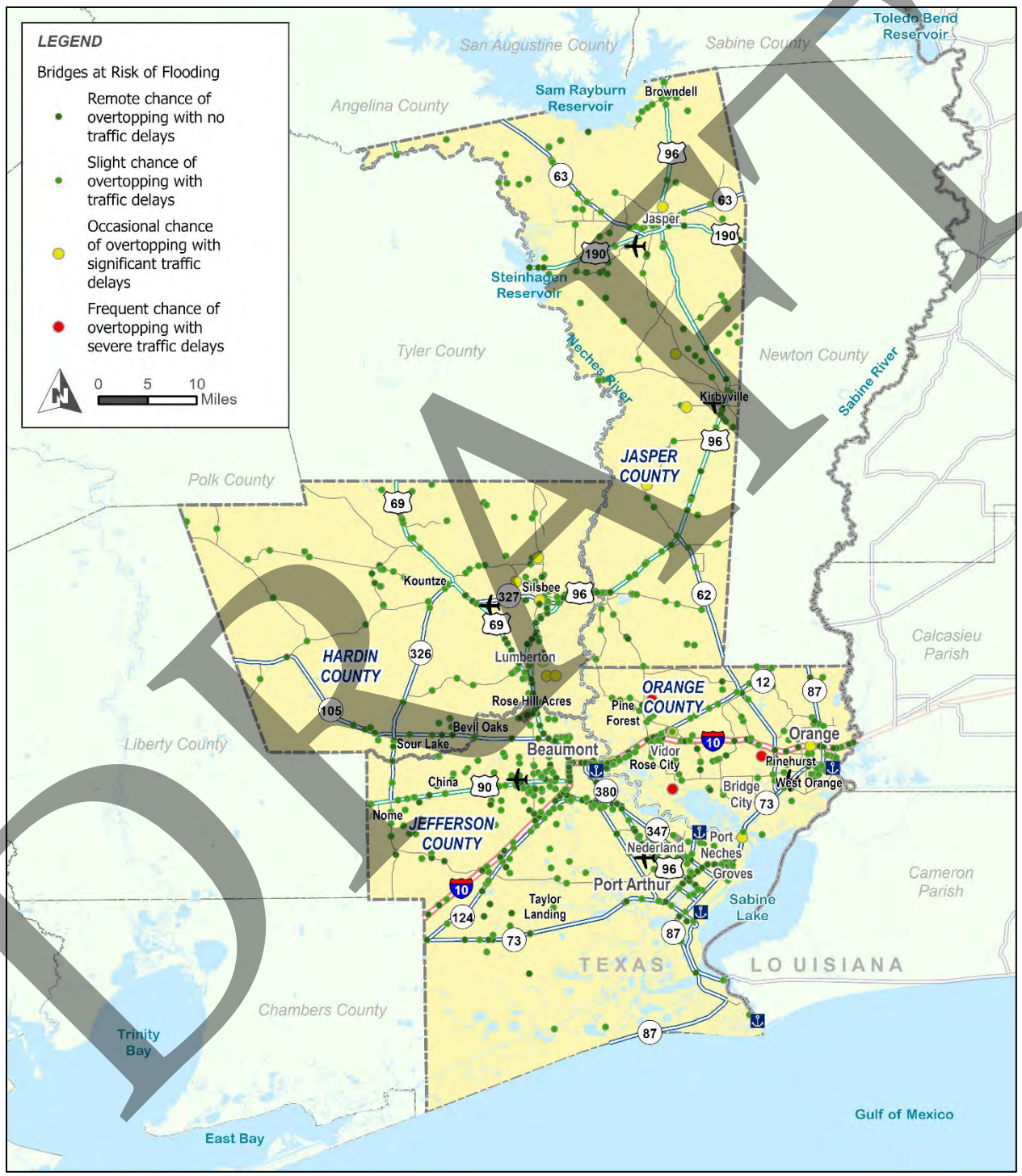
Figure 9-2: Vulnerable Transportation Infrastructure within Storm Surge Risk



Source: NOAA, TxDOT

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Figure 9-3: Bridges at Risk of Flooding



Source: National Bridge Inventory

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9.2.1.4 Identify, Analyze, and Prioritize Adaptation Options

After identifying vulnerabilities through a system-level analysis, adaptation strategies were developed to address vulnerabilities within the region. Potential strategies include:

- Engineer new transportation assets that can withstand environmental conditions expected in the future.
- Retrofit existing assets to accommodate future environmental conditions expected in the future.
- Increase redundancy of the transportation system to avoid disruptions and provide alternative means/routes of travel.
- Relocate transportation assets to avoid damage.
- Program maintenance schedules at a higher frequency.
- Improve operations plans during emergency situations.

9.2.1.5 Incorporate Assessment Results into Decision-making

The metropolitan transportation planning process provides a key opportunity for transportation agencies to proactively identify strategies that address risk and promote resiliency at the transportation system level. Resiliency to climate change and extreme weather events should be considered during the decision-making process, when options are considered for transportation investments. The results of a vulnerability assessment provide the SETRPC-MPO with useful information to avoid making investments in particularly vulnerable areas or to build resiliency into project design.

9.2.2 Agency Coordination

The SETRPC-MPO held a series of workshops on resiliency with local officials in April 2018 to start the discussion on infrastructure vulnerabilities to natural disasters and how to plan for risk reduction. Representatives from TxDOT, the Port of Port Arthur, the City of Orange, and the Texas Transportation Institute (TTI) participated in the workshop series. The SETRPC-MPO coordinates with transportation officials continually to plan for a resilient regional transportation system.

9.2.3 Resiliency Improvement Plan

The SETRPC-MPO is currently developing a Resiliency Improvement Plan (RIP) for the four-county region. The RIP will serve as a guiding framework for infrastructure improvements to enhance resiliency goals.

9.2.4 Proposed Future Studies

The Center for Advances in Port Management at Lamar University employs multidisciplinary analytical expertise and tools to solve complex port problems. The Center for Advances in Port Management has proposed to prepare a Sabine Neches Waterway Transportation System Resiliency Study that may help identify additional strategies to enhance resiliency against future disasters.

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Chapter 10: Financial Plan

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10.0 Introduction

Federal planning regulations require that the financial plan presented in the MTP be financially constrained, which means that the estimated cost for all transportation improvements presented in the plan cannot exceed the amount of reasonably expected revenues projected from identified funding sources.

This chapter focuses on the long-range financial constraints and opportunities in the SETRPC area over the next 25 fiscal years of this SETRPC MTP-2050. The SETRPC-MPO, in cooperation with the Technical Committee members, TxDOT staff, and the Texas A&M Transportation Institute (TTI), have conducted a careful analysis of what funds are to be reasonably expected, how those funds may be allocated, and how and when projects will be financed. Without a doubt, actual funding availability over the 25 years of this plan will depend largely upon future actions and public policy directives initiated at the federal and state levels.

10.1 Funding Sources

Federal and state transportation revenue streams are rapidly losing pace with needed investments. State and federal gas taxes have not changed since the early 1990s and the general increases in oil prices have caused people to adjust their driving habits and buy more fuel-efficient cars. Federal programs have made strides toward rejuvenating the automobile industry and decreasing emissions, but those advances have come at the cost of decreasing federal and state transportation revenue.

Various suggestions have been made to bolster federal and state transportation funding mechanisms, including increasing the gasoline tax and/or indexing it to the consumer price index, increasing local vehicle registration fees, and imposing a local tax dedicated to transportation improvements. However, such tax increases are typically very politically unpopular. Other suggestions include transitioning to a tax based upon miles driven, rather than gasoline consumed. GPS and other technologies to implement this type of solution have been around for years but concerns over privacy are likely to prevent this type of solution from materializing.

At the local level, the Texas State Legislature prevented the opportunity to allow some counties to impose a local option tax which would allow local officials to put a tax on the ballot which would raise the gas tax as well as automobile registration and licensing fees. Nevertheless, MPOs must make some predication on future revenue funding streams in order to try and keep up with the transportation infrastructure investments that are necessary to keep their regional economies competitive in the global marketplace.

10.1.1 Roadway Funding Revenue

A description of the various categories of funding available through TxDOT is summarized in Table 10-1 below.

