

Eastern Shore Metropolitan Planning Organization 2045

Long Range Transportation Plan (LRTP)

Prepared for the:

Eastern Shore Metropolitan Planning Organization (ESMPO)

In Cooperation with:

The Baldwin County Commission, the City of Spanish Fort, the City of Daphne, the City of Fairhope, the Town of Loxley, and the Alabama Department of Transportation



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Executive Summary

Rapid population growth in the Eastern Shore region is transforming the area from a collection of small cities and towns into a modern suburban region. The rapid pace of growth is beginning to strain the capacity of the region's infrastructure, and the long term forecasts suggest that the region will be challenged with worsening traffic congestion, which is consistent with the experience of nearly all rapidly growing urban areas. Transportation funding from state and federal sources simply is not sufficient to both maintain and expand highways in high growth regions.

This Long Range Transportation Plan has relied on growth forecasts from the Center for Economic and Business Research (CEBR) at the University of Alabama for the long range population forecasts for the region. These forecasts were supplemented with analysis of growth trends over the past two decades. Data from the Alabama Department of Labor was used to evaluate employment trends in the region and to relate those trends to the observed and forecast population growth trends.

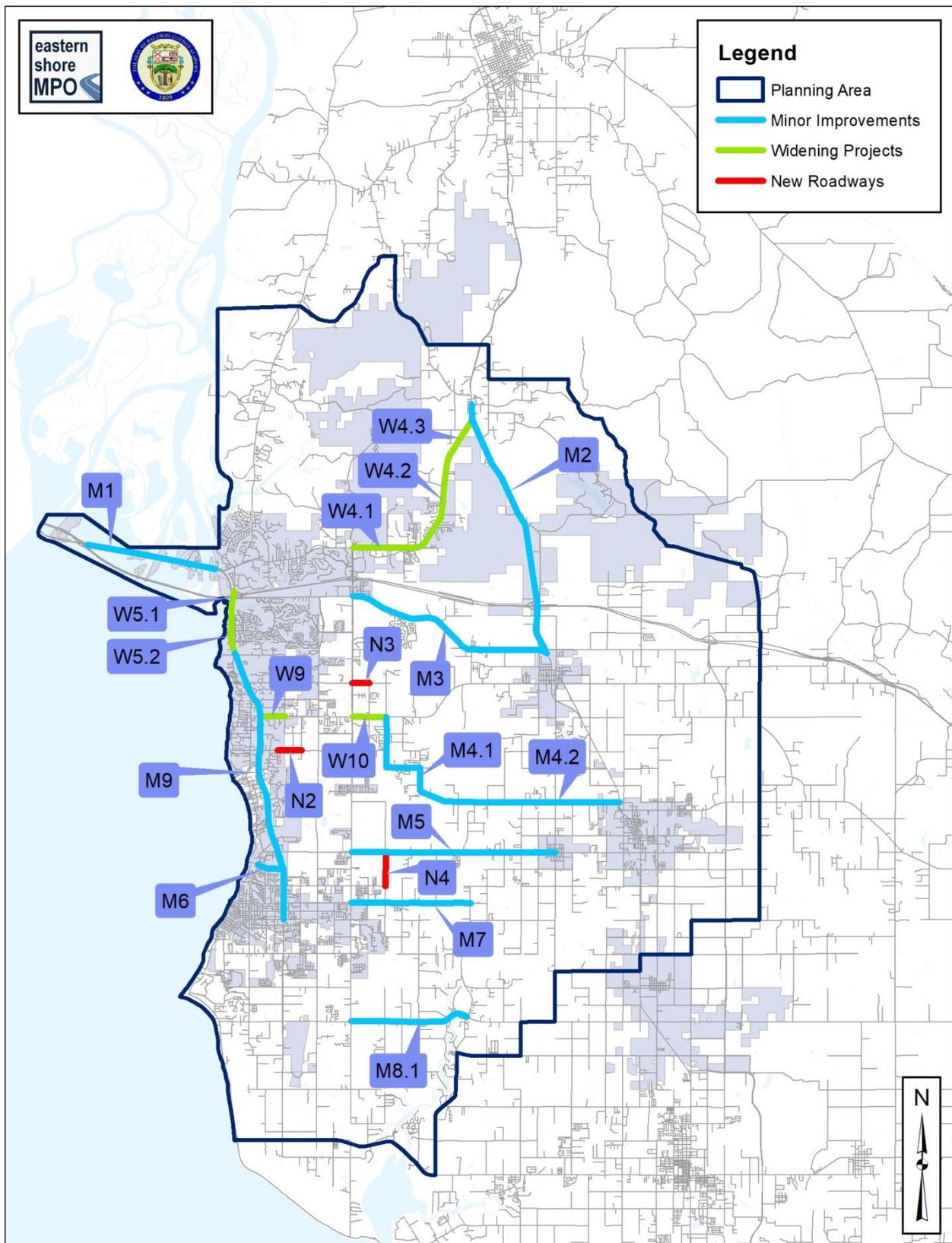
While many residents express concerns about traffic congestion, this plan finds that existing traffic congestion levels are moderate compared with larger metro areas. However, the plan also indicates that the projected rate of growth and sprawling distribution of population and employment growth will lead to rapidly worsening traffic congestion in all major highway corridors in the region. Traffic congestion invariably follows rapid suburban growth, as scarce highway funding and the long lead times for construction of new projects simply do not keep pace with growth.

An estimated \$168 million in federal and state funding for highway improvements through 2045 has been used to develop a financially feasible plan for the Eastern Shore Region. However, the highway projects that can be built with these funds only slightly improve the levels of congestion that are forecasted to occur if no further improvement were made in the highway system (the "Existing plus Committed Projects" or "E plus C" highway network). As with all fast growing regions, rapid growth translates into worsening traffic congestion. We know of no exceptions.

In evaluating projects for this long range plan, careful analysis has been conducted to assess the benefits of each project in regards to congestion levels, average traffic speed, commuter corridors, and tourism corridors. Crash frequency maps have been used to identify projects that will best address locations where collisions are common. Finally, the multimodal benefits of proposed highway projects have been assessed based on the identified freight corridors, bicycle and pedestrian routes, and transit routes.

The maps and tables below summarize the recommendations of this Long Range Transportation Plan (LRTP) for the Eastern Shore Metropolitan Planning Area and are supported by the more in depth analysis contained in the full plan document.

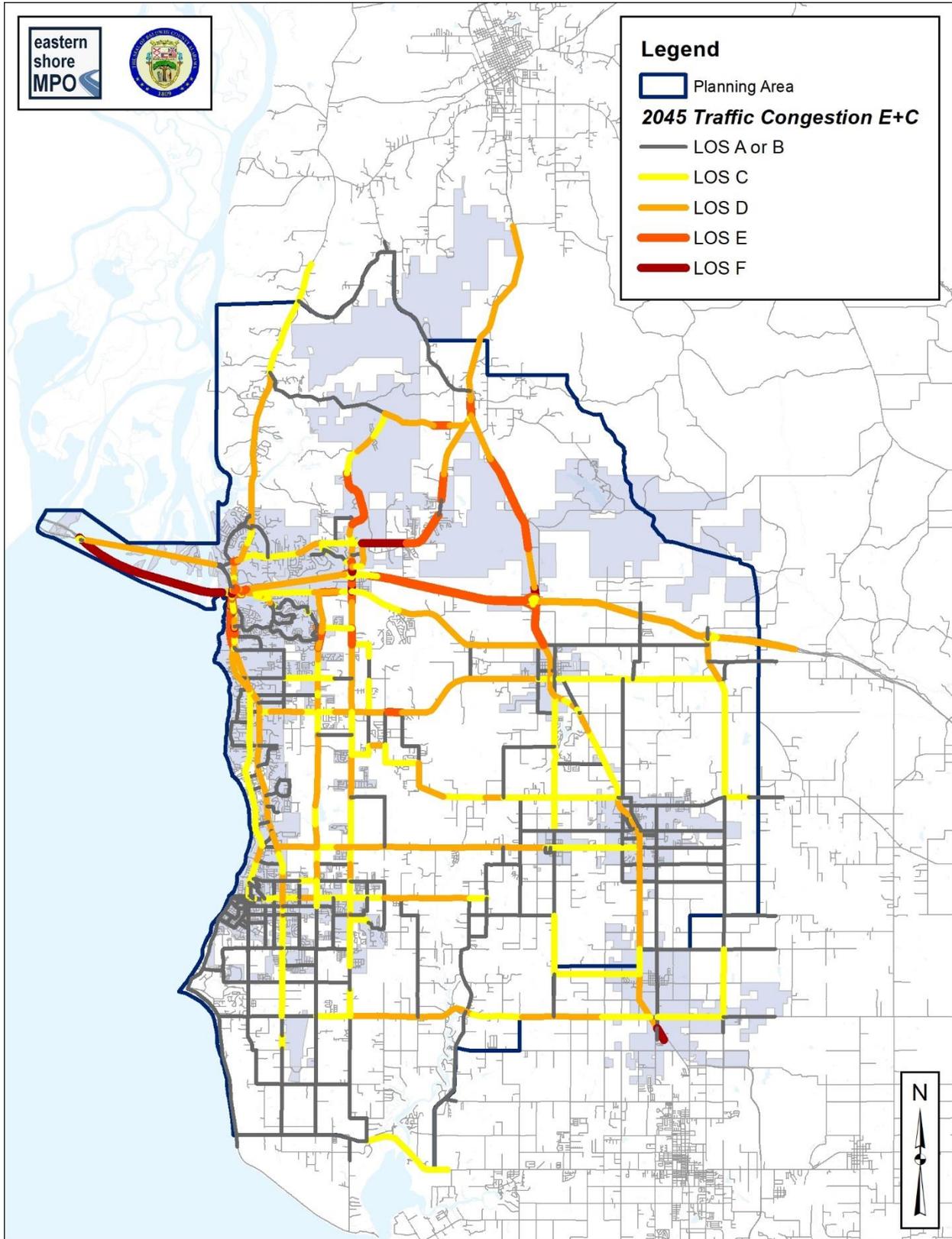
Executive Summary - Recommended Financially Constrained Highway Projects



Recommended Highway Projects through 2045

Project Type	Project ID	Project Name	Project Termini		Priority
			Begin	End	
Road Widening	W5.1	US Highway 98	Interstate 10	D'Olive Creek	High
	W4.1	US Highway 31	Jimmy Faulkner Drive (CR 27)	Old Highway 31	High
	W5.2	US Highway 98	D'Olive Creek	North Main Street (Daphne)	High
	W4.2	US Highway 31	Old Highway 31	Redmond Lane	High
	W4.3	US Highway 31	Redmond Lane	State Route 59	Medium
	W9	Daphne Ave (CR 64)	US Highway 98	Pollard Road	Medium
	W10	County Road 64	State Route 181	County Road 54	Medium
New Roads	N2	Johnson Road to Glover Lane Connector	Johnson Road	Glover Lane	High
	N3	Pleasant Road Extension	SR 181	Rigsby Road	Medium
	N4	Lawrence Road Connector	State Route 104	Gayfer Road Ext.	Medium
Minor Improvements	M2	State Route 59	US Highway 31	US Highway 90	High
	M9	US Highway 98	North Main Street (Daphne)	Nichols Avenue	High
	M5	State Route 104	State Route 181	County Road 55	High
	M1	The Causeway (US 31-US 90-US 98)	US Highway 98 Interchange	I-10 Interchange	Medium
	M8.1	County Road 32	State Route 181	County Road 9	Medium
	M3	US 90	State Route 181	State Route 59	Medium
	M4.1	County Road 54	County Road 64	County Road 49	Low
	M4.2	County Road 54	County Road 49	State Route 59	Low
	M6	Volanta Avenue (<i>Not a Federal Aid Route</i>)	Greeno Road (US 98)	North Section Street	Low
M7	County Road 48	State Route 181	County Road 9	Low	

Executive Summary - Projected 2045 Traffic Congestion



1. Introduction

The Eastern Shore Metropolitan Planning Organization (ESMPO) is designated by the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Alabama Department of Transportation (ALDOT) as the lead planning agency for coordinating all federal surface transportation funding in the Eastern Shore area (see geographic definition below).

The ESMPO was created in 2012 as a result of the 2010 Census defining the Fairhope, Daphne, and Spanish Fort area as an Urbanized Area, which is a densely settled area with more than 50,000 persons. Federal agency regulations require that all Urbanized Areas must establish or join a Metropolitan Planning Organization (MPO) that will coordinate transportation planning and programming for the area.

1.1. Overview

The Long Range Transportation Plan (LRTP) coordinates transportation planning for the urbanized area along the Eastern Shore of Baldwin County. The LRTP identifies transportation improvements that will be needed in the Eastern Shore area over the next 25 years, through 2045. The LRTP implements the federal “3-C Planning Process,” which is:

- Comprehensive (including all modes);
- Cooperative (involving a broad array of stakeholders and other interested parties); and
- Continuous (being updated at least every five years).

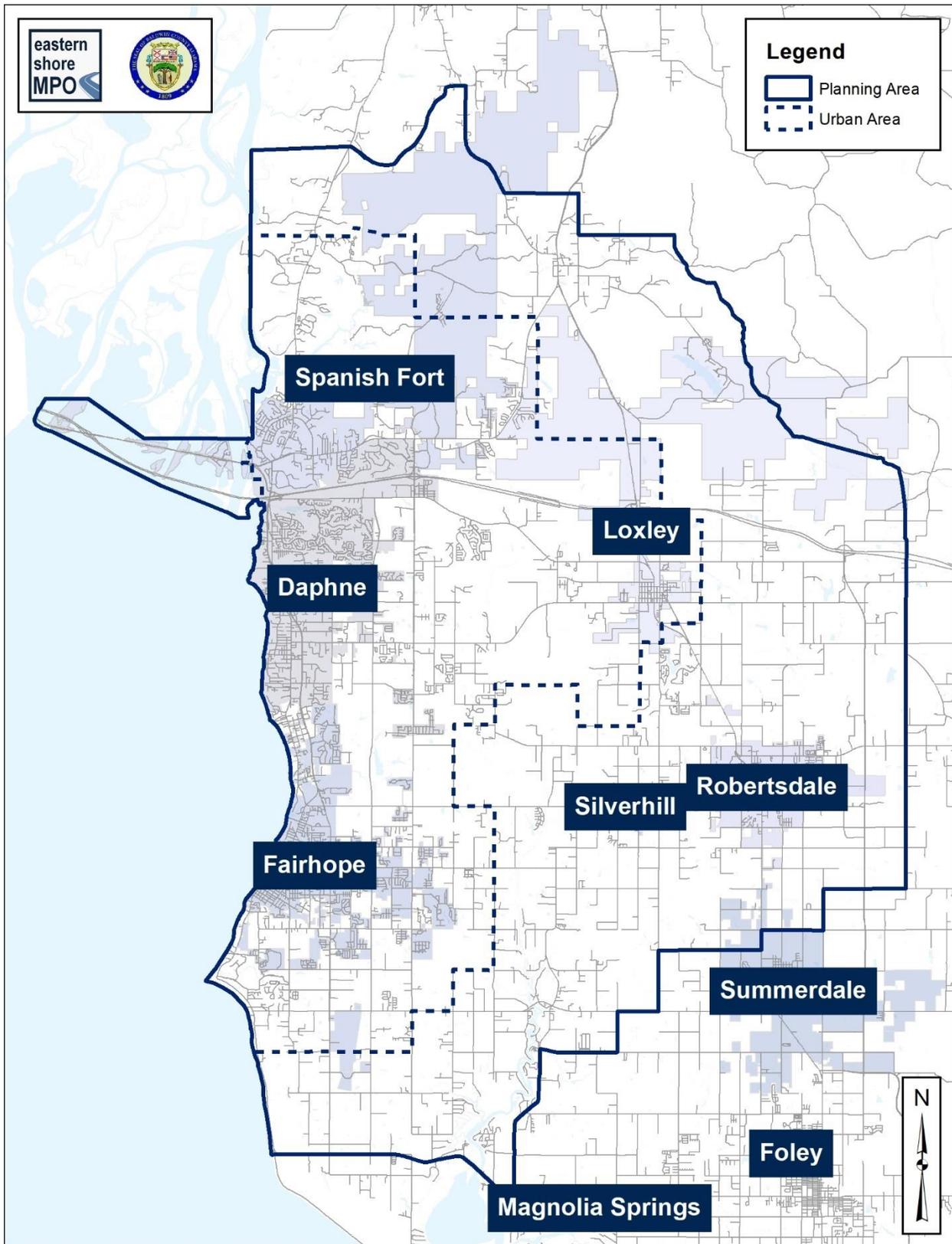
The 3-C planning process is established in Federal statute and is required for all Urbanized Areas. The LRTP is one of the key products of the planning process for the Eastern Shore Metropolitan Planning Organization (ESMPO), along with the Transportation Improvement Program (TIP) and Unified Planning Work Program (UPWP).

1.2. Eastern Shore MPO Area Description

The planning area for an MPO includes all existing Census defined Urbanized Area and should also include all area expected to become urbanized in the next 20 to 25 years. Figure 1.1. illustrates the planning area or “study area” for ESMPO, which includes all of Daphne, Fairhope, Silverhill, and Robertsdale; most of Spanish Fort and Loxley; and a portion of Summerdale.

The total land area of the Eastern Shore MPO planning area is approximately 311 square miles. The urbanized portion of the planning area is approximately 143 square miles.

Figure 1-1: Eastern Shore MPO Area



1.3. Public Participation in LRTP Development

Public participation for the Eastern Shore Metropolitan Planning Organization (MPO) update of the long-range transportation plan (LRTP) took place between Fall of 2019 and the Summer of 2020. Through the MPO's Public Participation Program, staff worked to provide opportunities for members of the public to participate in long-range transportation planning and to ensure that everyone's voice may be heard, valued, and considered.

Participation occurred during scheduled MPO meetings during public comment periods offering stakeholders a chance to offer their input into and feedback on the LRTP. During Fall of 2019, a survey was distributed via the MPO newsletter and social media feed as well as being carried by newsletters and social media feeds of the local municipalities. In Spring 2020, an open house was scheduled to present preliminary recommendations of the LRTP; however, it was interrupted by the COVID-19 pandemic. In an effort to continue the planning process during the pandemic and solicit additional feedback on those preliminary recommendations, an additional survey was developed and distributed.

1.4. FAST Act Scope of the Planning Process

The 2045 LRTP has been developed in accordance with the FAST Act (Fixing America's Surface Transportation Act). MPOs are encouraged to consult or coordinate with planning officials responsible for other types of planning activities affected by transportation, including planned growth, economic development, environmental protection, airport operations, and all modes of freight movement.

Under the FAST Act, the transportation planning process must consider projects, strategies, and services that will address the following ten factors:

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;
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 storm water impacts of surface transportation; and,
10. Enhance travel and tourism.

1.5. Livability Principles and Indicators

Increasingly, federal and state agencies are using Performance Measures as a way of ensuring greater accountability for the expenditure of public funds in an ever growing number of programs and activities across a variety of disciplines. Within the transportation sector and the planning processes associated

with transportation infrastructure development, ALDOT has adopted the Livability Principles and Indicators as a sustainability measurement against future actions.

All planning tasks must be measured against these **Livability Principles**:

- 1) Provide more transportation choices
- 2) Promote equitable, affordable housing
- 3) Enhance economic competitiveness
- 4) Support existing communities
- 5) Coordinate policies and leverage investment
- 6) Value Communities and neighborhoods

As a measure of sustainability of these principles, the MPO will provide the following **Livability Indicators**:

- 1) Percentage of LRTP projects that contain bicycle and pedestrian elements, excluding transit projects
- 2) Percentage of transportation investment from the Long Range Transportation Plan (LRTP) dedicated to enhancing accessibility of existing transportation facilities
- 3) Percentage of household income spent on housing and transportation
- 4) Percentage of Workforce Commuting to Work by Bike
- 5) Percentage of Workforce Walking to Work
- 6) Percentage of Workforce Utilizing Public Transit
- 7) Percentage of jobs and housing located within one-half (1/2) mile of transit service
- 8) Percent of workforce living within twenty-four (24) miles or less from primary job

1.6. Eastern Shore MPO Structure

The Baldwin County Highway Department manages the Eastern Shore Metropolitan Planning Organization. The MPO is comprised of the MPO Policy Board, the Technical Advisory Committee (TAC), the Citizen Advisory Committee (CAC), and the Bicycle and Pedestrian Advisory Committee (BPAC).

The MPO Policy Board serves as the official policy and decision-making body of the Eastern Shore MPO. The Technical Advisory Committee, the Citizen Advisory Committee, and the Bicycle and Pedestrian Advisory Committee advise the Policy Board about transportation policy, programs, and projects. The Policy Board submits approved projects and programs to the Alabama Department of Transportation (ALDOT) for programming, funding, and implementation. MPO Policy Board members are designated by their elected positions in the City of Spanish Fort, the City of Daphne, the City of Fairhope, the Town of Loxley, the Baldwin County Commission, the Alabama Department of Transportation, and the Federal Highway Administration. The MPO Policy Board is comprised of nine voting members and four non-voting members.

The Technical Advisory Committee (TAC) provides technical assistance and input in the various planning elements involved in the transportation planning process. The Citizen Advisory Committee (CAC) serves as a formal means through which citizens may participate in the transportation planning process. The Bicycle and Pedestrian Advisory Committee (BPAC) provides a means for those engaged in local bicycle and pedestrian activities to provide input into the metropolitan planning process. The composition of the Policy Board and Advisory Committees is provided on pages v through vii. The organizational structure of the MPO is illustrated in Figure 1-2 below.

1.7. Environmental Mitigation Strategies

Where the projects identified in this plan impact wetlands, threatened or endangered species, archaeological sites, historic properties, hazardous waste sites, national forests, tribal lands, and other environmentally or culturally sensitive areas, the MPO will work with federal, state, and tribal regulatory agencies to identify mitigation activities.

A review of the projects proposed in this Long Range Transportation Plan indicates that the primary concerns with the identified projects are wetlands impacts and associated wildlife impacts, and historic property impacts.

Mitigation activities may be required in the environmental approvals for projects. A good mitigation strategy for wetlands impacts is acquisition and permanent protection of high quality wetlands in or near the MPO study area; this strategy is also applicable for wildlife impacts.

Some states and MPOs have created Wetland Mitigation Banks, which purchase and protect highly productive, unspoiled wetlands to create “credits” that are “spent” to offset project-related wetlands impacts.

Historic property impacts are best handled by avoidance and minimization. In other words, flexibility in highway design should be employed to the maximum extent feasible so that historic property impacts are avoided or minimized. Flexibility in highway design may include such strategies as substituting narrow non-traversable medians for “fifth lane” medians, reducing lane widths, adjusting design speeds, and shifting road centerlines away from sensitive properties.

1.8. Title VI and Environment Justice Communities

The Eastern Shore Metropolitan Planning Organization is committed to ensuring public participation in the development of all transportation plans and programs. It is the overall goal of the MPO that the transportation planning process be open, accessible, transparent, inclusive, and responsive. As a continuing effort by the MPO to provide public access and the means by which to engage in the planning process, the MPO has established the following public participation goals for all documents and programs:

1. An Open Process – To have an open process that encourages early and continued public participation. All MPO and committee meetings are open to the public.
2. Easy Information Access – To provide complete and timely information regarding plans, programs, procedures, policies, and technical data produced or used during the planning process, to the general public and the media. All MPO meeting announcements, documents, maps, and plans can be viewed at www.easternshorempo.org.

3. Notice of Activities – To provide timely and adequate public notice of hearings, meetings, reviews, and availability of documents.
4. Public Input and Organizational Response – To demonstrate consideration and recognition of public input and comments, and to provide appropriate responses to public input.
5. An Inclusive Process – To encourage participation in the planning process by traditionally under-represented segments of the community; low-income groups, minorities, persons with disabilities, and the elderly; and to consider the needs of these groups when developing programs, projects, or plans.

The Eastern Shore MPO will be compliant with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990 (ADA) by July 20, 2016. Additionally, the MPO is, and will be, compliant with all other Title VI programs, processes, and procedures to include the following:

- Civil Rights Act of 1964, 42 USC 2000d, et seq., which prohibits exclusion from participation in any federal program on the basis of race, color, or national origin.
- 23 USC 324, which prohibits discrimination on the basis of sexual orientation, adding to the landmark significance of 2000d. This requirement is found in 23 CFR 450.334(1).
- Rehabilitation Act of 1973, 29 USC 701 Section 504, which prohibits discrimination on the basis of a disability, and in terms of access to the transportation planning process.
- Americans with Disabilities Act of 1990, which prohibits discrimination based solely on disability.
- ADA encourages the participation of people with disabilities in the development of transportation and paratransit plans and services. In accordance with ADA guidelines, all meetings conducted by the MPO, will take place in locations which are accessible by persons with mobility limitations or other impairments.
- Language Assistance Plan (LAP), which is required by Title VI of the Civil Rights Act of 1964, Executive Order 13166, and FTA Circular C 4702.1B, October 2012. The Eastern Shore MPO has completed a Four Factor Analysis of the Eastern Shore Metropolitan Planning Area to determine requirements for compliance with the Limited English Proficiency (LEP) provisions.
- Environmental Justice, Executive Order 12898, which requires recipients of federal funds to consider the both minority and low-income population in the planning process. Based on analysis, the MPO has identified a population within the MPA that may require MPO assistance in participating in the planning process. A Language Assistance Plan has been developed and is documented in the 2013 Public Participation Plan, which can be accessed at the following on the MPO website, www.easternshorempo.org.

In order to further support the public participation goals of the ESMPO, the public was encouraged to participate in the development of the LRTP. The 2045 LRTP process has included two series of public

engagement, designed to obtain input from the public concerning the long range transportation planning process in the Eastern Shore Metropolitan Planning Area. **This process will culminate in a public involvement meeting to present the draft 2045 LRTP and receive comments from the public during a 14-day public comment period.** A summary of the public outreach activities and results are included in Appendix B.

All ESMPO meetings are open to the public. At these meetings, the ESMPO committees review the draft and approve the final LRTP documents. Interested individuals may also review and comment upon these documents in tandem with the MPO committees. Individuals may address their concerns to the MPO committees directly at any meetings they attend. The MPO coordinator at the Eastern Shore MPO should be contacted to obtain unapproved draft and final documents.

The Geography of Environmental Justice Communities in ESMPO

Appendix D includes mapping of several key characteristics that are indicative of the presence of under-served and disadvantaged populations. These include:

- Percent of Population Below Poverty Level
- Percent of Households Receiving Food Stamps
- Percent of Unemployment
- Percent Minority Population Versus Non-Minority
- Percent Minority Population by Census Block

The geographic distribution of each indication is variable, and high concentrations of Environmental Justice populations are not readily apparent in the region. Data to support the Environmental Justice mapping is not available at small census geography, and the Census Tract based analysis used here provides limited precision as to specific location of the subject populations. However, a few conclusions can be drawn, as described below.

Concentrations of minority population are found in south Fairhope, south of CR 64 in Daphne, east of Daphne in the CR 64 and US 90 corridors, north of Spanish Fort near the study area boundary, and along CR 32 near the study area boundary.

Unemployment levels tend to be highest in the rural areas east of Daphne along CR 64 and in the area southeast of Fairhope, and this geographic pattern is reinforced by the mapping of households below the poverty level and households receiving food stamps.

1.9. Performance Measures

ALDOT's Performance Measures

In compliance with the Joint Planning Rule from FWHA (23 CFR 450 and 771) and FTA (49 CFR 613), under the MAP-21 and the FAST Act, State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) are to implement a performance-based approach to planning and programming activities. This includes setting data-driven performance targets for transportation performance measures. This approach supports the national goals for the federal-aid highway and

public transportation programs. The seven goals are as follows: 1) Improving Safety, 2) Maintaining an Infrastructure Asset System in a State of Good Repair, 3) Reducing Traffic Congestion, 4) Improving the Efficiency of the Surface System, 5) Freight Movement and Economic Vitality, 6) Protecting the Environment, and 7) Reducing Project Delivery Delays.

Under the 23 CFR 490, the DOTs and MPOs are required to establish targets for applicable national performance measures. The Safety Performance Measures (PM1), Bridge/Pavement Measures (PM2), the System Performance Measures (PM3), and the FTA's Transit Asset Management (TAM) Targets have been adopted by ALDOT and the MPOs. Some targets are required to be set on an annual basis while others are set on two (2)-year and four (4)-year cycles.

ALDOT and the MPOs, along with the Transit Providers, have a cooperative agreement in place to coordinate the development of the targets, the sharing of information related to the transportation performance measures, selection of targets, and reporting requirements.

STIP Linkage to Performance-Based Planning Documents and Targets

The FHWA/FTA Joint Planning Rule required that two years after the rules become effective that STIP/TIPs amendments or updates must meet the Performance-Based Program and Planning (PBPP) requirements (23 CFR 450. 226 and 450.340). These “phased -in” requirements became effective in 2018 and 2019. The STIP/TIPs aid in programming investments toward achieving the targets as well as align with the PBPP plans *to the maximum extent practicable*.

This STIP contains both Highway and Transit Projects. Typical highway projects, such as highway capacity, system preservation, bridge, and safety projects, support the established targets. The same is true for the transit projects that are capital purchases. The STIP project selection criteria considers ALDOT's goals and objectives to preserve the existing system, improve system reliability, promote safety, reduce congestion, and improve the movement of goods and people. ALDOT will continue to coordinate with the MPOs on updates and/or amendments to the STIP/TIPs and support the selected performance targets *to the maximum extent practicable*.