Table 10-1: TxDOT Funding Categories

Funding Category		Description
1	Preventative Maintenance and Rehabilitation	Provides for preventive maintenance and pavement rehabilitation on the existing state highway system, including installation and rehabilitation of traffic control devices and the rehabilitation and maintenance of operational traffic management systems.
2	Metropolitan and Urban Area Corridor Projects	Addresses mobility needs in all metropolitan areas throughout the state.
3	Non-Traditionally Funded Transportation Projects	Addresses mobility needs through the state using funding sources not traditionally part of the state highway fund. The projects in this category include Proposition 12, Proposition 14, Pass-through Toll Financing, Texas Mobility Fund, Concession, Regional Toll Revenue, Comprehensive Development Agreement, Local Participation, and unique federal funding.
4	Statewide Connectivity Corridor Projects	Addresses mobility and added capacity project needs on major state highway system corridors which provide statewide connectivity between urban areas and corridors which serve mobility needs throughout the state. The highway connectivity network is composed of the Texas Trunk System; National Highway System (NHS); and connections from Texas Trunk System or NHS to major ports on international borders or Texas water ports.
5	Congestion Mitigation and Air Quality Improvement	Addresses the attainment of national ambient air quality standards in the non-attainment areas of the state. Projects are for congestion mitigation and air quality improvement in the non-attainment areas in the state.
6	Bridges	Addresses the replacement or rehabilitation of deficient existing bridges located on public highways, roads, and streets in the state; the construction of grade separations at existing highway-railroad grade crossings; and the rehabilitation of deficient railroad underpasses on the state highway system.
7	Metropolitan Mobility / Rehabilitation	Addresses transportation needs within the metropolitan area boundaries of Metropolitan Planning Organizations having urbanized areas with populations of 200,000 or greater.
8	Safety	Addresses safety needs on and off the state highway system, and includes the Safe Routes to School program, the High Risk Rural Roads program, and the Rail-way-Highway Safety Program.
9	Transportation Enhancements	Addresses projects that are above and beyond what could normally be expected in the way of enhancements to the transportation system, including the cultural, historic, aesthetic, and environmental aspects of transportation infrastructure.
10	Supplemental Transportation Projects	Addresses projects that do not qualify for funding in other categories, such as state park roads, landscaping, and handicap accessible curb ramps at on-system intersections.
11	District Discretionary	Addresses projects selected at the District Engineer's discretion.
12	Strategic Priority	Addresses needs related to statewide economic development, military deployment routes, and manmade and natural emergencies.

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10.1.2 Federal Funding Programs for Transit

A description of each of the Federal Transit Administration (FTA) program from which funding is available for the SETRPC region is provided in Table 10-2 below.

Table 10-2: FTA Funding Categories

Funding Category		Description
5307	Urbanized Area Formula Grant Program	Program subsidizes the operating and/or capital cost of transit services. Eligible expenses include planning, engineering, most administration, preventive maintenance, fuel, parts, and operating costs.
5309	Capital Investment Program	Divided into three categories: modernization of existing rail systems, new rail systems, and new and replacement buses and facilities. The bus category is the only one from which the SETRPC region is eligible to receive funds. These funds are used to subsidize the purchase of buses, bus-related equipment and paratransit vehicles, and for the construction of bus-related facilities.
5310	Transportation for Elderly Persons and Persons with Disabilities	Capital expenses that support transportation to meet the special needs of older adults and persons with disabilities.
5311	Rural Transit and Intercity Bus	Capital, planning, and operating expenses for public transit in non-urbanized areas with a population under 50,000 as designated by the Bureau of the Census.
5324	Emergency Relief	Funding for protecting, repairing, and/or replacing equipment and facilities that may suffer or have suffered serious damage as a result of an emergency, including natural disasters such as floods, hurricanes, and tornadoes.
5339	Buses and Bus Facilities	Provides funding to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities.

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10.1.3 Other Funding Sources

Texas Mobility Fund

The Texas State Legislature created the Texas Mobility Fund in order to accelerate completion of TxDOT projects and improvements. The Fund allows the state to issue bonds, which are backed by a dedicated revenue source. HB 3588 authorizes certain transportation related fees such as motor vehicle inspection fees and driver's license fees to be moved from the state's General Revenue Fund to the Texas Mobility Fund.

Local Option Sales Taxes for Transportation

The use of local option sales tax revenues to fund transportation needs in the southeast Texas region represents a significant opportunity. In general, the State of Texas Tax Code authorizes cities and counties to adopt local sales and use taxes for any purpose other than repaying bonds. Provided the sum of all local option taxes in a given area does not exceed 2%, and the local option tax is approved by referendum, each city and/or county in the southeast Texas region could adopt up to a ½% sales tax that could be earmarked to address transportation system needs.

State Infrastructure Bank

This is a banking system set up by TxDOT with federal and state funds and is designed to encourage local entities to pay a larger share of the cost for highway projects. Local entities may apply for loans, lines of credit, letters of credit, bond insurance, and capital reserves for roadway improvement projects.

Traffic Impact Fees on New Development

Traffic impact fees ensure that new development pays its fair share of the cost to improve the transportation system so as not to exacerbate existing transportation problems.

Toll Fees

The use of toll revenue financing is attracting increased attention to complete transportation projects when other funding sources may be limited. Issuing bonds secured by toll revenue gives state and local authorities the ability to accelerate transportation projects that might otherwise not be able to be completed using traditional funding sources. HB 3588 allows TxDOT to enter into an agreement with Regional Mobility Authorities (RMAs) to pay a per-vehicle fee as reimbursement for construction and maintenance of state highways or as compensation for the cost of maintaining facilities transferred to an RMA. Based on pre-determined levels of usage, this approach allows TxDOT to effectively pay "tolls" on behalf of motorists using a new facility with revenues being derived from traditional funding sources such as gas tax revenues. The "shadow toll" or "pass through financing" payments received by the RMA from TxDOT can then be used to repay revenue bonds issued by the RMA to advance the project.

State Tax on Motor Fuels

States have the option of extending the retail sales tax to gasoline and dedicating the proceeds for transportation or transit. Several other states, such as New Jersey, Florida, California, and Maryland, use excise taxes on motor fuels for transportation funds.

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Bond Issues

Funds for roadway and other capital improvements could be generated through the issue of "Certificates of Obligation," commonly known as bonds. Issuing bonds to fund city improvements largely depends on a favorable bond rating and low interest rates. Funding transportation improvements by issuing bonds remains an attractive option for cities in the SETRPC area.

10.2 Revenue Projections

The first step in the process of demonstrating financial constraints is to determine what revenues can be reasonably expected over the life of the plan. Most regional roadway projects are financed through federal and state funds which are mostly derived from taxes on fuel and fees from vehicle registration. Transit projects are also funded through federal, state, and local sources, as well as revenue received through fares.

The MPO has worked with the Texas A&M Transportation Institute (TTI) and the TxDOT-Beaumont District to determine the expected levels of funding for the fiscal years included in this plan (FY 2025-3050). As per TxDOT's direction the FY 2024-2033 Unified Transportation Plan (UTP) was utilized to project the future revenue for all categories of funds. TTI utilized the Transportation Revenue Estimator and Needs Determination System (TRENDS) database to project the reasonable revenues by category. TRENDS is a scenario planning model that forecasts revenues and expenses for TxDOT. The model is updated regularly to include the latest cash forecasts and letting schedules from TxDOT. The revenue projections by available funding through TxDOT by category from 2025 to 250 are presented in Table 10-3**.**

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Table 10-3: MTP Revenue Projections for TxDOT Roadway Projects

Category	Description	MTP Revenue Projection
1	Preventive Maintenance and Rehabilitation	$0.00
2M or 2U	Urban Area (Non-TMA) Corridor Projects	$197,139,998.00
3	Non-Traditionally Funded Transportation Project	$3,446,792.00
3DB	Design Build (DB)	$0.00
4	Urban and Regional Connectivity	$61,295,223.00
5	CMAQ	$0.00
6	Structures - Bridge	$0.00
7	Metro Mobility & Rehab	$0.00
8	Safety	$0.00
9	TAP Set-Aside Program	$0.00
10	Supplemental Transportation	$15,576,976.13
10 CBI	Corridor Border	$0.00
11	District Discretionary	$1,120,000.00
11	Energy Sector	$0.00
12	Texas Clear Lanes	$0.00
12	Strategic Priority	$422,790,000.00
SW PE	Statewide Budget PE	$0.00
SW ROW	Statewide Budget ROW	$0.00
DA		$900,000,000.00
Total		$1,603,668,821.71

** This category is programmed by the Texas Transportation Commission's discretion on a project by project basis. As such, an annual average amount is not reflected.*

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10.2.1 Transit Funding Revenue

Table 10-4 contains the annual average amount of funding anticipated for the various FTA funding categories, along with the amount projected for all the fiscal years 2020-2045 included in this plan.

Table 10-4: MTP Revenue Projections for TxDOT Transit Projects

Category	Description	MTP Revenue Projection
5307	Operations and Maintenance	$91,479,860
5310	Funds for Transportation for Seniors and People with Disabilities	$4,936,167
5311	Rural Transit and Intercity Bus	$13,558,131

10.3 Project Selection Process

The SETRPC Technical Committee met on Wednesday, August 30, 2023, to score projects which were submitted in the Call For Projects. Projects were scored following various criteria established in the adopted Project Selection Process (PSP) including safety, mobility, connectivity, accessibility, sustainability, environmental, equity, cost, etc. The members of the Technical Committee were present, which met the requirement to establish a quorum.

The PSP specifies two separate evaluation tracks tailored to the characteristics of different types of projects. The Road Evaluation Track is designed to evaluate projects which are oriented towards vehicle use, and the Transportation Choices & Livability Evaluation Track is designed to evaluate projects for active transportation modes and social benefits.

Within each evaluation track, there are objective and subjective criteria. Objective criteria can be measured with planning tools and are scored by the staff of the MPO. The subjective criteria cannot be directly measured but depend on contextual knowledge and opinions. The Technical Committee prepares the subjective scoring portion of the PSP. The objective scores and the average of the subjective scores from all Technical Committee members are totaled to derive the final score and ranking for each project.