ALDOT Performance Measures & Targets

FHWA Safety Performance Measures (PM1) (Annual Targets)	Calendar Year Targets 2021	
Number of Fatalities	961	
Rate of Fatalities (per 100 million Vehicle Miles Traveled)	1.364	
Number of Serious Injuries	6595	
Rate of Serious Injuries (per 100 million Vehicle Miles Traveled)	9.355	
Number of Non-motorized fatalities and serious injuries	366	
FHWA Bridge/Pavement Performance Measures (PM2)	Original 4-Year Target 2022	
% of Pavements of the Interstate System in Good Condition	n/a	
% of Pavements of the Interstate System in Poor Condition	n/a	
% of Pavements of the Non-Interstate NHS in Good Condition	> 40.0%	
% of Pavements of the Non-Interstate NHS in Poor Condition	< 5.0%	
% of NHS bridges in Good condition by deck area	≥ 27.0%	
% of NHS bridges in Poor condition by deck area	≤ 3.0%	
FHWA System Performance Measures (PM3)	Adjusted 4-Year Target 2022	
% of Person-Miles Traveled on the Interstate that are Reliable	92.00%	
% of Person-Miles Traveled on the Non-Interstate NHS that are Reliable	90.00%	
Truck Travel Time Reliability (TTTR) Index on the Interstate	1.3	
FTA Transit State of Good Repair Performance Measures	Calendar Year Targets 2021	
% of Rolling Stock (Revenue vehicles) meet or exceed Useful Life Benchmark (ULB)	Reduce inventory by 5%	
% of Equipment (over \$50K) meet or exceed Useful Life Benchmark (ULB)	Reduce by 10%	
% of FTA-funded Facilities with condition rating below 3.0 (average) of FTA Average TERM Scale	No more than 20% of facilities rate less than average	
FTA Transit Safety Performance Measures	Demand Response	Fixed Route
Fatalities	0	0
Rate of Fatalities	0	0
Injuries	0	0
Rate of Injuries	0	0
Safety Events	0	0
Rate of Safety Events	0	0
Mean distance between major mechanical failure	185,235	185,235

*rate = total number for the year/total revenue vehicle miles traveled

Performance-Based Plans Descriptions

Listed below are brief descriptions of ALDOT’s PBPP Plans. These plans align with their respective performance measures and targets and this STIP.

Strategic Highway Safety Plan (SHSP) and Highway Safety Improvement Program (HSIP) Report (HSIP) (PM1)

The SHSP is a data-driven, multiyear comprehensive plan that establishes ALDOT’s traffic safety goals, objectives, priorities and areas of focus, and facilitates engagement with safety stakeholders and partners. The SHSP provides a comprehensive framework for reducing fatalities and serious injuries on all public roads, with the ultimate vision of eradicating the State’s roadway deaths. The strategies detailed in the plan integrate the efforts of partners and safety stakeholders from the 4 Es of safety (Engineering, Education, Enforcement and Emergency Medical Services).

The Alabama SHSP 3rd Edition was completed in July 2017 and the current focus of Alabama’s SHSP is the National Goal of “Toward Zero Deaths” initiative which is to reduce fatalities by 50% by 2035.

The HSIP is an annual report required by states that documents the statewide performance measures toward the zero deaths vision. It identifies and reviews traffic safety issues around the state to identify locations with potential for improvement.

Transportation Asset Management Plan (TAMP) (PM2)

The TAMP is a focal point for information about the bridge and pavement assets, their management strategies, long-term expenditure forecasts, and business management processes. The development of ALDOT’s TAMP is consistent with ALDOT’s desire to make data-driven spending decisions related to its assets. In short, ALDOT puts into practice, both on a regular basis and more specifically in the TAMP, better decision making based upon quality information and well-defined objectives. The TAMP will be a central resource for multiple ALDOT Bureaus for asset information, management strategies around those assets, financial sources and forecasting, and business management processes.

System Performance Measures (PM3)

System Performance Measures (PM3) assess the performance of the Interstate and Non-Interstate National Highway System (NHS) for the purpose of carrying out the National Highway Performance Program (NHPP); to evaluate freight movement on the Interstate System; and to analyze traffic congestion and on-road mobile source emissions for the purpose of carrying out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

The Alabama Statewide Long-Range Plan provides a high-level description of existing and projected travel and maintenance conditions of Alabama’s infrastructure. This Plan places emphasis on the roadway system because it is the primary mode of transportation for the movement of people and goods. The targets support system reliability along Alabama’s infrastructure system.

The Alabama Statewide Freight Plan (FP) provides an overview of existing and projected commodity flow by mode (truck, rail, waterway, air and pipeline) along existing and projected network characteristics through data analysis. In general, the FP provides an overall profile of Alabama’s multimodal freight network, existing and projected freight flows by truck, and congested areas of concern throughout the state. The targets support the movement of freight which affects economic vitality.

The targets were set utilizing the FHWA’s dataset source for travel time called National Performance Management Research Data Set (NPMRDS), Regional Planning Commission of Greater Birmingham’s Air Quality Conformity Data, and other resources.

Transit Asset Management (TAM)

Transit Asset Management (TAM) is a business model that uses the condition of assets to guide the optimal prioritization of funding at transit properties to keep transit networks in a State of Good Repair (SGR). The benefits of the plan are: improved transparency and accountability, optimal capital investment and maintenance decisions, more data-driven decisions, and has potential safety benefits. This plan aligns with the transit targets under Transit Asset Management.

Project Evaluation for the ESMPO LRTP

Performance measures used in the Project Evaluation section of this plan are operationalized using travel model outputs and other measures of network characteristics are organized in three categories: *Mobility; Safety; and Multimodal benefits.*

Mobility is evaluated using four criteria: congestion (measured by Volume/Capacity ratios); speed (measured as the variance from free-flow speed); commuter routes (measured as the percent of daily traffic generated by commuters in each corridor); and tourism corridors (measured as the percent of traffic originating from outside of the study area in each corridor).

Safety is evaluated based on a subjective analysis of crash frequency maps. Liability concerns and ALDOT data restrictions limit the ability to present any detailed crash data or mapping, so this performance measure is based on the consultant teams review of crash frequency maps. Projects along road segments with high crash frequency are weighted favorably.

Multimodal benefits are identified based on the modal elements in this LRTP. Projects that improve freight corridors, projects that include proposed facilities in the bicycle and pedestrian networks in this plan, and projects that include existing transit routes are weighted favorably in the project evaluation process.

1.10. Goals and Objectives

The 2040 ESMPO LRTP did not explicitly state Goals and Objectives for the plan. To a significant degree, federal guidance defines the goals and objectives of the planning process, as outlined in the Planning Emphasis Areas and the ten Planning Factors listed in Section 1.4 of this plan.

The MPO Policy Committee may find it beneficial to clearly articulate a more specific set of goals and objectives for staff and consultants to use as guidance in the future for developing plans, recommendations and programs. The general goals and objectives that have been considered in this planning process are:

Goal 1: Produce a clear, concise, user-friendly plan.

Objective 1.1: Focus on maps and tables that clearly illustrate the data, assumptions, and results of the planning process

Objective 1.2: Provide a concise, readable report, with technical details and documentation provided separately in appendices.

Objective 1.3: Develop an executive summary of the plan that can be easily posted on websites and reproduced as a handout to provide an easily accessible and understandable version of the plan.

Goal 2: Effectively engage the public in the planning process, provide education regarding the MPO planning process for the region, and ensure that the plan is responsive to public input.

Objective 2.1: Seek input from all residents of the region through printed questionnaires, booths at festivals and events, Facebook posts, on-line surveys, and public information meetings.

Objective 2.2: Document public input and respond to public comments in developing the plan.

Goal 3: Develop effective strategies for maintaining and improving regional mobility for all modes and for freight, within the anticipated funding levels.

Objective 3.1: Identify existing and predicted future traffic congestion and develop strategies to mitigate and manage congestion that are consistent with available funding.

Objective 3.2: Identify opportunities to improve mobility for non-automobile users and provide alternatives to automobile travel.

Objective 3.3: Identify corridors with high truck traffic volumes and identify projects that will help to improve freight movement within and through the region.

Goal 4: Preserve the existing transportation system in a state of good repair, improve safety and operations, and support tourism in the region.

Objective 4.1: Identify maintenance deficiencies in the transportation system and address these in the project evaluation process

Objective 4.2: Identify the types of facilities that have above average crash rates and identify roadway improvement projects that address areas with high numbers of crashes.

Objective 4.3: Identify important tourism corridors and address these in the project evaluation process.

2. Existing Conditions

This section of the report summarizes the current status of the transportation and land use systems in the Eastern Shore region and is the basis for developing the future transportation needs in Section 3 of the report.

2.1. Land Use and Demographics

Effective transportation planning relies on accurate base year data about land use activities. The transportation system serves and influences land use, while land use changes also influence transportation needs. The traffic, or flow pattern, that results from land use and transportation decisions determines where additional investment in transportation facilities will be most productive.

2.1.1. Employment

Figures 2-1 and 2-2 map regional retail and non-retail employment. Both Retail and Non-retail employment is concentrated along US 98 and in the I-10 corridor. Figure 2-3 summarizes employment in tabular form.

Figure 2-1: Current Employment Data for ESMPO and Baldwin County

	July 2010	July 2015
Baldwin County Total Employment	75,120	84,511
Percent of Baldwin County Employment within MPO	55%	54%
ESMPO Total Employment Estimate	41,095	45,339

Sources: Alabama Department of Labor, Eastern Shore MPO 2010 Employment Data

Figure 2-2: Retail Employment by Traffic Analysis Zone, 2015

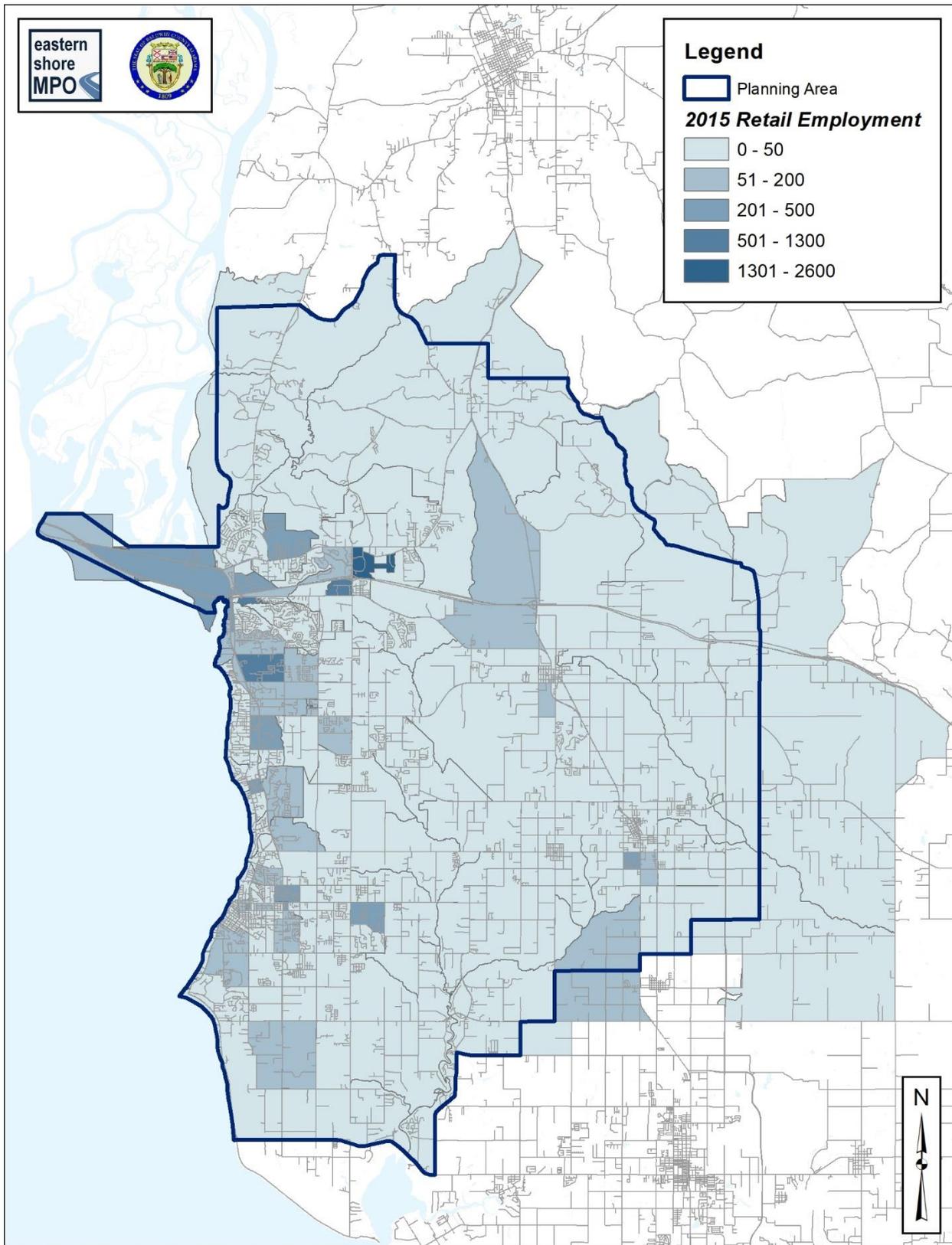
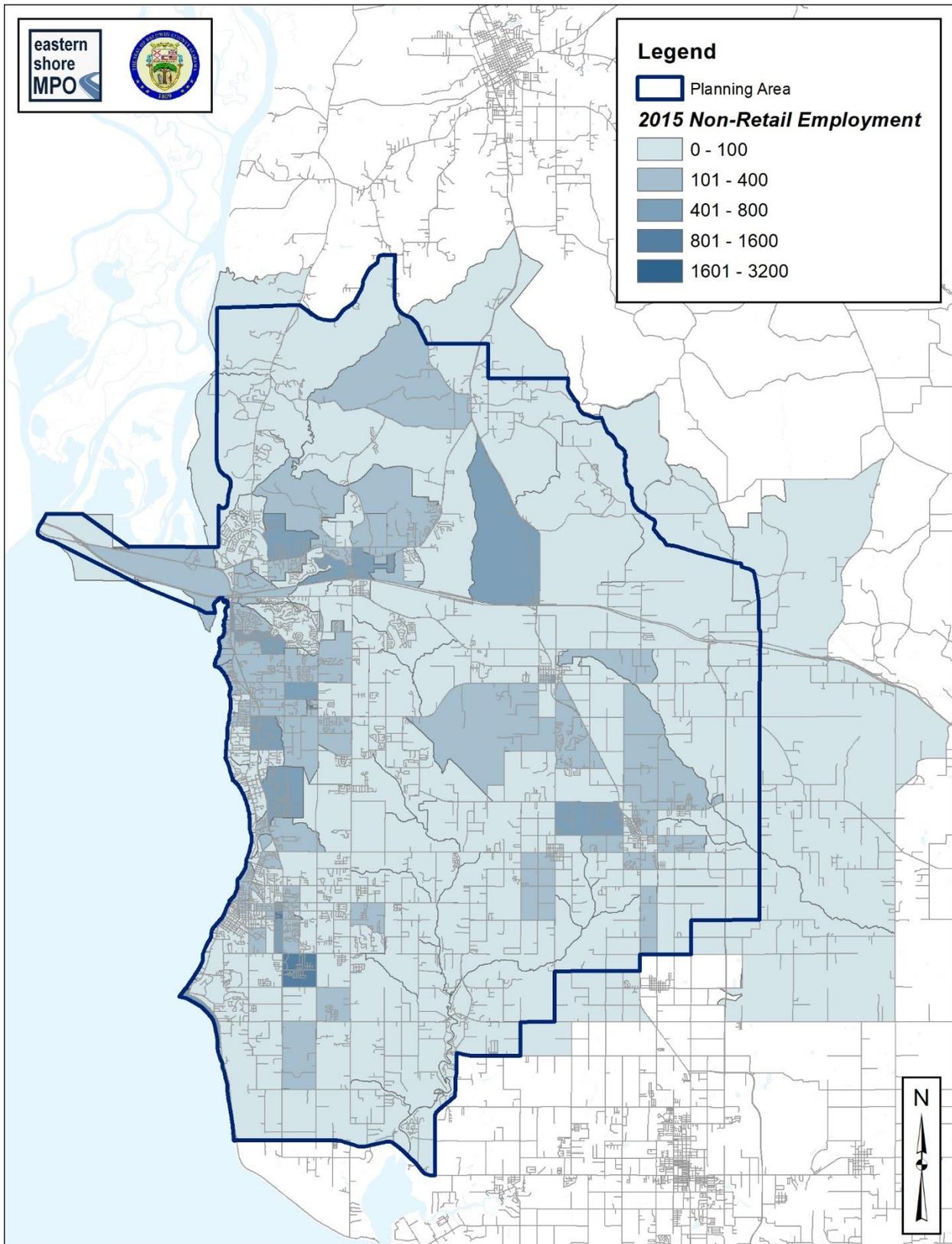


Figure 2-3: Non-Retail Employment by Traffic Analysis Zone, 2015



2.1.2. Population Overview

As the region has experienced suburban growth, population is spreading outward from the traditional central areas of Fairhope, Daphne and Spanish Fort along the US 98 corridor, and moving eastward into agricultural lands along the SR 181 corridor and into the Belforest area. Growth is also occurring in and large, undeveloped forested tracts north of I-10. The recent development in the region has focused on areas with good access to I-10, as residents seek locations that have good access to jobs in the I-10 corridor in Eastern Shore and in greater Mobile. Convenience to regional retail and services around the I-10 interchanges at US 98 and at SR 181 are also an important influence on the location of residential growth.

The figure below (Figure 2-4) lists the population of the MPO and Baldwin County.

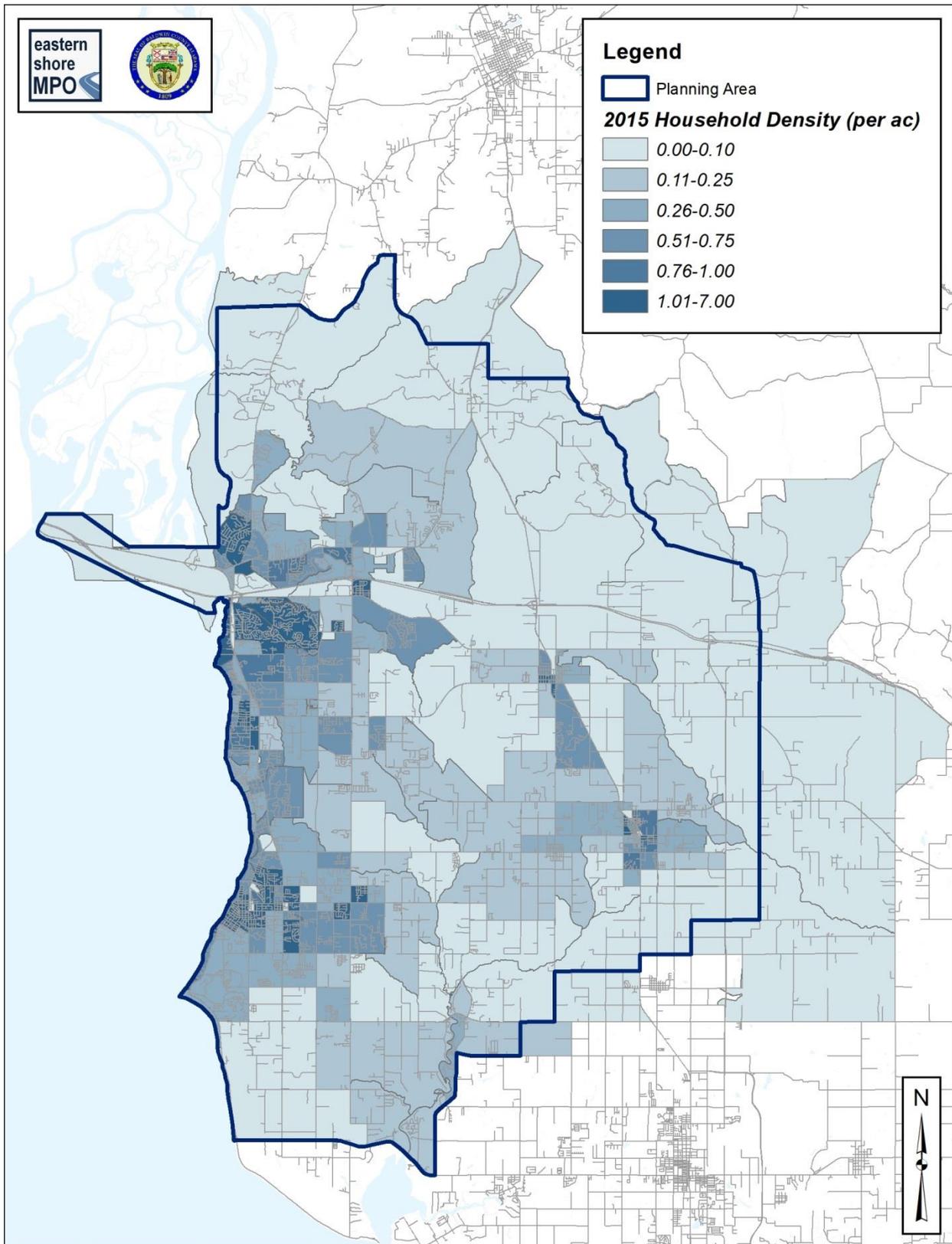
Figure 2-4: Population and Households in Baldwin County and ESMPO, 2010 and 2015 Estimates

	Population (July 1)		Households		Change, 2010-2015	
	2010	2015	2010	2015	Pop	HHs
ESMPO	98,220	110,006	38,919	43,568	11,786	4,649
Remainder of Baldwin County	84,890	92,857	33,744	36,933	7,761	3,189
Baldwin County Total	183,110	202,863	72,663	80,501	19,753	7,838

Sources: U.S. Census Bureau, Population Division, and Center for Business and Economic Research, The University of Alabama, ESMPO 2010 Travel Model data

Figure 2-5 on the next page maps the current density of households per acre in the Traffic Analysis Zones (TAZs) in the region. TAZs are the geographic units for which population and employment data is collected and growth is projected. Typically, each TAZ is bounded by the major roads that are included in the regional travel model and includes from just a few census blocks to dozens of census blocks, depending on block size.

Figure 2-5: Household Density by TAZ, 2015



2.1.3. Land Use Patterns and Commuting

Baldwin County has many more workers than jobs, producing a significant outflow of workers to adjacent counties. While Mobile is the primary destination of commuters leaving Baldwin, Escambia County is also a significant destination for out-of-county workers, as illustrated in Figure 2-6.

Figure 2-6: Baldwin County Residents Commute Patterns

County of Workplace	Workers	Percent
Baldwin	43,039	55.2%
Mobile	20,086	25.8%
Escambia, FL	3,186	4.1%
Jefferson, AL	1,723	2.2%
Montgomery	1,044	1.3%
Escambia	937	1.2%
Jackson, MS	533	0.7%
Santa Rosa, FL	494	0.6%
Madison	452	0.6%
Shelby	447	0.6%
All other locations	6,027	7.7%
Total	77,968	100.0%

Sources: U.S. Census Bureau, LEHD; Alabama Dept. of Labor, LMI Division

2.2. Highways

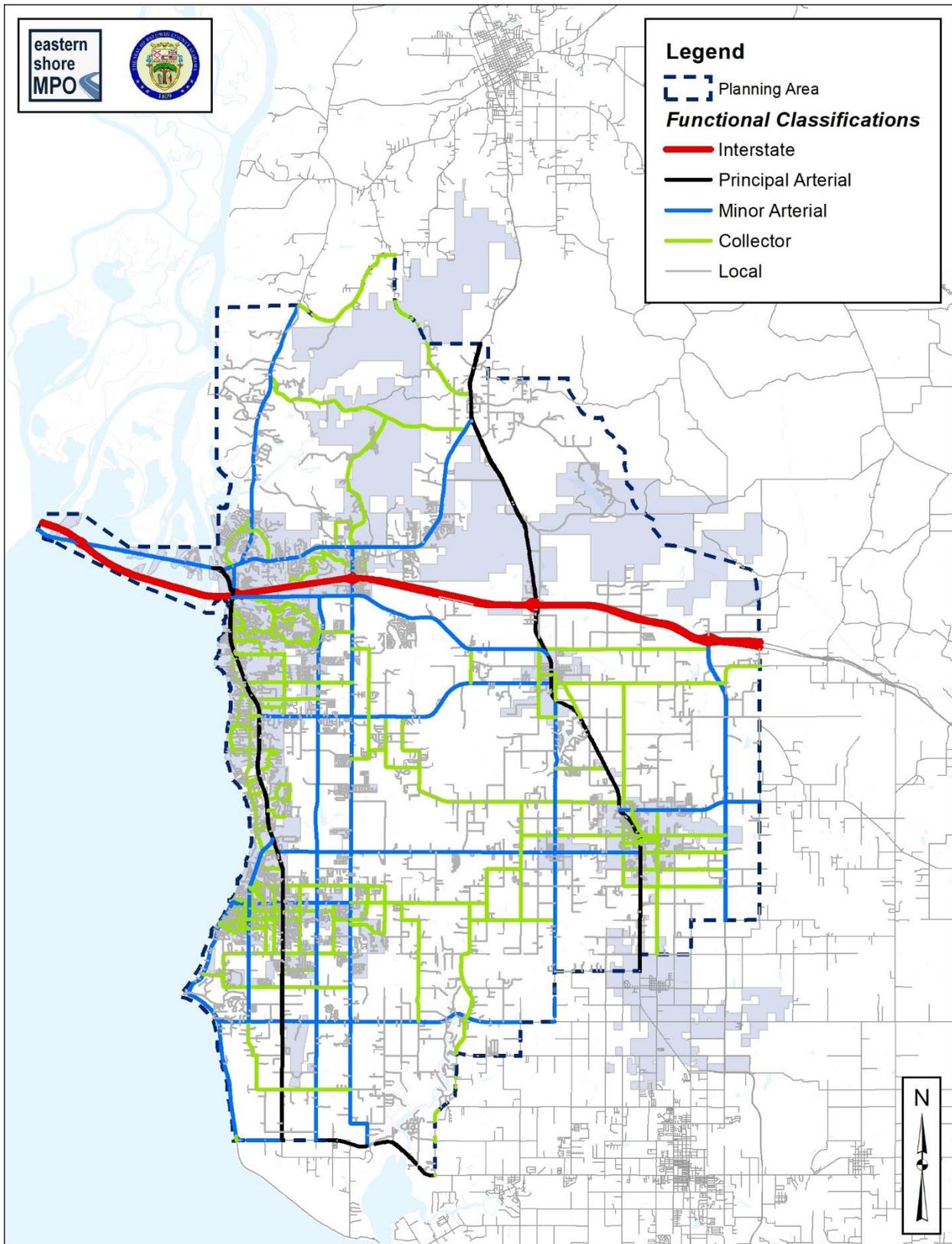
The ESMPO region is generally well served by a connected grid of arterial highways and collector roads.

2.2.1. Network description and Functional Class

Figure 2-7 shows the functional class of roads in the region. Federal Highway Administration (FHWA) classifies roads based on the type of travel served, with Principal Arterials generally serving long-distance travel between large cities, Minor Arterials connecting larger cities to smaller cities and suburbs, and collector roads distributing traffic to neighborhoods and commercial areas.

Functional classification is not based on traffic volume specifically. A minor arterial serving a major regional shopping center may have higher traffic volumes than some principal arterials in a region. The function of the road is the determining factor in classification.

Figure 2-7: Highway Functional Classification Map



2.2.2. Traffic Flow Patterns

In the ESMPO region, the roads that have been widened to four lanes are almost all north-south routes that connect to I-10, reflecting the reliance on the Interstate for many trips. Relatively few east-west corridors have been widened to four lanes, and only in short segments. No east-west four lane corridor crosses the entire study area presently except I-10. Figure 2-8 illustrates traffic flow patterns with wider lines for roads with highest traffic volumes.

2.2.3. Congestion

Level of Service (LOS) on highways in the ESMPO region is generally an acceptable “LOS C” condition, with notable exceptions along I-10 and US 98, as well as in a few other hot spots in the SR 181 corridor. In large, rapidly growing urbanized areas, LOS D is generally considered an acceptable level of congestion. Seasonal congestion associated with tourist travel to Gulf Shores and Orange Beach and other coastal destinations is an issue in the SR 59 and Baldwin Beach Express corridors. Figure 2-9 illustrates traffic congestion levels for 2015.