Four projects were evaluated under the Road Evaluation Track. The SETRPC did not receive any projects submitted for active transportation modes and social benefits during the call for projects. Therefore, no project was evaluated under the Transportation Choices & Livability Evaluation Track. Following the scoring process and review by the Technical Committee, the total project scores and rankings were submitted to the SETRPC Transportation Planning Committee (TPC) board for their approval of the final ranking.

Following the ranking, the MPO staff selects each project to program into the MTP based on the priority ranking and the projected amount of revenue expected. Because the MTP is a financially constrained plan, projects can only be funded that fit within the expected revenue forecast for the MPO. All four projects from the Call for Projects were programmed into the MTP-2050. The year they are programmed indicates priority. The higher ranked projects are programmed to let for construction earlier than the lower ranked projects.

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10.4 Financially Constrained Plan

The projects selected in the SETRPC MTP-2050 must be financially constrained, meaning the project cost must fall within the expected revenue projections.

Table 10-5 demonstrates financial constraint for roadway projects for FY 2025-2050 by showing the comparison of revenue projection with the programmed amount.

Table 10-5: Roadway Projects FY 2025-2050 Financial Constraint

Category	Description	MTP Revenue Projection	MTP Programmed
1	Preventive Maintenance and Rehabilitation	Not applicable*	Not applicable*
2M or 2U	Urban Area (Non-TMA) Corridor Projects	$197,139,998.00	$197,139,998.00
3	Non-Traditionally Funded Transportation Project	$3,446,792.00	$3,446,792.00
3DB	Design Build (DB)	$0.00	$0.00
4	Urban and Regional Connectivity	$61,295,223.00	$61,295,223.00
5	CMAQ	$0.00	$0.00
6	Structures - Bridge	Not applicable*	Not applicable*
7	Metro Mobility & Rehab	Not applicable*	Not applicable*
8	Safety	Not applicable*	Not applicable*
9	TAP Set-Aside Program	$0.00	$0.00
10	Supplemental Transportation	$15,576,976.13	$15,576,976.13
10 CBI	Corridor Border	$0.00	$0.00
11	District Discretionary	$1,120,000.00	$1,120,000.00
11	Energy Sector	$0.00	$0.00
12	Texas Clear Lanes	$0.00	$0.00
12	Strategic Priority	$422,790,000.00	$422,790,000.00
SW PE	Statewide Budget PE	$0.00	$0.00
SW ROW	Statewide Budget ROW	$0.00	$0.00
DA		$900,000,000.00	$900,000,000.00
Total		$1,603,668,821.71	$1,603,668,821.71

** These categories are programmed by TxDOT and typically do not require an individual listing, and as such, a programmed amount is not reported.*

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Similarly, Table 10-6 demonstrates financial constraint for transit projects for FY 2025-2050 by showing the comparison of revenue projection with the programmed amount.

Table 10-6: Transit Projects FY 2025-2050 Financial Constraint

Category	Description	MTP Revenue Projection	MTP Programmed
5307	Operations and Maintenance	$91,479,860	$91,479,860
5310	Funds for Transportation for Seniors and People with Disabilities	$4,936,167	$4,936,167
5311	Rural Transit and Intercity Bus	$13,558,131	$13,558,131

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Chapter 11: Financially Constrainted Project List

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11.0 Introduction

The SETRPC MTP-2050 includes several recommendations. This chapter summarizes the financially constrained list of roadway and transit projects that will be funded for the next 25 years. The SETRPC-MPO is committed to investing in a variety of projects that preserve the existing system, expand the system's capacity, enhance its efficiency and safety, and improve its overall quality. Improvements in this SETRPC MTP-2050 focus on adding new capacity, improving traffic flow and system efficiency, increasing safety, enhancing regional gateways, and supporting economic development.

The projects that have been included within the MTP-2050 were carefully selected and prioritized. These projects represent the current priorities based upon anticipated needs over the coming years. However, planning for the future always includes revisiting priorities, evaluating new trends, and considering a wide variety of other factors. Therefore, this plan is to be considered a living document and will be revised as events warrant.

11.1 Roadway Projects

The projects that have been selected for inclusion within the SETRPC MTP-2050 were carefully selected and prioritized. The list of projects that are presented on the pages that follow was developed by including projects from the most recent SETRPC Transportation Improvement Program (TIP), TxDOT 2024-2033 UTP, and projects selected through this MTP-2050 development process. The project details for the selected roadway projects for the SETRPC MTP-2050 are summarized in Table 11-1. The "Map #" column in the table indicates the project location as shown in Figure 11-1. For additional project details, refer to Appendix A.

Table 11-1: Selected Roadway Projects for the Financially Constrained MTP-2050

MAP #	CSJ	MPO ID	County	LET Date	OUTSIDE OF TIP FY	Highway	Limits From	Limits To
1	0920-38-288	24001-F50N	Jefferson	2025	☑	Houston	Corner of Houston Ave and 4th Street	4th Street
2	0920-38-291	24002-F50N	Jefferson	2025	☑	Austin	Corner of Rev Dr Ransom Howard Drive	4th Street
3*	0920-00-149	24029-F50N	Jefferson	2025	☑	Various	Districtwide	
4*	0920-00-171	24031-F50N	Jefferson	2025	☑	IH 10	Districtwide	
5	5000-00-272	25001-F50P	Orange	2026	☑	IH 10	17160 I-10, Vidor, TX 77663	
6	5000-00-447	26002-F50P	Jasper	2027	☐	South Wheeler St	331 South Wheeler St, Jasper, TX 75951	
7	5000-00-494	26003-F50P	Beaumont	2027	☐	Smith Rd	7495 Smith Rd, Beaumont, TX 77713	
8	5000-00-525	26004-F50P	Beaumont	2027	☐	IH 10	17457 IH 10 Access Rd, Beaumont, Tx 77705	
9	5000-00-602	26005-F50P	Beaumont	2027	☐	IH 10	3745 IH 10 Access Rd, Beaumont, TX 77705	
10	5000-00-603	26006-F50P	Vidor	2027	☐	SH 12	1400 Hwy 12, Vidor, Tx 77662	
11	0065-06-067	19095-F45N	Hardin	2028	☐	US 69	US 96, South	Jefferson C/L
12	0065-07-065	19084-F45N	Jefferson	2028	☐	US 69	Hardin C/L, South	Tram Road
13*	0920-00-172	24032-F50N	Jefferson	2028	☐	Various	Districtwide	

*Not Mapped, District Wide Project

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Table 11-1.1: Selected Roadway Projects for the Financially Constrained MTP-2050

MAP #	CSJ	MPO ID	County	LET Date	OUTSIDE OF TIP FY	Highway	Limits From	Limits To
14*	0920-00-133	24028-F50N	Jefferson	2027	☐	Various	Districtwide	
15	0339-04-036	24027-F50N	Hardin	2029	☐	SH 105	0.10 Miles East of SH 326	Pine Island Bayou
16	0200-04-020	24025-F50N	Jasper	2028	☐	US 69	Angelina County Line	Tyler County Line
17	0028-13-142	N/A	Jefferson	2040	☑	IH 10	US 90, East	At UPRR
18*	0920-00-150	24030-F50N	Jefferson	2038	☑	Various	Districtwide	
19	0064-07-044	24023-F50N	Jasper	2032	☑	US 96	Sabine C/L, South	0.8 Miles North of RE 255
20	0200-10-060	N/A	Hardin	2035	☑	US 69	0.75 Miles South of FM 1003	Mitchell Road
21	0200-14-060	24026-F50N	Jefferson	2033	☑	US 69	IH 10, South	SH 347
22	0064-08-062	24024-F50N	Jasper	2032	☑	US 96	0.8 Miles North of RE 255, South	RE 255
23	0200-15-025	N/A	Jefferson	2040	☑	US 69	Nederland Ave, South	Jimmy Johnson Blvd.
24*	0920-00-173	24033-F50N	Jefferson	2046	☑	Various	Districtwide	
25	0307-01-159	26001-F50N	Jefferson	2036	☑	SH 87	3.8 Miles NORTH of SH 82	3 Miles SOUTH of SH 82

*Not Mapped, District Wide Project

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Table 11 - 2: Selected Roadway Projects for the Financially Constrained MTP-2050

MAP #	CSJ	Project Name	Project Description	Funding Category	Construction Cost	Total Cost
1	0920-38-288	Port / Port Arthur Truck Queuing and Laydown	Port of Port Arthur Truck Queuing Area and Laydown Yard Project - Construction of a Truck Queuing Area at the corner of Houston Avenue and 4th St-Rider 37	3-TMFPCI	$1,931,138.50	$1,931,138.50
2	0920-38-291	Port / Port Arthur Truck Queuing and Staging	Port of Port Arthur- Construct a Queuing Area at the corner of Rev Dr Ransom Howard Drive and Austin Avenue	3-TMFPCI	$1,515,653.50	$1,637,922.00
3*	0920-00-149	FY 24 Districtwide ADA Project	FY 24 Districtwide ADA Project. Along College St- From Pinchback Rd to IH 10	12-CMQ, 10-ADA, 1	$3,031,840.60	$3,475,634.82
4*	0920-00-171	Transportation Non-Roadway	Truck Parking (FY 25) - approximately 18 truck parking spots	10CBNS, 1	$2,654,301.98	$2,789,900.89
5	5000-00-272	Electric Car Charging Location	Install 4 Direct Current Fast Charge ports along the Electric Alt Fuel Corridors plus 5 years	10NEVI	$735,478.13	$735,478.13
6	5000-00-447	Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	10NEVI	$1,065,869.00	$1,065,869.00
7	5000-00-494	Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	10NEVI	$1,162,491.00	$1,162,491.00
8	5000-00-525	Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	10NEVI	$1,146,000.00	$1,146,000.00
9	5000-00-602	Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	10NEVI	$774,504.00	$774,504.00
10	5000-00-603	Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	10NEVI	$773,884.00	$773,884.00
11	0065-06-067	Construct New Road	Widen Freeway from 4 to 6 Lanes	2-MU, 4-3C, 1	$48,335,223.00	$51,028,597.00
12	0065-07-065	Construct New Road	Widen Freeway from 4 to 6 Lanes	2-MU, 1	$33,720,000.00	$34,032,375.00
13*	0920-00-172	Bicycle and Pedestrian Improvements	Districtwide Pedestrian Upgrades	10CR, 1	$6,344,000.00	$6,404,627.00

*Not Mapped, District Wide Project

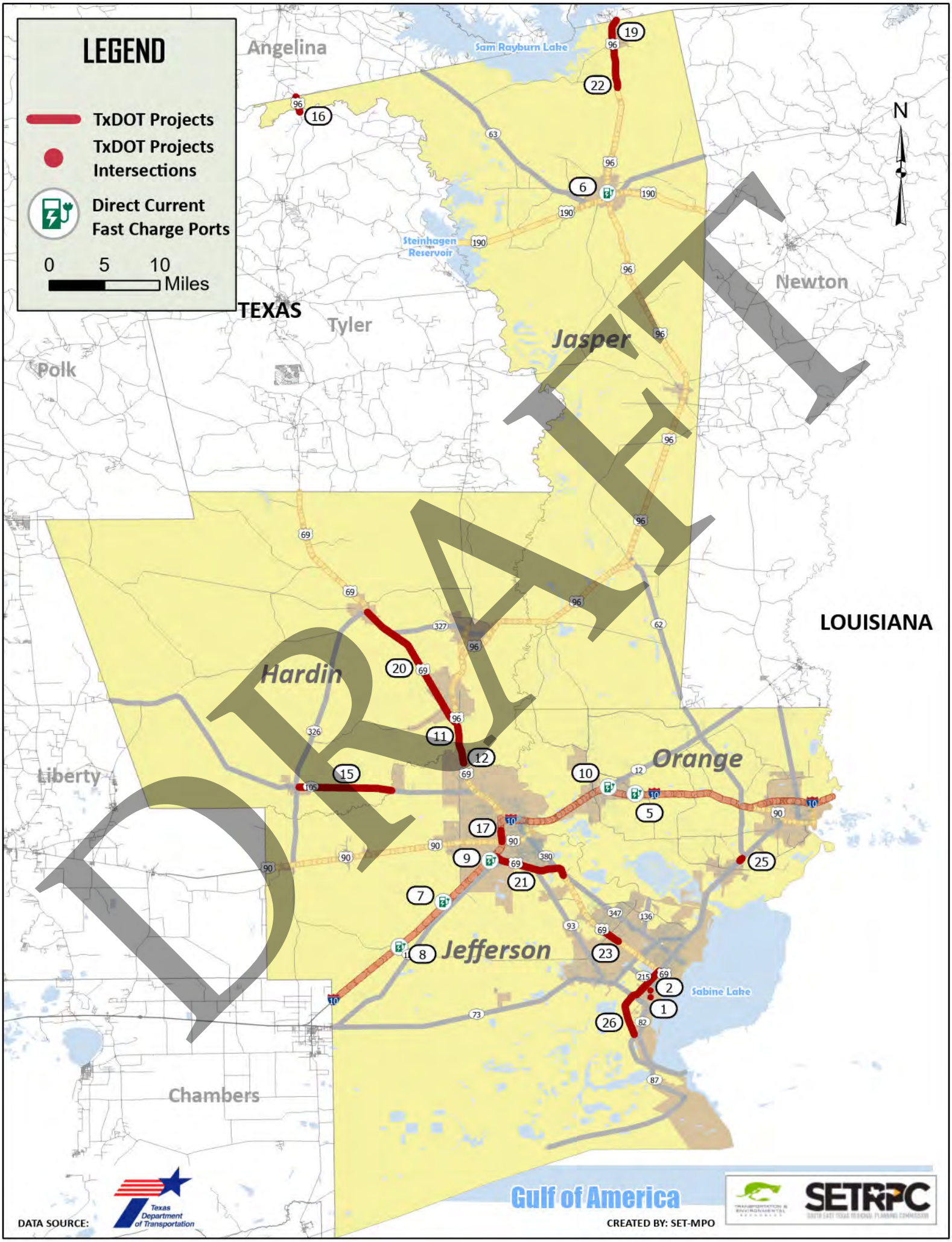
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Table 11 - 2.1: Selected Roadway Projects for the Financially Constrained MTP-2050

MAP #	CSJ	Project Name	Project Description	Funding Category	Construction Cost	Total Cost
14*	0920-00-133	IH-10 Drainage Improvements	IH-10 Drainage Improvements	12-TTC, 1	$11,200,001.00	$11,703,035.00
15	0339-04-036	Widen Road - Add Lanes	Widen from 2 to 4 Lanes with CLTL	12-TTC, 2-MU, 1	$127,784,001.00	$155,640,106.00
16	0200-04-020	Widen Road - Add Lanes and Shoulders	Widen Existing 2 Lane Highway to 4 Lanes Divided	12-TTC, 1	$34,646,001.00	$34,722,771.00
17	0028-13-142	Bridge Replacement	IH 10-UPRR Overpass - Replace Bridge and Approaches	1	$0.00	$2,017,820.00
18*	0920-00-150	Traffic Surveillance	District Wide - ITS Upgrade to Install 40 CCTV Cameras and 8 DMSs	1	$1,568,423.00	$1,645,737.61
19	0064-07-044	Widen Road - Add Lanes	Widen from 2 to 4 Lanes Divided	12-TTC, 1	$95,000,001.00	$126,130,001.00
20	0200-10-060	Construct Frontage Roads	Construct Frontage Roads Only For New Location 4 Lane Divided Facility (Future Interstate)	12-TTC, DA, 1	$1,100,000,000.00	$1,100,000,000.00
21	0200-14-060	US 69 Widening - IH-10 to SH 347	Widen from 4 to 6 Main Lanes	12-TTC, 2-MU, 4-3C, 1	$121,680,001.00	$125,129,287.00
22	0064-08-062	US 96 (N of RE 255 to RE 255) - Widen	Widen from 2 to 4 Lanes Divided	12-TTC, 1	$7,480,001.00	$10,197,001.00
23	0200-15-025	Highway Improvements	Ramp Reversal, Bridge Widening, and Intersection Improvements	N/A	$0.00	$0.00
24*	0920-00-173	Hazard Elimination & Safety	Hazard Elimination & Safety	N/A	$0.00	$0.00
25	0307-01-159	SH 87 (@SH 82)Widen & RR Grade Separation	SH 87 (3.8 Miles NORTH of SH 82 to 3 Miles SOUTH of SH 82) Widening for Shoulder and Turniong Bay and RR Grade Separation	11SF	$1,120,000.00	$4,600,886.50

*Not Mapped, District Wide Project

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LEGEND
TxDOT Projects
TxDOT Projects Intersections
Direct Current Fast Charge Ports
0 5 10
Miles
N
Angelina
Sam Rayburn Lake
Steinhagen Reservoir
TEXAS
Tyler
Polk
Jasper
Newton
LOUISIANA
Hardin
Liberty
Orange
Jefferson
Chambers
Sabine Lake
Gulf of America
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DATA SOURCE:
Texas Department of Transportation
CREATED BY: SET-MPO
SETRPC

11.2 Transit Projects

Selected transit projects within the SETRPC region are summarized by FTA funding category with details on total project cost and the programmed amount. Table 11-2 shows FTA Category 5307 transit project, Table 11-3 shows FTA Category 5310 transit projects, and Table 11-4 shows FTA Category 5311 transit projects.