Figure 2-8: Map of Traffic Flow, 2015

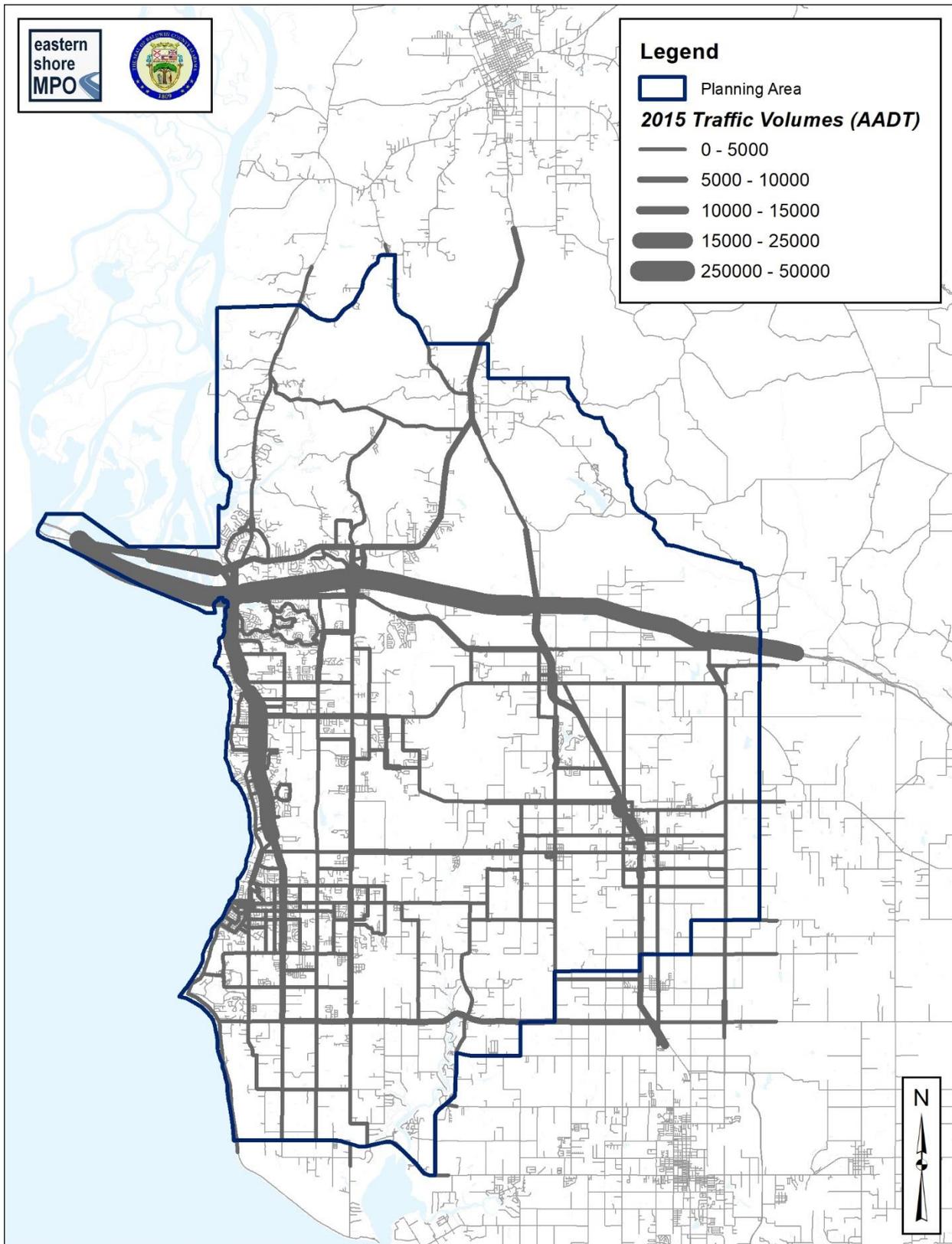
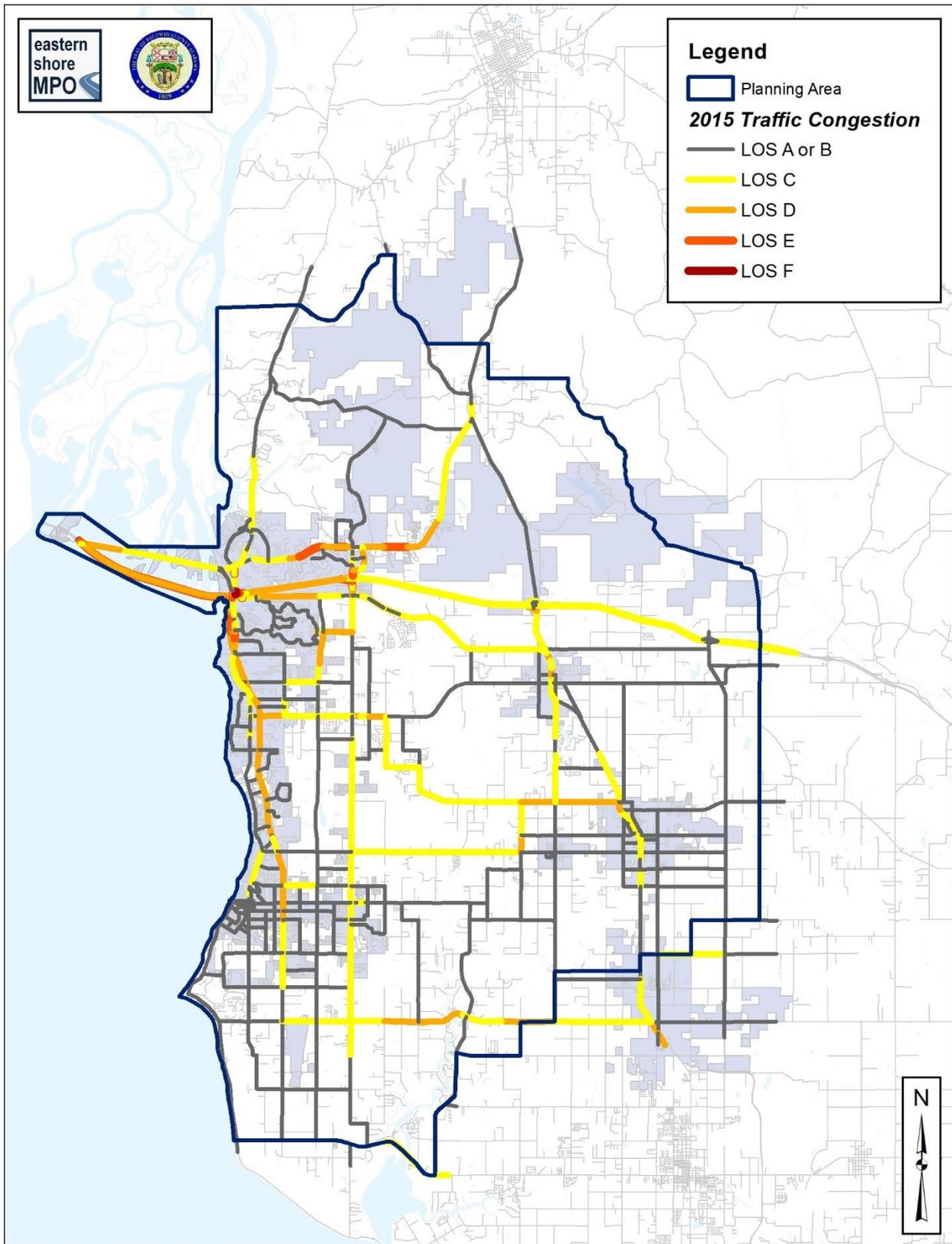


Figure 2-9: 2015 Level of Service Map



2.2.4. Safety

A review of regional crash data identified some crash hot spots, which are generally associated with the most congested areas in the region. ALDOT restrictions on publication of crash data limits the ability to map crash information. Figure 2-10 summarizes crashes by facility type, and, not surprisingly, reveals some minor reduction in crash rates when two lane arterials are widened.

Figure 2-10: Crash Rates per 100,000 VMT by Functional Class and Lanes

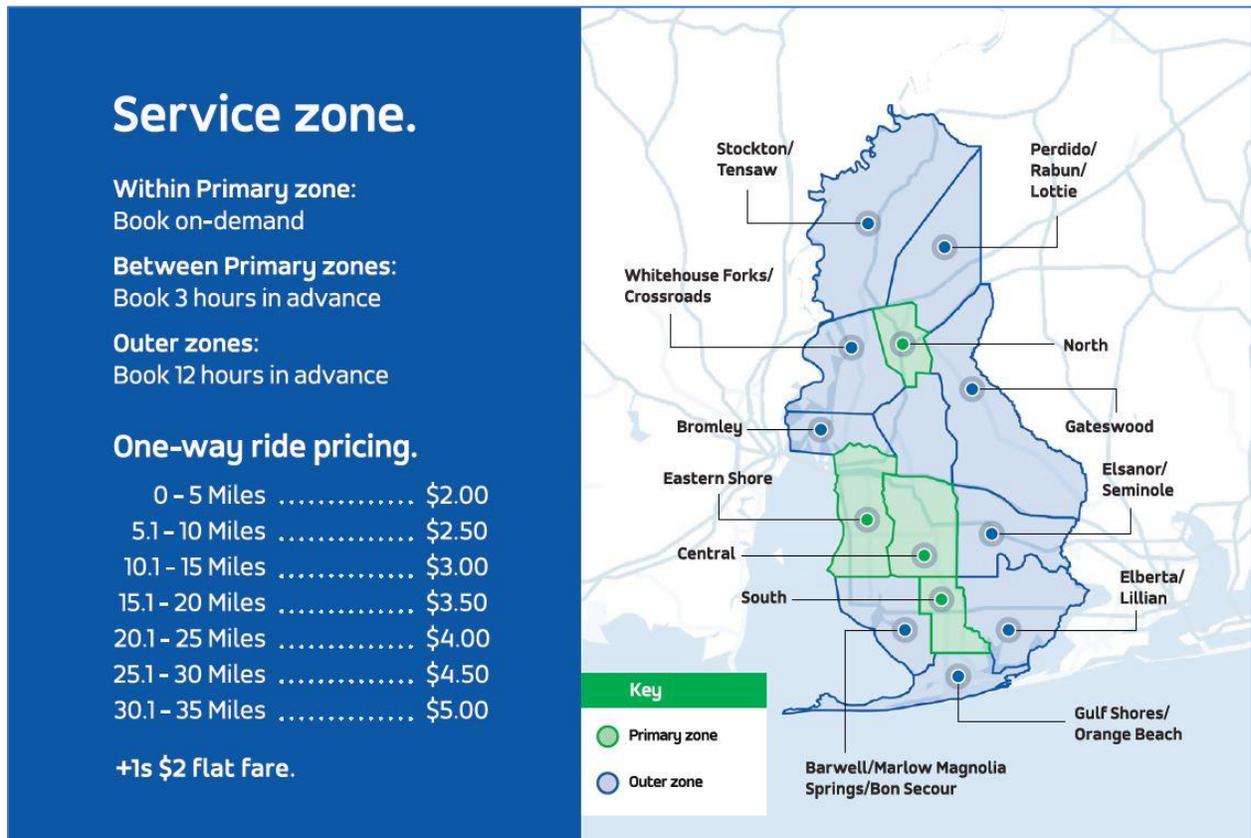
Functional Class	Lanes Per Direction			All/Avg
	1	2	3	
Interstate	-	0.82	-	0.82
Principal Arterials	0.86	3.00	3.21	2.76
Minor Arterials	6.76	4.12	11.47	6.40
Collectors	12.51	12.21	-	12.51

Source: ALDOT Crash Statistics, 2014 to 2018

2.3. Public Transportation

A transit plan was prepared and adopted in 2018, but much has changed about the transit system in the interim. Most of the festival-related service that the system previously provided will no longer be operated. In addition, BRATS is evaluating ways to leverage ridesharing services in efforts to develop improved efficiency and reduce costs per rider. Dramatic changes in service delivery and operations associated with the COVID-19 pandemic have made it difficult to assess trends in the service. BRATS is currently evaluating options for restructuring and improving the system, but the assessment is not yet complete.

Figure 2-11: Transit Routes and DR Service Area



2.4. Bicycle and Pedestrian Facilities

2.4.1. Overview

Bicycle and pedestrian facilities clearly have wide public support in the core of the ESMPO area. Public comments have been highly supportive of expanded and improved facilities for bicycle and pedestrian travel, although most public comments expressed safety concerns about cycling on most of the roads in the region. Many new subdivisions in the region have sidewalks on the residential subdivision streets. However, outside of the older sections of the City of Fairhope, very few of the region's arterial highways and collector roads have any facilities for bicycles or pedestrians.

2.4.2. Existing Network

The Eastern Shore Trail (EST) is clearly well used for recreation, but also serves some work and shopping trips as well, based on field observations. The EST has the potential to be the spine of a regional bicycle and pedestrian network that could connect much of the region and provide benefits for work travel, recreation, as well as tourism. This type of connected trail network has economic development benefits as well, as businesses of all sizes are increasingly seeking locations that have strong quality of life amenities that are attractive to employees and to customers.

Wide sidepaths (shared use sidewalks) exist along Greeno Road in Fairhope and are used by both pedestrians and cyclists. Along with the EST, these sidepaths currently serve as a central spine for both bicycle and pedestrian facilities in the region. Figure 2-12 illustrates the existing network of bicycle paths and wide shoulders that may function as bicycle lanes. Figure 2-13 presents existing pedestrian paths and sidewalks.

Figure 2-12: Existing Bicycle Facilities

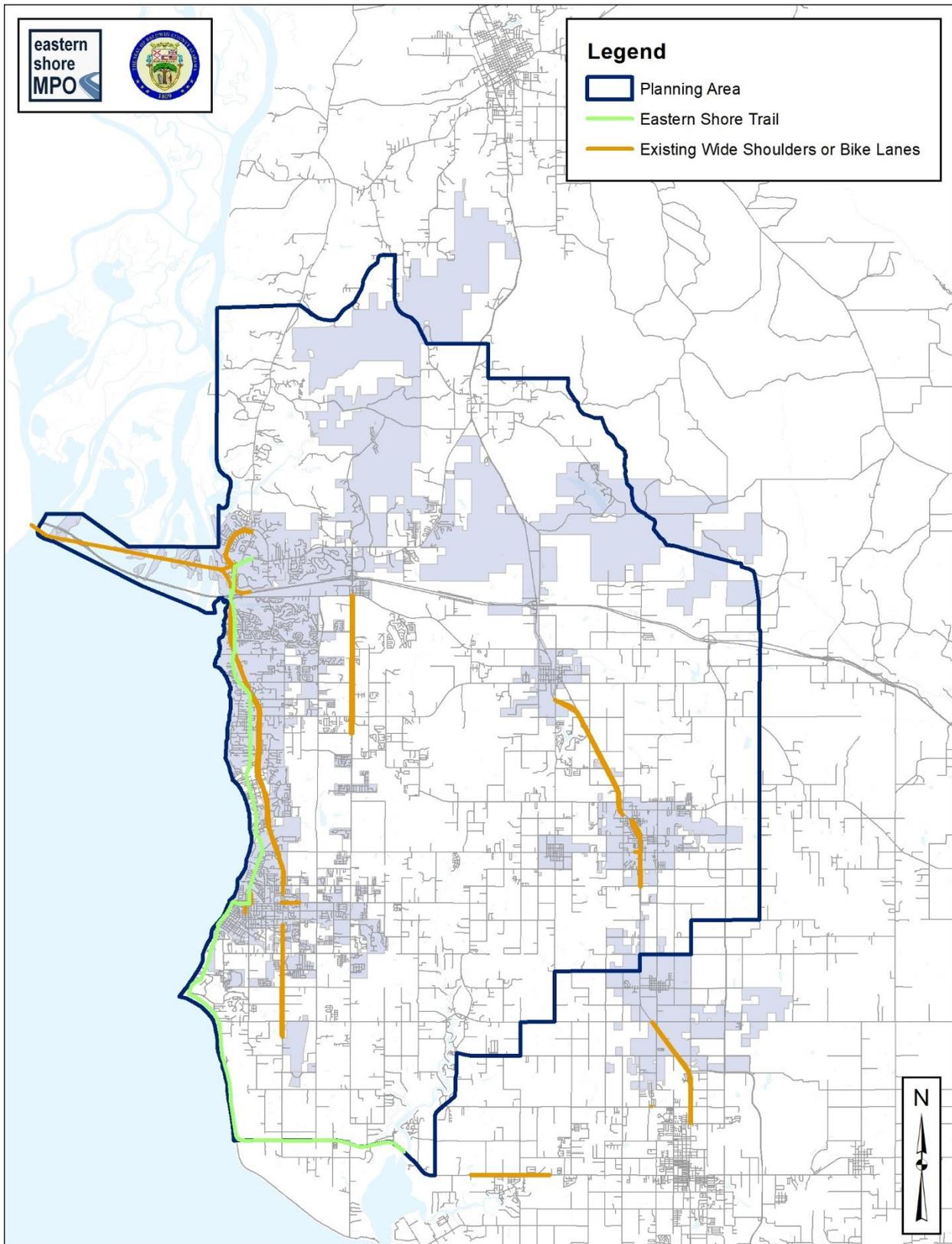
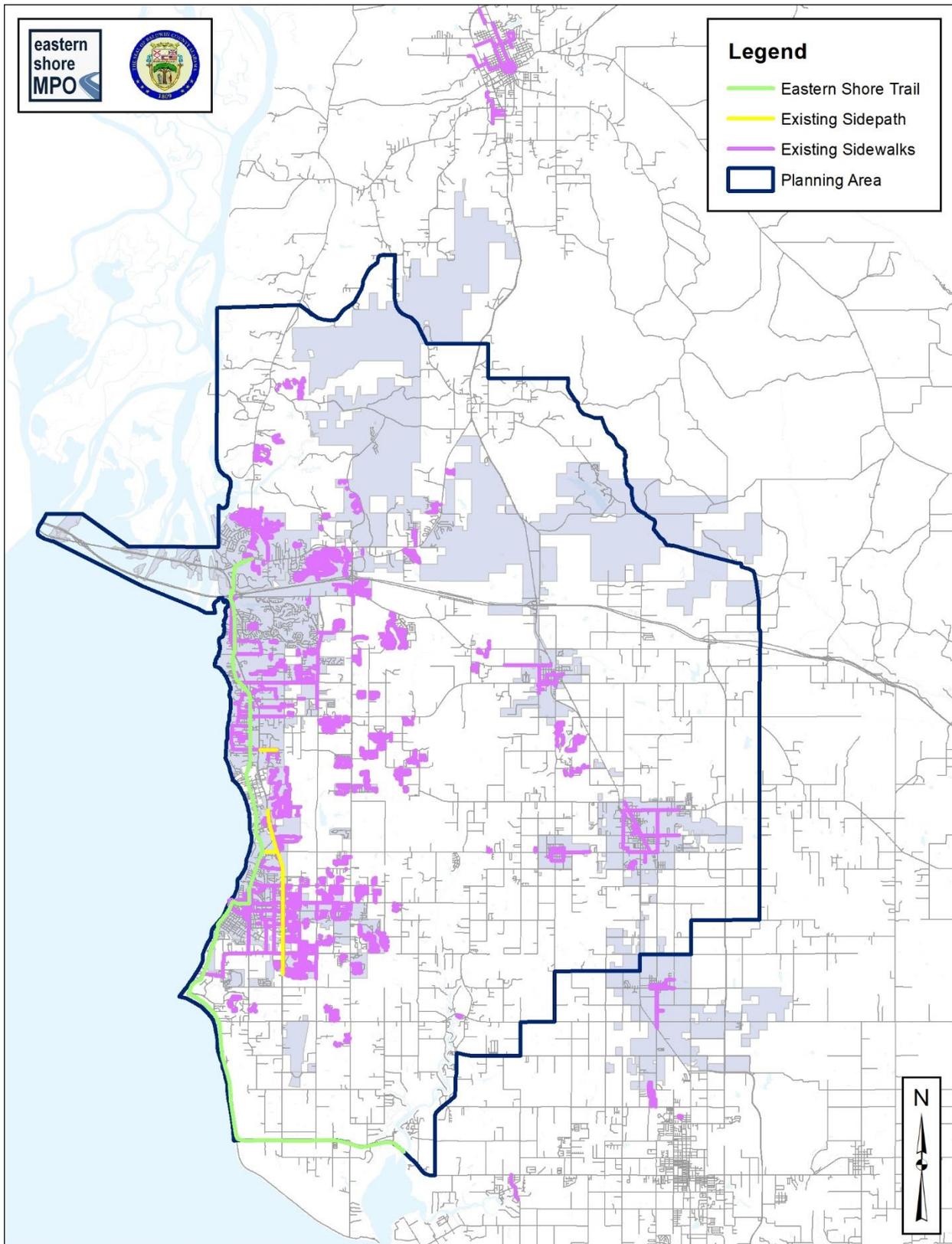