Table 11-3: FTA Category 5307 Transit Project

Year	Project	Total Cost	FTA Programmed Amount
2025	Operations and Maintenance	$3,659,194	$3,659,194
2026	Operations and Maintenance	$3,659,194	$3,659,194
2027	Operations and Maintenance	$3,659,194	$3,659,194
2028	Operations and Maintenance	$3,659,194	$3,659,194
2029	Operations and Maintenance	$3,659,194	$3,659,194
2030	Operations and Maintenance	$3,659,194	$3,659,194
2031	Operations and Maintenance	$3,659,194	$3,659,194
2032	Operations and Maintenance	$3,659,194	$3,659,194
2033	Operations and Maintenance	$3,659,194	$3,659,194
2034	Operations and Maintenance	$3,659,194	$3,659,194
2035	Operations and Maintenance	$3,659,194	$3,659,194
2036	Operations and Maintenance	$3,659,194	$3,659,194
2037	Operations and Maintenance	$3,659,194	$3,659,194
2038	Operations and Maintenance	$3,659,194	$3,659,194
2039	Operations and Maintenance	$3,659,194	$3,659,194
2040	Operations and Maintenance	$3,659,194	$3,659,194
2041	Operations and Maintenance	$3,659,194	$3,659,194
2042	Operations and Maintenance	$3,659,194	$3,659,194
2043	Operations and Maintenance	$3,659,194	$3,659,194
2044	Operations and Maintenance	$3,659,194	$3,659,194
2045	Operations and Maintenance	$3,659,194	$3,659,194
2046	Operations and Maintenance	$3,659,194	$3,659,194
2047	Operations and Maintenance	$3,659,194	$3,659,194
2048	Operations and Maintenance	$3,659,194	$3,659,194
2049	Operations and Maintenance	$3,659,194	$3,659,194
2050	Operations and Maintenance	$3,659,194	$3,659,194

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Table 11-4: FTA Category 5310 Transit Projects

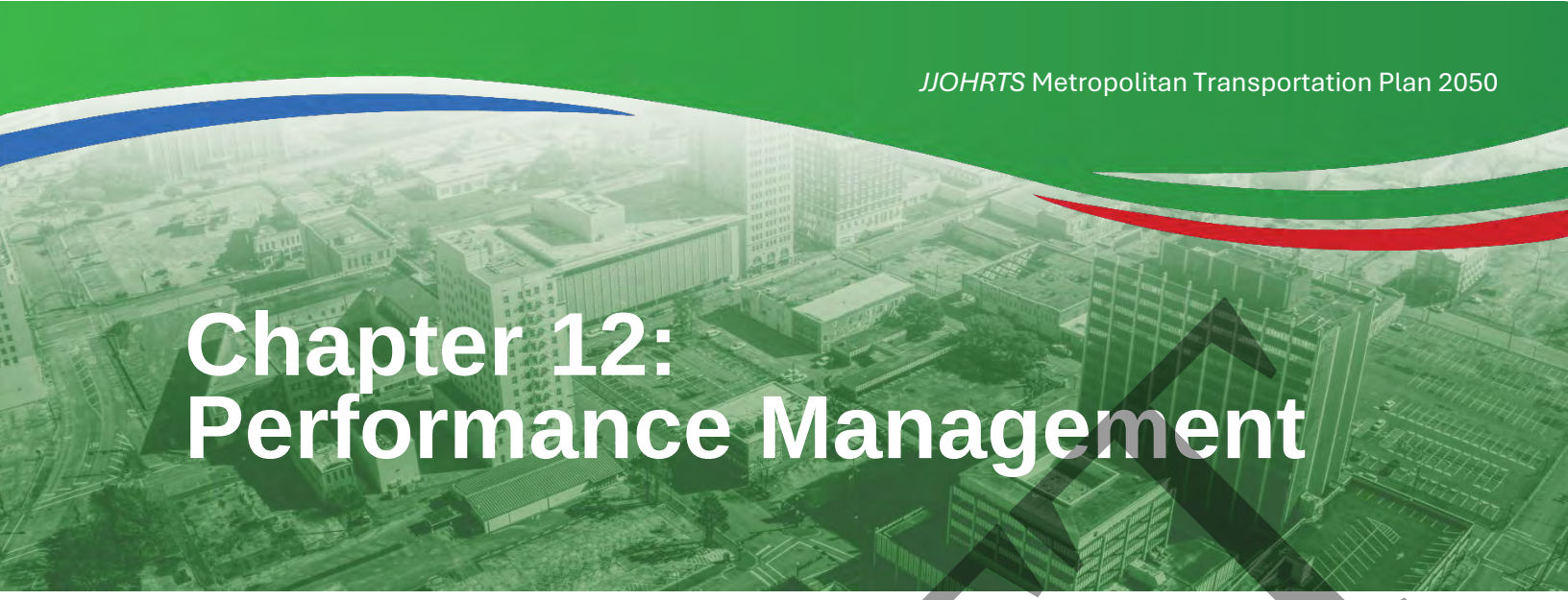
Year	Project	Total Cost	FTA Programmed Amount
2025	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2026	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2027	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2028	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2029	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2030	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2031	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2032	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2033	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2034	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2035	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2036	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2037	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2038	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2039	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2040	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2041	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2042	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2043	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2044	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2045	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2046	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2047	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2048	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2049	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447
2050	Funds for Transportation for Seniors and People with Disabilities	$197,447	$197,447

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Table 11-5: FTA Category 5311 Transit Projects.

Year	Project	Total Cost	FTA Programmed Amount
2025	Rural Transit and Intercity Bus	$542,325	$542,325
2026	Rural Transit and Intercity Bus	$542,325	$542,325
2027	Rural Transit and Intercity Bus	$542,325	$542,325
2028	Rural Transit and Intercity Bus	$542,325	$542,325
2029	Rural Transit and Intercity Bus	$542,325	$542,325
2030	Rural Transit and Intercity Bus	$542,325	$542,325
2031	Rural Transit and Intercity Bus	$542,325	$542,325
2032	Rural Transit and Intercity Bus	$542,325	$542,325
2033	Rural Transit and Intercity Bus	$542,325	$542,325
2034	Rural Transit and Intercity Bus	$542,325	$542,325
2035	Rural Transit and Intercity Bus	$542,325	$542,325
2036	Rural Transit and Intercity Bus	$542,325	$542,325
2037	Rural Transit and Intercity Bus	$542,325	$542,325
2038	Rural Transit and Intercity Bus	$542,325	$542,325
2039	Rural Transit and Intercity Bus	$542,325	$542,325
2040	Rural Transit and Intercity Bus	$542,325	$542,325
2041	Rural Transit and Intercity Bus	$542,325	$542,325
2042	Rural Transit and Intercity Bus	$542,325	$542,325
2043	Rural Transit and Intercity Bus	$542,325	$542,325
2044	Rural Transit and Intercity Bus	$542,325	$542,325
2045	Rural Transit and Intercity Bus	$542,325	$542,325
2046	Rural Transit and Intercity Bus	$542,325	$542,325
2047	Rural Transit and Intercity Bus	$542,325	$542,325
2048	Rural Transit and Intercity Bus	$542,325	$542,325
2049	Rural Transit and Intercity Bus	$542,325	$542,325
2050	Rural Transit and Intercity Bus	$542,325	$542,325

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Chapter 12: Performance Management

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12.0 Introduction

The SETRPC-MPO recognizes the importance of transportation performance tracking, goal setting, and measurement to provide greater accountability and transparency and to achieve a more efficient and effective investment of transportation resources. To date, the MPO has met all federal deadlines requiring adoption of performance measures.

12.1 Background

Transportation performance management is a strategic approach that uses system data to make investment and policy decisions to achieve national performance goals. Monitoring progress towards achieving these national performance goals is accomplished by establishing performance targets for key performance measures. Using a performance-based approach, decision makers can apply key information and data to understand the consequences of investment decisions across transportation modes.

For the SETRPC-MPO, performance management provides a means to evaluate the functionality and operations of the regional transportation system. They help to inform decision-making and improve the accountability for efficient and effective implementation of programs and projects. Performance management serves the following three functions for the SETRPC area:

- **Plan Development**: Provide a means to quantify baseline system performance and impacts of plan options to support trade-off decisions and help communicate the anticipated impacts of different investment strategies.
- **Plan Implementation**: Support plan implementation by emphasizing agency goals/ objectives and integrating them into budgeting, program structure, project selection, and project/program implementation policies.
- **Accountability**: Facilitate tracking and reporting on system performance relative to plan goals and objectives to support accountability for plan implementation and results.

12.1.1 Federal Legislation

Initiated as part of the 2012 Moving Ahead for Progress in the 21st Century (MAP-21) and continued in the 2015 Fixing America's Surface Transportation (FAST) Act, State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) are required to move towards a performance-based planning process with an emphasis on project selection based on specific planning factors.

SETRPC-MPO has focused on the following factors for selection of projects in its Fiscally Constrained Project List:

- **Safety**: Ability to reduce potential crashes based on the Safety Improvement Index (SII) reduction factors for specific improvements.
- **Emergency Response**: Identifies roadway improvements that enhance the provision of emergency services.
- **Intermodal Benefits**: Ability to improve the flow of intermodal transport along roadways in the most cost-effective and safety conscious manner.
- **Mobility**: Improvement in roadway Level-of-Service (LOS).

On May 27, 2016, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued the Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Final Rule. This regulation implements the transportation planning and transportation performance management provisions of MAP-21 and the FAST Act.

Pursuant with The Planning Rule, the Texas Department of Transportation (TxDOT) and each Texas MPO, including the SETRPC-MPO, must publish a System Performance Report for applicable performance measures in their respective statewide and metropolitan transportation plans and programs. The System Performance Report presents the condition and performance of the transportation system with respect to required performance measures, documents performance targets and progress achieved in meeting the targets in comparison with previous reports. Per the Planning Rule, the System Performance Report for the SETRPC MTP-2050 is included for the required Safety (PM1), Bridge and Pavement Condition (PM2), System Performance (PM3), Transit Asset Management (TAM), and Public Transit Agency Safety Plan (PTASP) performance measures and targets.

12.2 Roadway Performance Measures and Targets

The SETRPC-MPO coordinates with the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA) to establish and adopt performance measures and targets for the following performance areas: safety (PM1), pavement and bridge condition (PM2), and system performance (PM3).

12.2.1 Safety (PM1)

TxDOT has adopted its Strategic Highway Safety Plan, a data-driven statewide-coordinated safety plan to help reduce fatalities and serious injuries on all public roads. TxDOT established safety performance measures in the Highway Safety Improvement Program (HSIP) 2025 annual report. These performance measures are:

1) Number of fatalities
2) Rate of fatalities per 100 million vehicle miles traveled (VMT)
3) Number of serious injuries
4) Rate of serious injuries per 100 million VMT
5) Number of combined non-motorized fatalities and non-motorized serious injuries

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Safety performance targets are provided annually by the States to FHWA for each safety performance measure. Current statewide safety targets address calendar year 2026 and are based on an anticipated five-year rolling average (2022-2026). Texas statewide safety performance targets for 2026 are included in Table 12-1. The SETRPC adopted the Texas statewide safety performance targets on February 5, 2026.

Table 12-1: TxDOT Established Safety Performance Targets for CY 2026

2026 Safety Targets	Number of Fatalities	Rate of Fatalities*	Number of Serious Injuries	Rate of Serious Injuries*	Number of Non-Motorized Fatalities and Serious Injuries
2020	3,898	1.496	14,669	5.629	2,237
2021	4,456	1.563	19,456	6.826	2,620
2022	4,410	1.516	18,887	6.493	2,678
2023	4,291	1.424	18,776	6.229	2,760
2024	4,152	1.350	18,216	5.924	2,726
CY 2026 Target	4,506	1.440	18,884	6.300	2,802
** Rate per 100 million vehicle miles traveled*					

The SETRPC-MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the SETRPC MTP-2050 planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes, the Texas Strategic Highway Safety Plan (SHSP), the Texas Highway Safety Improvement Program (HSIP), the current statewide Texas Transportation Plan 2050 (TTP), and the SETRPC FY 2027-2030 Transportation Improvement Plan (TIP).

- The Texas Strategic Highway Safety Plan (SHSP) is intended to reduce the number of fatalities and serious injuries resulting from motor vehicle crashes on public roads in Texas. Existing highway safety plans are aligned and coordinated with the SHSP, including the Texas Highway Safety Improvement Program (HSIP), MPO and local agencies' safety plans. The SHSP guides TxDOT, Texas MPOs, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out across Texas.
- The TxDOT Highway Safety Improvement Program (HSIP) annual report provides for a continuous and systematic process that identifies and reviews traffic safety issues around the state. The goal of the HSIP process is to reduce the number of crashes, injuries and fatalities through the implementation of strategies and countermeasures structured around seven emphasis areas.
- The statewide Texas Transportation Plan 2050 (TTP) summarizes transportation needs across the state and identifies future funding projections for projects across transportation modes over the 25-year plan horizon.
- To support progress towards approved highway safety targets, the SETRPC FY 2027-2030 TIP increases the safety of the transportation system for motorized and non-motorized users

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as required by the Planning Rule through programming projects to help achieve the safety targets.

To support progress towards approved highway safety targets, the SETRPC MTP-2050 includes investments for safety improvements. These funded safety projects are expected to contribute to the achievement of the safety performance targets.

12.2.2 Pavement and Bridge Condition (PM2)

The Pavement and Bridge Condition Rule (PM2) establishes performance requirements to assess conditions on the National Highway System (NHS) and outlines the process for State DOTs and MPOs to establish targets and report conditions. TxDOT adopted new pavement and bridge condition targets on October 1, 2024 which consist of the following six (6) performance measures for PM2:

1) Percentage of Interstate System pavement in good or better condition,
2) Percentage of Interstate System pavement in poor condition,
3) Percentage of Non-Interstate National Highway System pavement in good condition,
4) Percentage of Non-Interstate National Highway System pavement in poor condition,
5) Percentage of Bridge Deck on the National Highway System in good condition, and
6) Percentage of Bridge Deck on the National Highway System in poor condition.

MPOs have 180 days from the adoption of performance measure targets by a state department of transportation to adopt those measures for the MPO or adopt their own targets. The SETRPC-MPO adopted the performance measures established by TxDOT for PM2 on February 6, 2024. These performance targets are shown in Table 12-2.

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Table 12-2: TxDOT Established (PM2) Pavement and Bridge performance Measure Targets

Performance Measure	Statewide Baseline	2 Year Target	4 Year Target
Pavement on Interstate System			
1) % in "Good" condition	64.5%	63.9%	63.6%
2) % in "Poor" condition	0.1%	0.2%	0.2%
Pavement on Non-Interstate			
3) % in "Good" condition	51.7%	45.5%	46.0%
4) % in "Poor" condition	1.3%	1.5%	1.5%
National Highway System Bridge Deck Condition			
5) % in "Good" condition	49.2%	48.5%	47.6%
6) % in "Poor" condition	1.1%	1.5%	1.5%

The SETRPC-MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the SETRPC MTP-2050 planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, the current statewide Texas Transportation Plan 2050 (TTP) and the SETRPC 2027-2030 TIP.

- The TTP 2050 summarizes transportation needs across the state and identifies future funding projections for projects across transportation modes over the 25-year plan horizon.
- The SETRPC FY2027-2030 TIP addresses infrastructure preservation and identifies pavement and bridge infrastructure needs within the metropolitan planning area and allocates funding for targeted infrastructure improvements.

To support progress towards TxDOT's statewide PM2 targets, the SETRPC MTP-2050 includes investments that will maintain pavement and bridge condition performance. Investments in pavement and bridge condition could include pavement replacement and reconstruction, bridge replacement and reconstruction, new bridge and pavement capacity, and system resiliency projects that improve NHS bridge components.

The fiscally constrained SETRPC MTP-2050 recommends investments for pavement and bridge condition through Category 1 Preventative Maintenance and Rehabilitation and Category 6 Bridges funds allocated to the TxDOT Beaumont District. These projects are expected to contribute toward achieving pavement and bridge condition performance targets.

12.2.3 System Performance (PM3)

The System Performance rule (PM3) establishes performance measure requirements to assess the performance of the National Highway System (NHS) and to assess freight movement on the Interstate System. These measures focus on evaluating travel time reliability and travel delays on interstate, freeway, and principal arterial class facilities to determine whether the magnitude of travel time variability is considered unreasonable. The objective of the rule is to ensure efforts to improve unreasonable travel

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delays and expedite the movement of people and goods, furthering the national goal of improving the efficiency of the surface transportation system.

Each MPO and state department of transportation must establish 2- and 4-year performance targets to assess the travel time reliability of all traffic on the National Highway System (NHS) and the travel reliability of national freight movement on the Interstate System. On February 9, 2023, the Texas Department of Transportation adopted revised travel time reliability targets for three performance measures. The MPO can either adopt a separate set of travel time reliability targets or support the targets approved by TxDOT. The SETRPC-MPO adopted the performance measures established by TxDOT for PM3 on June 15, 2023. These performance targets are shown in Table 12-3.

Table 12-3: System Performance (PM3) Measures and Targets

Performance Measure	Statewide Baseline	2 Year Target	4 Year Target
National Highway System Travel Time Reliability			
1) Percentage of the Person-Miles Traveled on the Interstate that are Reliable	84.6%	97%	95%
2) Percent of the Person-Miles Traveled on the Non-Interstate NHS that are Reliable	90.3%	70%	70%
3) Truck Travel Time Reliability (TTTR) Index	1.39	1.55	1.55

The SETRPC-MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the SETRPC MTP-2050 planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, the Texas Freight Mobility Plan, the current statewide Texas Transportation Plan 2050 (TTP), and the SETRPC FY2027-2030 TIP.

- The Texas Freight Mobility Plan defines the conditions and performance of the state freight system and identifies the policies and investments that will enhance Texas highway freight mobility well into the future. The Plan identifies freight needs and the criteria Texas will use to determine investments in freight and prioritizes freight investments across modes.
- The TTP 2050 summarizes transportation needs across the state and identifies future funding projections for projects across transportation modes over the 25-year plan horizon.
- The SETRPC FY2027-2030 TIP addresses reliability, freight movement, and congestion within the metropolitan planning area and allocates funding for targeted improvements.

To support progress towards TxDOT's statewide PM3 targets, the SETRPC MTP-2050 devotes resources to projects that will address passenger and highway freight reliability and delay. The fiscally constrained SETRPC MTP-2050 recommends $380,740,178 of investments for travel time reliability improvements through Category 2 Metropolitan and Urban Area Corridor Projects and Category 4 Statewide Connectivity Corridor Projects funds allocated to the TxDOT Beaumont District. The funded projects are expected to contribute toward achieving travel time reliability performance targets.