Figure 2-13: Existing Sidewalks/Pedestrian Facilities



2.5. Truck Freight

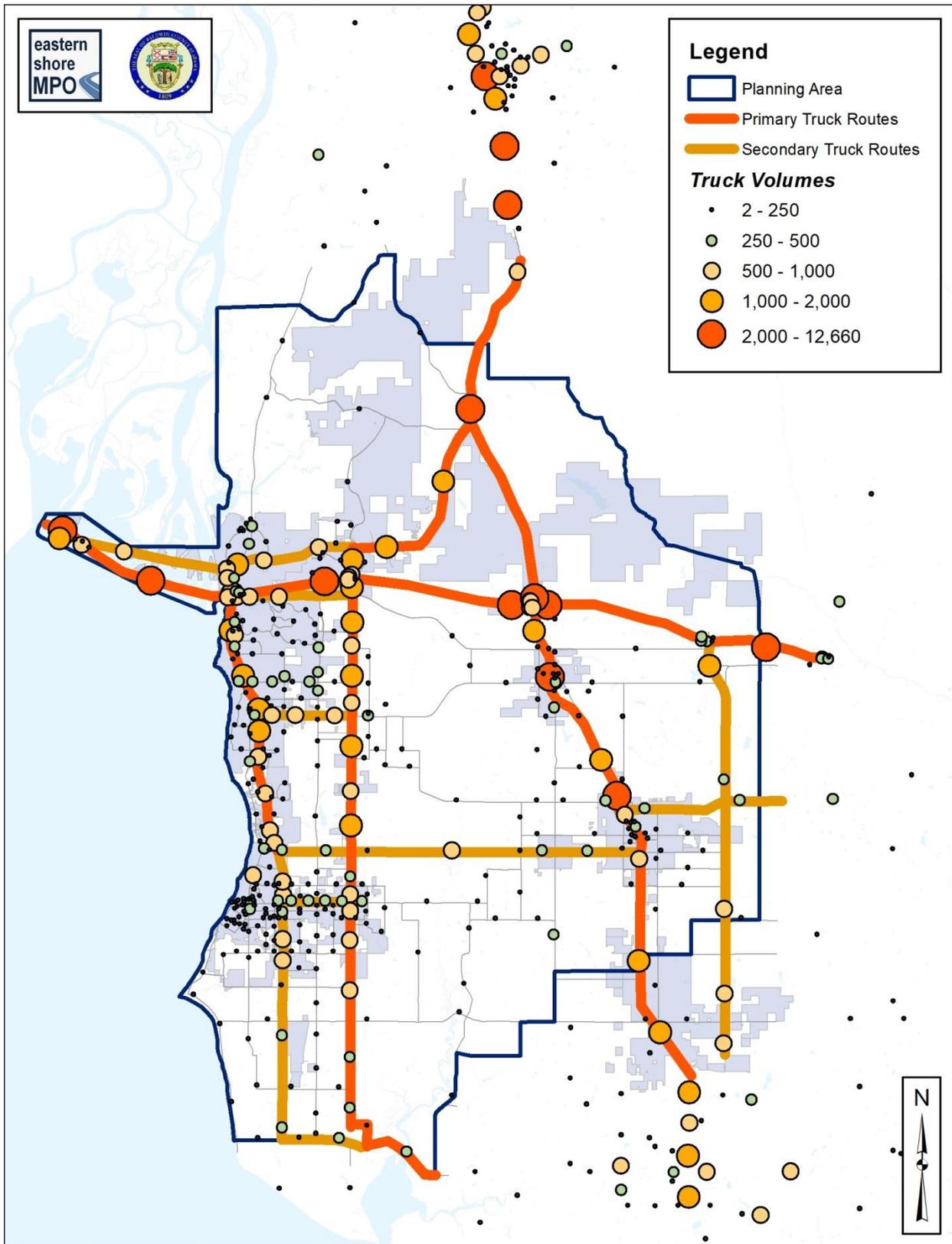
2.5.1. Overview

Essentially all freight in the ESMPO area moves by truck, as the planning area has no rail facilities, air cargo operations or port facilities.

2.5.2. Highway Freight Corridors

Figure 2-14 shows the truck traffic flows in the region using graduated size dots, with the largest dots representing the heaviest truck traffic. The truck flows are estimated using ALDOTs traffic count data and heavy vehicle count data. Based on these flows, a truck network is defined for the region, with primary routes identified as those with more than 1,000 trucks per day, and secondary routes with between 250 and 1,000 trucks per day on most segments.

Figure 2-14: Truck Traffic Flows



2.6. Aviation

The H. L. Sonny Callahan Airport in the City of Fairhope is the only general aviation airport in the study area. The airport is located 13 miles south of I-10 and is situated at the southern end of Fairhope on the east side of U.S. 98. The airport has been implementing a master plan for airport improvements and is supportive of improvements to CR 32 that would provide better access to fixed base operations as well as to the Fairhope Academy aviation training center. Airport officials believe the presence of the Fairhope Academy, a joint venture with Coastal Alabama Community College, has long-term benefits for economic development in the region and can help attract aviation-related industrial development to sites around the airport.

Commercial flights by major airlines are offered at Mobile Regional Airport on the west side of Mobile.

The Gulf Shores Airport Authority operates Jack Edwards National Airport south of the study area near Gulf Shores and has had ambitions to provide commercial airline services. It is not clear how the disruption of commercial aviation by the COVID-19 pandemic will affect the potential development of commercial flights at Jack Edwards National Airport.

2.7. Railroads

The ESMPO study area currently does not have any passenger or freight rail services. CSX operates a Class I rail that passes through northern Baldwin County, just north of the Eastern Shore MPO planning area.

A significant rail intermodal operation exists in the Mobile Bay area, just west of the ESMPO planning area. The rail operations have been enhanced by the Alabama State Port Authority's construction of the Choctaw Point and Garrows Bend facilities at the Port of Mobile.

No plans exist relating to rail service or rail infrastructure improvements, within the Eastern Shore area. Rail connectivity to the Port of Mobile remains an important transportation issue for the ESMPO, as it directly impacts the economic vitality of the MPO study area. However, decisions about rail investment are made by the private railroad corporations and are beyond the direct influence of the MPO.

3. Future Transportation Needs

The forecast for future transportation needs in the ESMPO area follows a very typical pattern for rapidly growing regions: traffic congestion is expected to increase significantly, and anticipated funding from state and federal sources is not sufficient to keep pace with increasing traffic congestion.

Overall, the recommendations of this plan are focused on maintaining the existing highway system in a good state of repair, managing traffic congestion by focusing on intersection improvements and selective widening of the most congested highway segments, and improving safety for all users of the transportation system by focusing on minor improvements along two-lane highways that are projected to have high growth in traffic volumes (but not to become severely congested).

The highway corridors identified for minor improvements in this plan typically will involve construction of left turn lanes at intersections based on crash history or peak period traffic delays, addition of wide paved shoulders to improve drainage and reduce run-off-the-road crashes (these paved shoulders also are an accommodation for cyclists and pedestrians), other roadway design and maintenance improvements, and in some cases will include construction of sidewalks or multi-use sidepaths where the pedestrian and bicycle element of this plan calls for these facilities.

3.1. Overview of Needs Identification

The primary tool used to identify and prioritize the improvements recommended in this plan is a regional travel demand forecasting model.

The “base year” travel model is developed by mapping all of the major roads in the study area (generally, the model includes only roads that are included in the federal aid eligible network of roads); collecting complete data regarding the number of lanes, speed limits, traffic volume, and length for each segment of the road network; and tabulating existing employment, population, households and school enrollment by small geographic areas called Traffic Analysis Zones (TAZs).

The ESMPO travel model is run in three steps: a trip generation step estimates the number and type of trips (e.g. work trips, school trips, and other trips) for each TAZ; a trip distribution step estimates the destination of the trips generated in each TAZ based on the proximity and size of schools and employment centers; and a traffic assignment step, which calculates the shortest route between the origin and destination TAZs based on distance, speeds, and traffic congestion (much like WAZE or Google Maps recommends routes). In large metro areas with extensive public transit systems, travel models typically include a modal split step between the trip distribution and traffic assignment steps that predicts how many trips will use transit or carpooling.

The base year travel model is “calibrated” so that overall regional travel patterns are consistent with known travel characteristics, and “validated” to ensure that the model-predicted traffic volumes in the base year are closely matched to actual traffic counts conducted annually by ALDOT on the highway system.

Once the base year model is calibrated and validated, the 2045 forecast data for employment and population in the region is used to run a future year model. The 2045 future year traffic volumes and traffic congestion levels predicted by the regional travel model are entirely dependent on the population and employment growth forecast for the region. This makes it critical to continually track growth patterns in the region and to ensure that the growth forecast matches the actual observed growth trends.

The traffic forecast for 2045 was used to identify a list of road improvement needs based on increases in traffic volumes and traffic congestion levels that would be expected if no improvements are made to the road network. The list of identified project needs is then evaluated using a set of performance criteria that address traffic flow and mobility; commuter routes and tourism routes; high crash routes and locations in the region; bridge conditions; truck freight; and bicycle and pedestrian network plans; and transit routes.

3.2. Population and Employment Forecasts

The process for developing Control totals for 2045 population, households and employment is described, below, followed by the process for geographic distribution of the growth to the TAZs in the study area.

3.2.1. Control Totals

A population control total was developed for Baldwin County for 2045 using a linear regression forecast based on the University of Alabama Center for Business and Economic Research (CBER) forecasts through 2040. This is essentially an extrapolation of the current CBER forecast.

2045 population for ESMPO was then forecast based on a linear regression forecast using the 2010 and 2015 population for the study area, and the 2040 study area population assumed in the previous LRTP update. This result is compared with the current trend of population distribution between ESMPO and the balance of Baldwin County, and the slight increase in the share of County population that is forecast to be within the ESMPO study area is considered a reasonable result.

Figure 3.1 provides details of the population forecast.

Figure 3-1: 2045 Population Forecast for Baldwin County and ESMPO

	2010	2015	2040	2045
Baldwin County Pop	182,265	202,410	300,899	321,729
MPO Pop	98,220	110,006	164,264	175,383
ESMPO Share of County Population	53.9%	54.3%	54.6%	54.5%

Sources: U.S. Census Bureau; Center for Business and Economic Research, University of Alabama

The 2045 employment control total is forecast in a similar way, using 2010 and 2015 estimates and the 2040 employment forecast from the previous LRTP in a linear regression forecast of 2045 employment.

Figure 3-2 provides details of the employment forecast for the study area. The modest increase in the ratio of employment to population is reasonable and consistent with trends in growing central counties in large metropolitan areas. The current ratio of retail employment to total employment is assumed to remain essentially constant at 0.32; many forces are affecting retail employment, most recently and notably the dramatic shift toward on-line purchases during the COVID-19 pandemic. Any attempt to forecast the long term impacts of the pandemic and the general on-line shopping trend is beyond the scope of this analysis.

Figure 3-2: 2045 Employment Forecast

	2015	2045
Retail Employment	14,278	25,398
Non-Retail Employment	31,061	54,185
Total Employment	45,339	79,582
Employment/Population Ratio	0.41	0.45
Retail Emp/Total Emp Ratio	0.31	0.32

Sources: U.S. Census Bureau LEHD Data; Center for Business and Economic Research, University of Alabama; Alabama Department of Labor, Labor Market Information Division; ESMPO 2010 Travel Model data

3.2.2. Geographic Distribution of Growth

For this forecast of growth, household growth was distributed in the same growth pattern from 2040 to 2045 as was forecast from 2015 to 2040 in the previous LRTP. This was operationalized by calculating the change in households in each TAZ between 2015 to 2040 (25 years), dividing by 5, and adding the result to the 2040 forecast value. The result of this distribution of household growth is mapped in Figure 3-3, which shows households per acre by TAZ.

Employment growth was distributed to TAZs based on the growth pattern observed in Census LEHD data from 2010 to 2015. While this is an imperfect assumption, it is the best available basis for distributing employment growth. This was operationalized by starting with the 2040 employment forecasts for each TAZ in the current LRTP data and adding the 2010 to 2015 Longitudinal Employer-Household Data (LEHD) derived growth to the 2040 value. The total Retail employment by TAZ is shown in Figure 3-4, while Non-retail employment by TAZ is mapped thematically in Figure 3-5.

MPO staff should continue to monitor current subdivision development and major employer announcements and expansions. This will enable staff to assess how well the current population and employment forecast matches with actual growth trends and continue to improve and adjust the growth forecast to better match actual development trends.

Figure 3-3: Household Density by TAZ, 2045 Forecast by TAZ

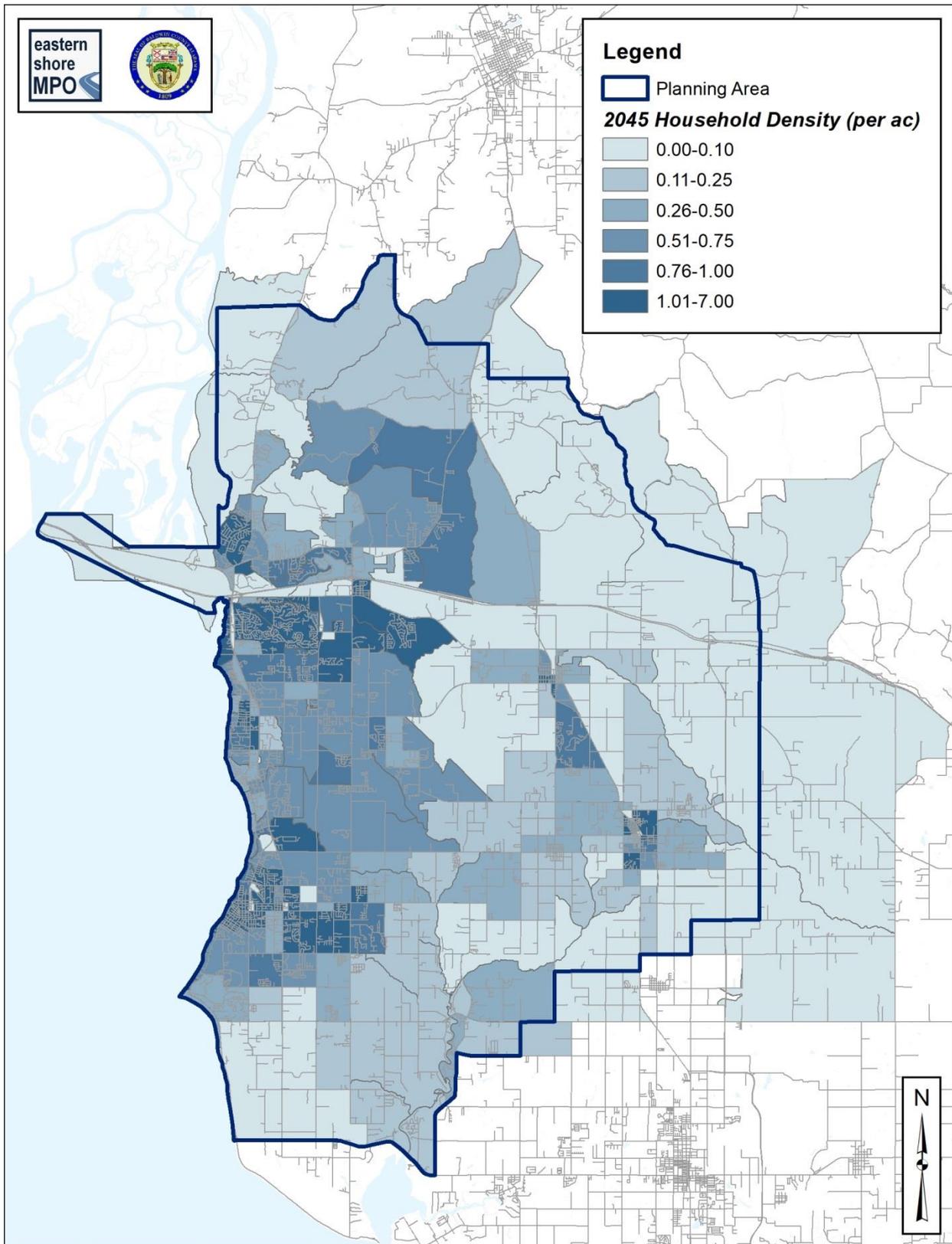


Figure 3-4: Retail Employment by Traffic Analysis Zone, 2045 Forecast

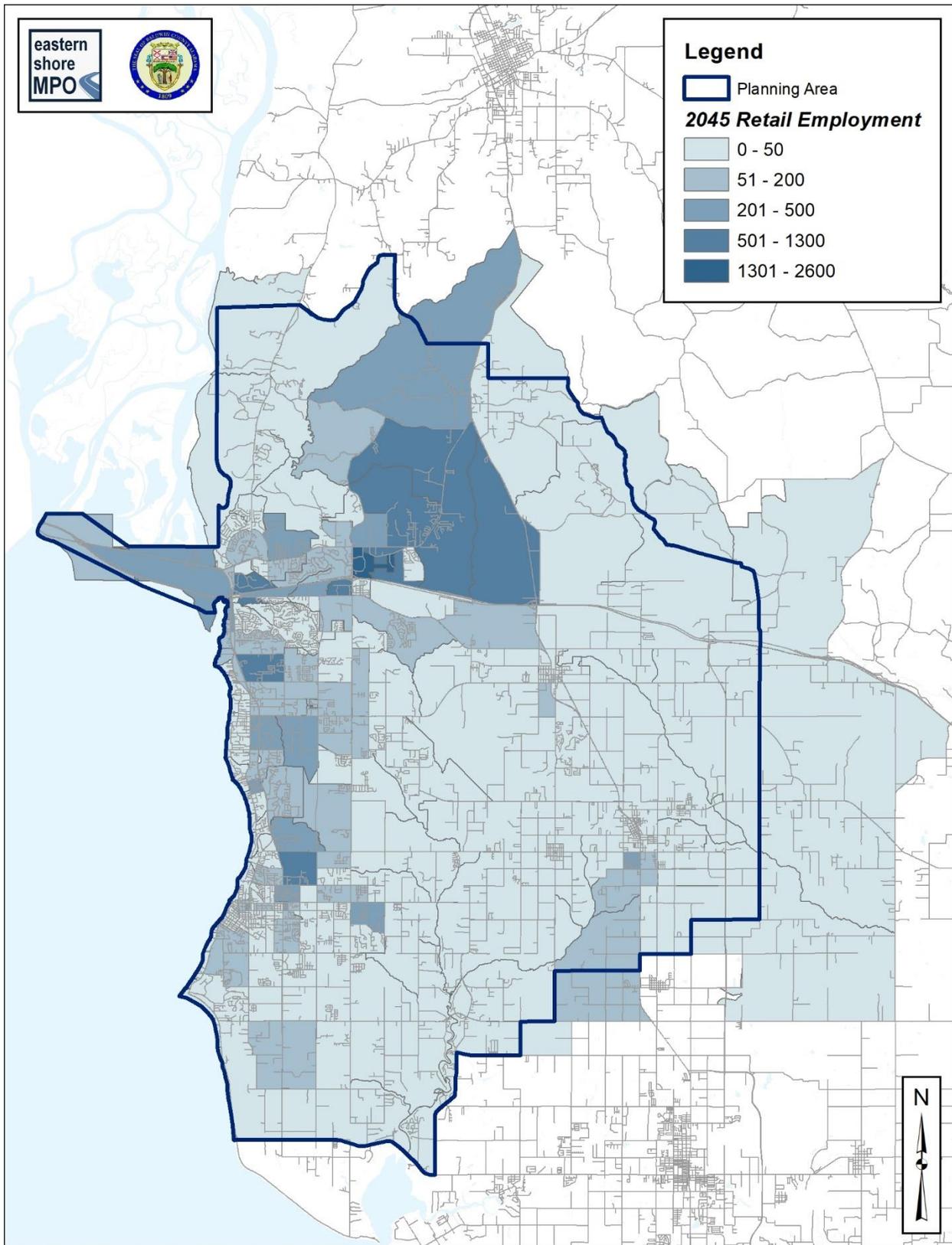
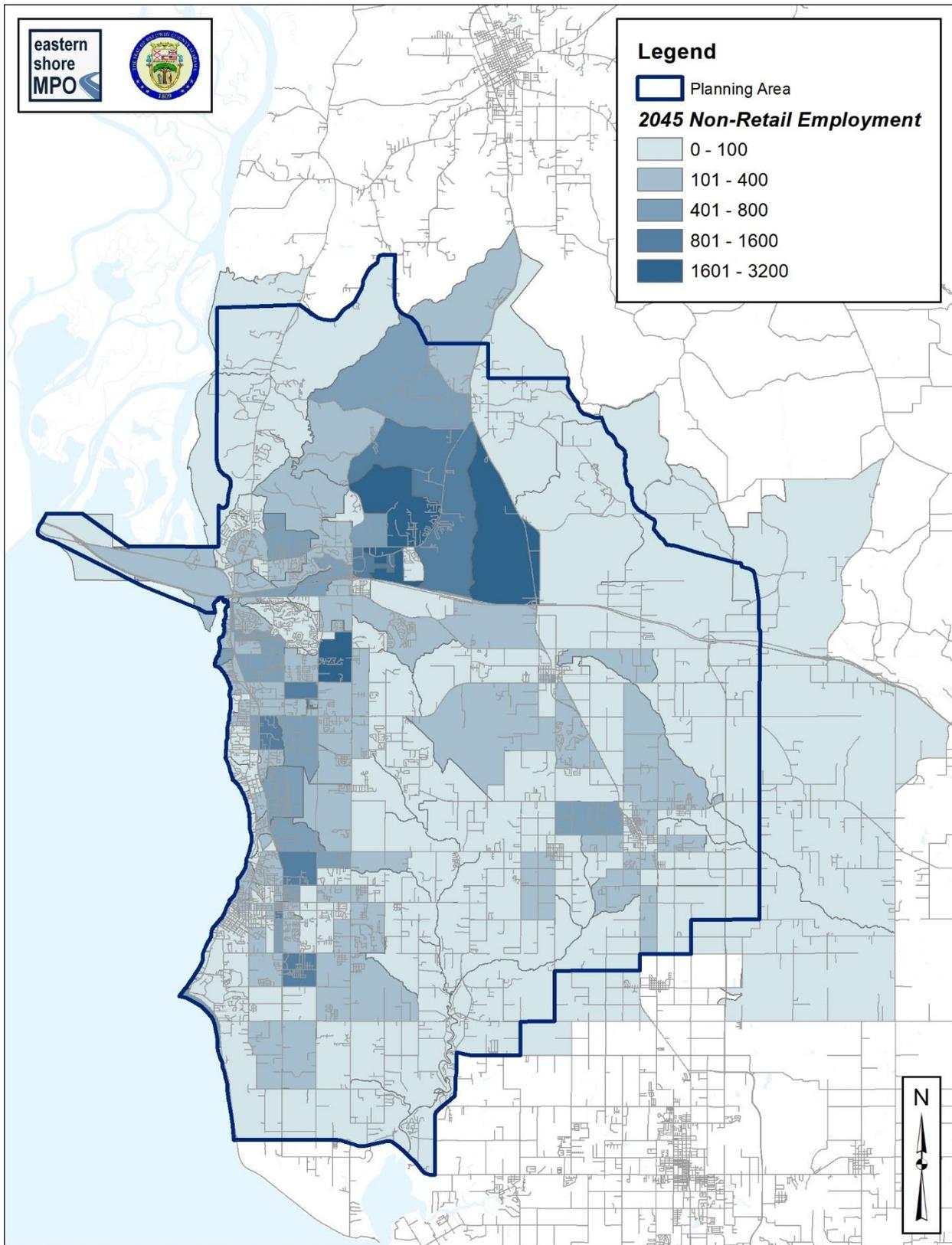


Figure 3-5: Non-Retail Employment by Traffic Analysis Zone, 2045 Forecast



3.3. Land Use Trends

Much of the ESMPO study area is in the early stages of transition from a rural, small-town centered region to a full-service suburban community. Growth now is generally focused along the arterial highway system instead of in the town centers, and the extensive grid of county roads enables residential development in a widely dispersed pattern. Agricultural uses are being gradually replaced by subdivisions in much of the study area.

Residential growth is predominantly occurring in low density single family subdivisions and is forecast to be most intense along the SR 181 corridor from Fairhope northward, eastward from the 98 corridor with concentration in the Belforest area, and north of I-10 around Spanish Fort and Loxley along US 31, SR 225, and SR 59. Significant infill development is occurring on remaining undeveloped tracts between Daphne and SR 181, and the SR 59 corridor between I-10 and Robertsdale.

Commercial, retail, and employment growth are focused along the I-10 corridor and along US Highway 98 and State Route 181 south from I-10 to Fairhope. Retail and service employment generally follows residential growth patterns and mirrors the forecast population growth pattern. Non-retail employment is forecast to be focused along US 98 south of I-10, along the I-10 corridor, and expanding northward in the US 31 corridor. While non-retail employment is increasing in the region, many workers will continue to commute to jobs outside of the study area.

3.4. Highway System Issues

Evaluation of problems in the ESMPO highway network focuses on traffic congestion, safety, and network connectivity, as detailed below.

3.4.1. Congestion

Traffic congestion predicted for 2045 closely mirrors the growth forecast for the region. Figure 3-6 illustrates the predicted traffic congestion in the region if no improvements are made to the highway system except those that are already funded and scheduled in the Transportation Improvement Program (TIP), which is the funded 4-year plan for transportation improvements that implements the long range plan.

Predicted future congestion is focused in the I-10 corridor and on the major routes north of I-10. US 31, SR 225, and SR 59 are all predicted to become substantially congested by 2045. Segments of US 98, CR 13, CR 64, and CR 54 are predicted to develop somewhat less intense congestion, while some of these segments are predicted to also be substantially congested. I-10 and US 98 (Battleship Parkway) also show dramatic increases in congestion, reflecting growth in regional through traffic as well as increased commuter traffic into the Mobile area from the Eastern Shore study area.