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12.3 Public Transportation/Transit Performance Measures and Targets

The SETRPC-MPO coordinates with the Beaumont Municipal Transit (BMT), Port Arthur Transit (PAT), South East Texas Transit (SETT), and the Federal Transit Authority (FTA) to establish and adopt performance measures and targets for the following performance areas: transit asset management (TAM) and Public Transportation Agency Safety Plans (PTASP).

12.3.1 Transit Asset Management Performance Measures and Targets (TAM)

The Federal Transit Administration (FTA) Transit Asset Management (TAM) Final Rule requires public transit providers to establish and implement TAM plans. The TAM plans for tier II providers must include a transit asset inventory, condition assessment of the inventoried assets, documentation of the provider's decision support tools/process, and a list of investment priorities to improve the state of good repair (SGR) of the provider's capital assets. SGR is defined as the condition in which a capital asset is able to operate at a full level of performance. The premise of the rule is the condition of assets should guide funding prioritization. The rule also outlines the process for State departments of transportation, MPOs, and transit providers to establish and report their transit asset performance targets, and the process FTA will use to assess whether transit providers have met or made significant progress toward meeting their performance targets.

FTA requires public transit providers to review and update their TAM plans at least once every four years. In 2018, Beaumont Municipal Transit, Port Arthur Transit, and South East Texas Transit developed their own TAM plans in accordance with the TAM Final Rule. The TAM plans were updated in 2024, which account for each transit provider's recent asset inventories, condition assessment, and expectations for asset procurement and improvements along with performance targets.

Beaumont Municipal Transit, Port Arthur Transit, and South East Texas Transit have approved the proposed updates to the transit asset performance targets for the federally required transit asset types. The MPO can either adopt a separate set of targets for the transit assets or support the targets approved by the transit agencies. The SETRPC-MPO adopted the performance measures established by Beaumont Municipal Transit, Port Arthur Transit, and South East Texas Transit for TAM on February 6, 2025. These performance targets are shown in Table 12-4.

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Table 12-4: Transit Asset Management (TAM) Performance Measures and Targets

Asset Category	Asset Class	Asset Type	FY 25 Target for Exceeding Useful Life Benchmark* (%)	FY 25 Target for Below 3** on TERM*** Scale (%)
Rolling Stock	Revenue Vehicle	Bus	20%	
		Cutaway Bus	10%	
		Van	10%	
Equipment	Non-Revenue Vehicle	Automobile	80%	
		Trucks and Other Rubber Tire Vehicles	40%	
Facility	Maintenance or Administrative Facility	Administrative Offices and Maintenance Shop/Yard		10%
	Passenger or Parking Facility	Station/Transit Terminal		10%

*Useful Life Benchmark (ULB): defined by FTA as the expected amount of time in years that a vehicle type is estimated to function, when acquired new and assuming routine maintenance is practiced.
** Based on the TERM scale, an asset is in a state of good repair if it has a rating of 3 or over on the TERM scale
*** FTA's Transit Economic Requirements Model (TERM). The TERM scale assigns numerical ratings from 1.0 (poor) to 5.0 (excellent) based on condition.

The SETRPC-MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the SETRPC MTP-2050 planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes, specifically, the current statewide Texas Transportation Plan (TTP) 2050 and SETRPC FY 2027-2030 TIP.

- ➔ The TTP 2050 summarizes transportation needs across the state and identifies future funding projections for projects across transportation modes over the 25-year plan horizon.
- ➔ The SETRPC FY 2027-2030 TIP addresses and identifies transit needs within the metropolitan planning area and allocates funding for targeted improvements.

To support progress towards the TAM targets, the SETRPC MTP-2050 devotes resources to projects that will address transit asset management.

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12.3.2 Public Transportation Agency Safety Plan (PTASP)

Under the Federal Transit Administration's (FTA) Public Transportation Agency Safety Plan (PTASP) Rule, applicable transit agencies are required to develop safety plans that define how these agencies will implement Safety Management Systems (SMS). These transit plans are required to include targets for performance measures defined in the National Public Transportation Safety Plan, which relate to fatalities, injuries, safety events, and system reliability. MPOs are federally required to set performance targets for these transit safety performance measures for their regions, in coordination with transit and state agencies. These requirements acknowledge the collaborative relationships needed to manage safety risks on transit systems.

Beaumont Municipal Transit and Port Arthur Transit are the only transit agencies within the metropolitan area utilizing FTA's Urbanized Area Formula Grants federal funds. Beaumont Municipal Transit and Port Arthur Transit have adopted transit safety performance targets for each performance measure. The SETRPC-MPO adopted the performance measures established by Beaumont Municipal Transit and Port Arthur Transit for PTASP on December 4, 2024. These performance targets are shown in Table 12-5.

Table 12-5: Public Transportation Agency Safety Plan (PTASP) Performance Measures and Targets

Mode	Fatalities (Total)	Fatalities (Per 100,000 VRM*)	Injuries (Total)	Injuries (Per 100,000 VRM)	Safety Events (Total)	Safety Events (Per 100,000 VRM)	System Reliability (VRM between failures)
Fixed Route Bus	0	0	<3	<0.33	<2	<0.66	>10,000
Demand Response Bus	0	0	0	0	<2	<0.8	>50,000

The SETRPC-MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the SETRPC MTP-2050 planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes, specifically, the current statewide Texas Transportation Plan (TTP) 2050 and the SETRPC FY 2027-2030 TIP

- ➔ The TTP 2050 summarizes transportation needs across the state and identifies future funding projections for projects across transportation modes over the 25-year plan horizon.
- ➔ The SETRPC FY 2027-2030 TIP addresses and identifies transit needs within the metropolitan planning area and allocates funding for targeted improvements.

To support progress towards the PTASP targets, the SETRPC MTP-2050 devotes resources to projects that will transit safety.

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12.4 Project Contribution to Performance Targets

Table 12-6 below shows the projects programmed within the fiscally constrained SETRPC MTP-2050 and the performance targets that each project is anticipated to positively affect. By agreeing to support the TxDOT performance targets in the area of safety (PM1), pavement and bridge condition (PM2), and travel time reliability (PM3), the SETRPC-MPO has agreed to coordinate with TxDOT to program projects that will contribute to the accomplishment of those goals, measures, and targets.

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Table 12-6: Project Contribution to Performance Targets

CSJ	MPO ID	Highway	Limits From	Limits To	Project Name	Project Description	PM1	PM2	PM3	TAM
0920-38-288	24001-F50N	Houston	Corner of Houston Ave and 4th Street	4th Street	Port / Port Arthur Truck Queuing and Laydown	Port of Port Arthur Truck Queuing Area and Laydown Yard Project - Construction of a Truck Queuing Area at the corner of Houston Avenue and 4th St-Rider 37	☐	☐	☐	☐
0920-38-291	24002-F50N	Austin	Corner of Rev Dr Ransom Howard Drive	4th Street	Port / Port Arthur Truck Queuing and Staging	Port of Port Arthur- Construct a Queuing Area at the corner of Rev Dr Ransom Howard Drive and Austin Avenue	☑	☐	☐	☐
0920-00-149	24029-F50N	Various	Districtwide		FY 24 Districtwide ADA Project	FY 24 Districtwide ADA Project. Along College St- From Pinchback Rd to IH 10	☑	☐	☐	☐
0920-00-171	24031-F50N	IH 10	Districtwide		Transportation Non-Roadway	Truck Parking (FY 25) - approximately 18 truck parking spots	☑	☐	☐	☐
5000-00-272	25001-F50P	IH 10	17160 I-10, Vidor, TX 77663		Electric Car Charging Location	Install 4 Direct Current Fast Charge ports along the Electric Alt Fuel Corridors plus 5 years of Operations and Maintenance	☐	☐	☑	☐
5000-00-447	26002-F50P	South Wheeler Rd	331 South Wheeler St, Jasper, TX 75951		Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	☐	☐	☑	☐
5000-00-494	26003-F50P	Smith Rd	7495 Smith Rd, Beaumont, TX 77713		Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	☐	☐	☑	☐
5000-00-525	26004-F50P	IH 10	17457 IH 10, Vidor, TX 77662		Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	☐	☐	☑	☐
5000-00-602	26005-F50P	IH 10	3745 IH 10 Access Rd, Beaumont, TX 77705		Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	☐	☐	☑	☐
5000-00-603	26006-F50P	HWY 12	1400 Hwy 12, Vidor, TX 77662		Electric Car Charging Location	Construct a Direct Current Fast Charge station plus 5 years of operations and maintenance.	☐	☐	☑	☐
0065-06-067	19095-F45N	US 69	US 96, South	Jefferson C/L	Construct New Road	Widen Freeway from 4 to 6 Lanes	☐	☐	☑	☐
0065-07-065	19084-F45N	US 69	Hardin C/L, South	Tram Road	Construct New Road	Widen Freeway from 4 to 6 Lanes	☐	☐	☑	☐
0920-00-172	24032-F50N	Various	Districtwide		Bicycle and Pedestrian Improvements	Districtwide Pedestrian Upgrades	☑	☐	☑	☐

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Table 12-6.1: Project Contribution to Performance Targets

CSJ	MPO ID	Highway	Limits From	Limits To	Project Name	Project Description	PM1	PM2	PM3	TAM
0920-00-133	24028-F50N	Various	Districtwide		IH-10 Drainage Improvements	IH-10 Drainage Improvements	☐	☑	☑	☐
0339-04-036	24027-F50N	SH 105	0.10 Miles East of SH 326	Pine Island Bayou	Widen Road - Add Lanes	Widen from 2 to 4 Lanes with CLTL	☐	☑	☑	☐
0200-04-020	24025-F50N	US 69	Angelina County Line	Tyler County Line	Widen Road - Add Lanes and Shoulders	Widen Existing 2 Lane Highway to 4 Lanes Divided	☐	☑	☑	☐
0028-13-142	N/A	IH 10	US 90, East	At UPRR	Bridge Replacement	IH 10-UPRR Overpass - Replace Bridge and Approaches	☐	☑	☐	☐
0920-00-150	24030-F50N	Various	Districtwide		Traffic Surveillance	District Wide - ITS Upgrade to Install 40 CCTV Cameras and 8 DMSs	☑	☑	☑	☐
0064-07-044	24023-F50N	US 96	Sabine C/L, South	0.8 Miles North of RE 255	Widen Road - Add Lanes	Widen from 2 to 4 Lanes Divided	☐	☐	☑	☐
0200-10-060	N/A	US 69	0.75 Miles South of FM 1003	Mitchell Road	Construct Frontage Roads	Construct Frontage Roads Only For New Location 4 Lane Divided Facility (Future Interstate)	☐	☐	☑	☐
0200-14-060	24026-F50N	US 69	IH 10, South	SH 347	US 69 Widening - IH-10 to SH 347	Widen from 4 to 6 Main Lanes	☐	☐	☑	☐
0064-08-062	24024-F50N	US 96	0.8 Miles North of RE 255, South	RE 255	US 96 (N of RE 255 to RE 255) - Widen	Widen from 2 to 4 Lanes Divided	☐	☐	☑	☐
0200-15-025	N/A	US 69	Nederland Ave, South	Jimmy Johnson Blvd.	Highway Improvements	Ramp Reversal, Bridge Widening, and Intersection Improvements	☑	☑	☑	☐
0920-00-173	24033-F50N	Various	Districtwide		Hazard Elimination & Safety	Hazard Elimination & Safety	☑	☐	☐	☐
0307-01-159	26001-F50N	SH 87	3.8 Miles NORTH of SH 82	3 Miles SOUTH of SH 82	SH 87 (@SH 82) Widen & RR Grade Separation	SH 87 (3.8 Miles NORTH of SH 82 to 3 Miles SOUTH of SH 82) Widening for Shoulder and Turning Bay and RR Grade Separation	☑	☑	☑	☐
Multiple	N/A	N/A	N/A	N/A	Transit Operations and Maintenance	Transit Operations and Maintenance	☐	☐	☐	☑

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Chapter 13: Public Involvement

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13.0 Introduction

The SETRPC MTP-2050 was developed through the continuous, comprehensive, and cooperative transportation planning process. The FAST Act requires MPOs to engage the public, agencies, and stakeholders throughout the regional transportation planning process. This MTP involved gathering input from stakeholders representing cities, counties, the state, federal agencies, the business community, community advocates, other interested stakeholders, and the general public at-large. This chapter summarizes the efforts the SETRPC-MPO undertook to solicit input into the development of the SETRPC MTP-2050.

13.1 Public Participation Plan

The Public Participation Plan (PPP) for the SETRPC-MPO provides the framework by which interested and affected individuals, organizations, agencies, and government representatives are consulted and included in the metropolitan transportation planning process. The SETRPC-MPO PPP was recently updated, and the Transportation Planning Committee adopted the updated PPP on November 16, 2023. The PPP was utilized to guide public involvement for the development of the MTP-2050.

13.2 Public Involvement Plan

A specific Public Involvement Plan (PIP) for the development of the SETRPC MTP-2050 was developed and followed. The PIP provided a framework for all public involvement and engagement activities to successfully prepare the MTP. The PIP identified involvement goals and methods, milestones for engagements, and a schedule. The PIP was followed to engage the public and stakeholders throughout the development of the MTP.

13.3 Public Meetings

For the development of the SETRPC MTP-2050, series of public meetings are held to educate, engage, and receive input. Typically, four public meetings are held at four locations across the SETRPC region.

The purpose of the series of public meetings is to gain participants' perspectives on existing and future transportation issues across the SETRPC region. Attendees have the opportunity to provide input and feedback through written comments and through exchange of ideas with study team members. Information is presented through several display posters with background on the SETRPC region and area projects.

13.4 Stakeholder Coordination

13.4.1 Transportation Planning Committee (TPC) Meetings

The TPC serves as the governing body for the MPO and makes all decisions regarding transportation policies and adopts all plans and programs developed by the MPO. The TPC provided regular and continuing general policy guidance during the development of this plan. The TPC meets quarterly, and its meetings are open to the public. All MPO TPC meetings were announced in accordance with the MPO's Public Participation Plan.

13.4.2 Technical Committee Meetings

The Technical Committee is an advisory committee to the TPC. The MPO staff presented all analyses contained within the SETRPC MTP-2050 to the Technical Committee for their review and recommendations. The Technical Committee also participated in evaluating and recommending candidate projects for inclusion in this SETRPC MTP-2050. Furthermore, the Technical Committee helped to formulate the financial plan for the SETRPC MTP-2050. The Technical Committee meets quarterly or on an as-needed basis and all meetings were announced in accordance with the MPO's Public Participation Plan.

13.4.3 MTP Adoption Process

The process of formally adopting the SETRPC MTP-2050 began with the completion of the draft SETRPC MTP-2050 and the commencement of the public comment period. This comment period was initiated with the posting of the availability of the document on the SETRPC website and simultaneous email notification to the TPC about the opening of the comment period. The MPO also conducted public meetings during the comment period to provide interested citizens an opportunity to review the draft SETRPC MTP-2050, ask questions of staff, and to submit comments or concerns regarding project recommendations. All meetings were advertised and announced in accordance with the MPO's Public Participation Plan.

13.4.4 Plan Amendment Process

As the MPO carries out their continuing, cooperative, and comprehensive planning process, amendments to this SETRPC MTP-2050 are expected. These may occur due to changes in project priorities, funding availability, or state and/or federal guidance. Depending upon the nature of the revision, per federal guidelines, revisions are categorized as either "Amendments" or "Administrative Modifications."

13.4.4.1 Amendments

The SETRPC MTP-2050 can be amended at any time between formal updates, and the following are examples of significant changes in the SETRPC MTP-2045 requiring an amendment.

- ➔ Adding or deleting a non-exempt project, i.e. one which requires an air quality/transportation conformity determination.
- ➔ Re-determining air quality/transportation conformity due to change in the State
- ➔ Implementation Plan requiring redetermination of conformity.
- ➔ Changing the estimated cost of a project that results in a 50% increase in cost and a cost that exceeds $1.5 million.
- ➔ Changing the design concept or scope of a project.
- ➔ Changing the funding sources for a project from non-federal to federal funds.

13.4.4.2 Steps in the Formal Amendment Process

- ➔ SETRPC-MPO will notify the TPC during their regular meetings of a necessary amendment.

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- TPC will initiate the formal amendment as required by the FAST Act. Elements of the amendment will meet current FHWA, FTA, EPA, and TxDOT requirements.
- The MPO will post a legal notice in various local newspapers and issue a press release to other local media outlets indicating that a draft amendment is available for public review on the agency's website (www.setrpc.org) and at the SETRPC office.
- Other community involvement techniques may be used, as outlined in the PPP.
- The public review and comment period is 30 days for the SETRPC MTP-2050 and begins on the day the availability notification of the draft document is posted on the website. Email notifications of the commencement of the public comment period will be sent to the TPC, as well as to interested persons in the MPO database.
- MPO staff will have seven days to summarize and address any public input received during the comment period.
- The TPC will consider the public input prior to their final approval of the amendment.
- All public input and comments received will be documented with responses by the MPO in the adopted document of the amendment.
- The MPO will submit the adopted amendment to the required parties (TxDOT, FHWA, FTA, etc.) for approval.

13.4.4.3 Administrative Modification

Administrative modifications to the SETRPC MTP-2050 are documented by the MPO staff, discussed at regular TPC meetings, and formalized in subsequent formal updates to the necessary documents. A formal public review and comment period is not required for administrative modifications to the SETRPC MTP-2050. Examples of changes requiring administrative modifications include:

- Adding or deleting an exempt project, i.e. one which does not require an air quality/transportation conformity determination.
- Change in the estimated cost of a project that does one, but not both, of the following: a) exceeds 50% and b) results in a cost exceeding $1.5 million.
- Moving a project from one fiscal year to another fiscal year, without affecting fiscal constraint.
- Moving a project from one federal funding category to another.
- Changing a project's funding source from federal to state funding.
- Splitting or combining projects without modification to original project design concept and scope.
- Changes to projects within the "grouped" category.
- Changes to project identification numbers (such as Control- Section-Job (CSJ) numbers).

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13.5 Resolution

13.5 Resolution

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13.6 Self Certification

13.6 Self Certification

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