Figure 3-6: Level of Service 2045 Existing and Committed Improvements (E+C) Network

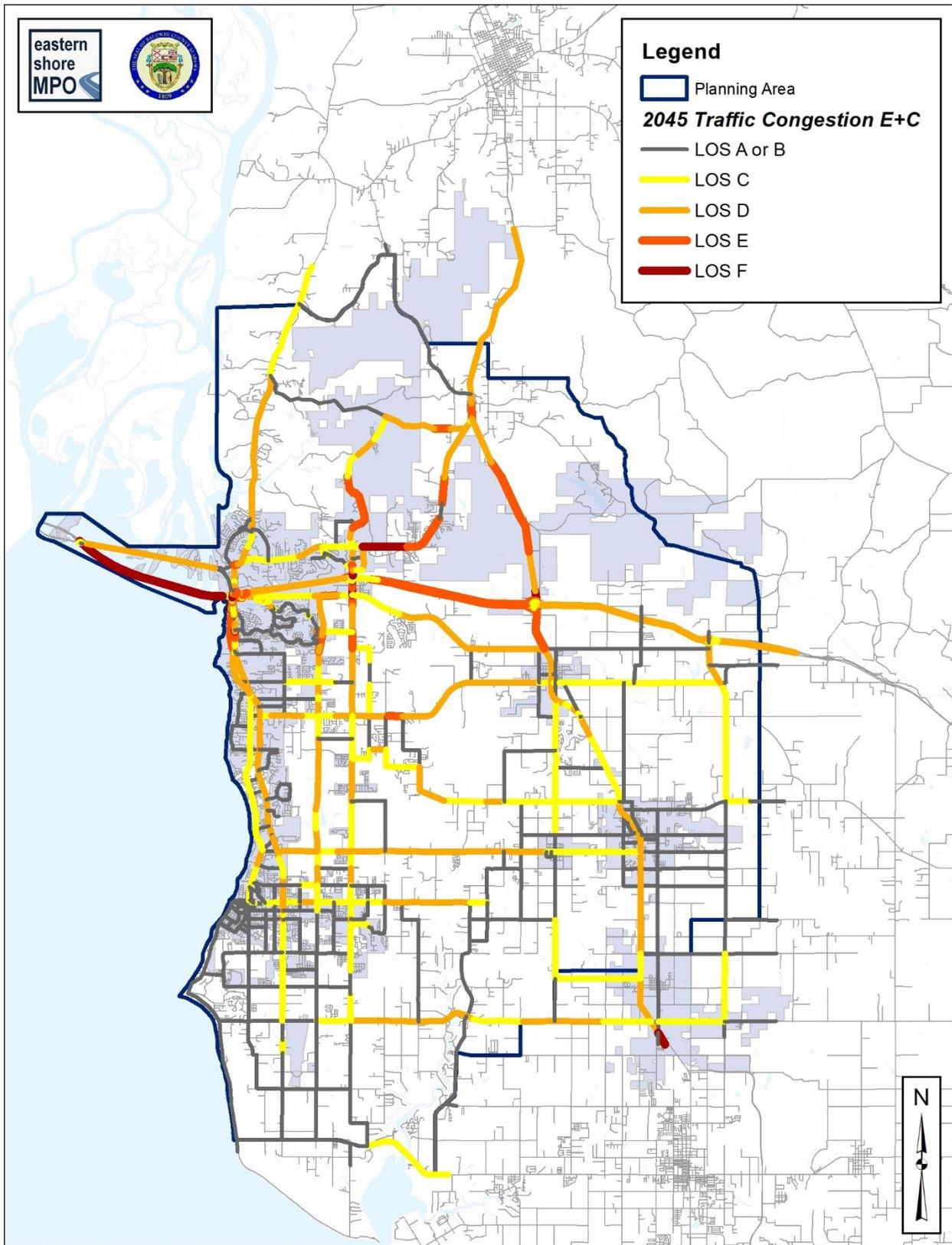
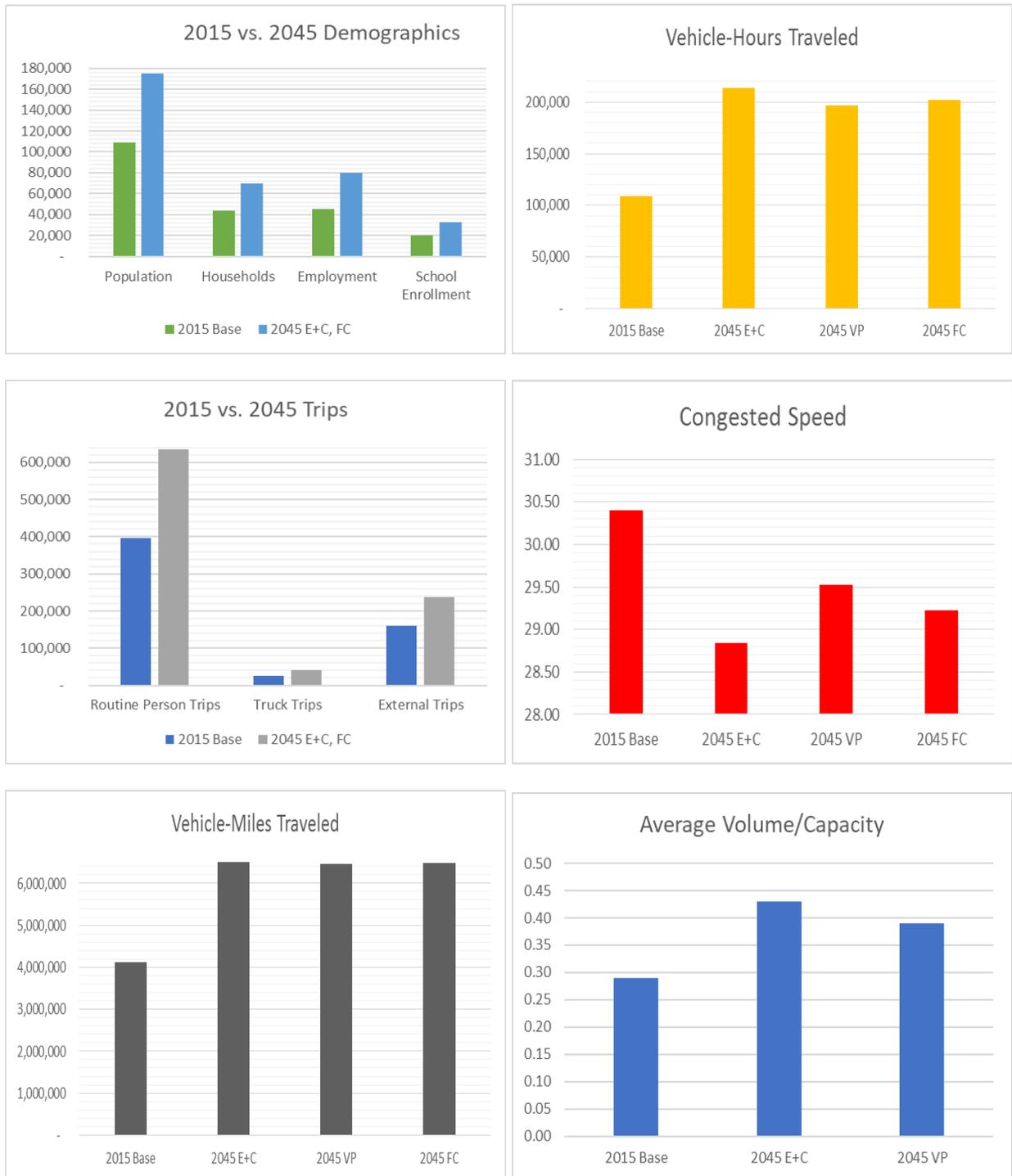


Figure 3-7 illustrates the change in key travel performance indicators from 2015 to 2045 for the 2015 Baseline, 2045 with the existing road network plus committed or funded projects (Existing plus Committed or “E+C”), for the “Visionary Plan” that includes all projects evaluated in this plan (2045 VP), and the Financially Constrained (FC) projects.

Figure 3-7: Highway Performance Indicators 2015 and 2045



3.4.2. Crashes and Highway Safety

As a general rule, two lane roadways have higher crash rates than multi-lane roads, and all roads tend to have higher crash rates as traffic volumes approach the traffic carrying capacity of the roadway.

Perhaps the most significant highway safety issue in the study area is the general increase in traffic on virtually all the two-lane east-west corridors in the study area. Generally, the major north-south corridors in the region have been widened or are under construction. This reflects a general pattern of north-south commuter and other regional travel that is focused on US 98, SR 181, and SR 59. East-west travel is dispersed on multiple facilities, which generally feed traffic onto the multi-lane north south routes that connect to I-10.

As Figure 3-6 illustrates, most of the two-lane east-west routes in the region will be approaching capacity by 2045, with significant segments operating at LOS D during peak periods. This is a normal condition in most urban areas. However, traffic crashes do tend to increase as roads approach capacity, so minor improvements to improve safety become more important in these corridors.

Funding for highway widening in the region is far below the level necessary to consider adding lanes to all the two-lane east-west routes that become more congested in the next 25 years. Instead, this plan identifies these east-west corridors for minor improvements that would focus on safety: wider paved shoulders, left turn lanes at selected intersections, and pedestrian and bicycle accommodations consistent with the bicycle and pedestrian network proposed in this plan.

Traffic safety issues are generally evaluated by tabulating or mapping crash data. While statewide crash data is available through ALDOT, publication of the data is restricted to avoid liability. For that reason, a regional crash frequency map cannot be published here, and specific crash rates are not used in the evaluation of projects in this plan. Instead, safety evaluations for individual projects were made by reviewing a general crash frequency map for the region and assigning a “safety score” from 1 to 3 to each project based on that mapped crash data. Since safety improvement is always a focus of roadway design, and the minor improvement corridors identified in the plan are geared toward safety-related improvements, all projects are given a minimum score of 1. Scores of 3 were assigned to projects in areas with highest crash counts, and scores of 2 assigned to projects in areas of moderate crash frequency in order to provide a basis for including safety in project evaluations.

3.4.3. Connectivity

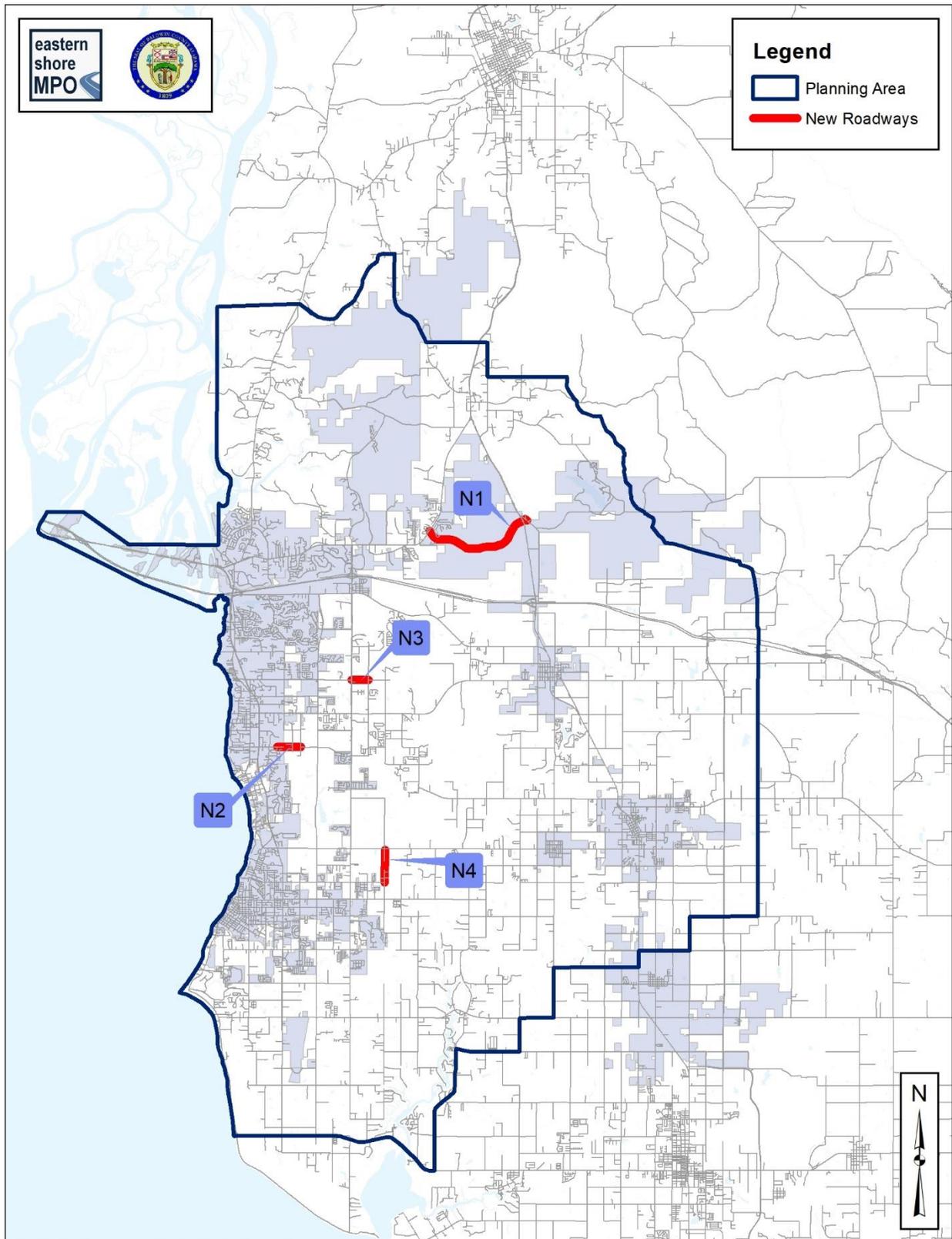
Most of the study area has a relatively well-connected network of arterial routes and collector roads. However, there are some general interruptions in the network that result from larger creeks and rivers that drain the study area, and the associated flood plains and wetlands in these riparian corridors.

North of I-10, Whitehouse Creek and Sibley Creek limit opportunities for new road connectivity in the rapidly growing areas in and between Spanish Fort and Loxley. Ideally, several east-west connections should be established to support anticipated growth in this area, but the cost of construction and environmental permitting for new roads across these creeks will limit the ability to develop a well-connected road network.

East of Daphne and Fairhope, the Fish River and its' tributaries has constrained the east-west connectivity of the road network. South of Daphne, Rock Creek and Fly Creek create a significant interruption in east-west connectivity in the road network.

Four new road segments are identified to improve connectivity in the road network and are presented in Figure 3-8.

Figure 3-8: Potential New Road Connections



3.5. Highway Needs

This section summarizes how highway projects were identified, highlights opportunities to pursue development-funded projects, discusses why traffic congestion is such a persistent problem in rapidly growing regions, and presents the list of projects that have been identified for consideration and evaluation in this plan.

3.5.1. Project Identification

Projects were identified for the “Visionary Project List” based on predicted traffic growth and traffic congestion, safety considerations, maintaining the highway network in a good state of repair, managing congestion as effectively as possible within financial limitations that preclude widening many of the roadways that are predicted to become congested. The Visionary Project List is all projects identified in the region by the planning process. Figure 3-9 maps the Visionary Projects.

3.5.2. Development-funded Improvement Strategies

One developer-funded roadway is identified in the region. The new road connection between SR 59 and US 31 north of I-10 is being built to open a large undeveloped area to new development. Such connections allow for traffic to disperse to the most direct and logical routes, rather than concentrating trips on a single regional arterial highway. Identifying additional opportunities for development-funded connections should be a priority in the rapidly developing area north of I-10.

In all of the corridors north of I-10 that are forecast to become congested by 2045, local subdivision growth is directly creating the need for road improvements. SR 225, Jimmy Faulkner Drive, US 31 and SR 59 all are forecast to develop significant traffic congestion by 2045. This results in part from the lack of a well-connected grid of collector roads, which is present in the study area south of I-10 and effectively distributes traffic to multiple minor road corridors.

While the major creek systems north of I-10 constrain development of new connections, it is essential to identify and preserve or require connectivity as new development occurs. Baldwin County, Spanish Fort and Loxley should engage large landowners and developers to develop an effective strategy for developing new collector roads between the arterial highways north of I-10 to support anticipated growth in the northern part of the study area.

3.5.3. Congestion Management, Induced Demand, and System Equilibrium

No rapidly growing urban area has succeeded in “building your way out of congestion.” Several factors contribute to the seemingly intractable urban traffic congestion problem.

First, voters have been generally unwilling to impose taxes or tolls that would be sufficient to both maintain the highway network in a good state of repair and to widen all of the roads necessary to eliminate peak period traffic congestion. Some key regional corridors – such as I-10 across Mobile Bay – are enormously expensive to widen. Financial limitations have been compounded by the fuel efficiency improvement of cars, light-duty trucks, and freight-hauling trucks over the past four decades. Americans now travel more miles per capita than ever before, using less fuel per mile of travel. Gasoline is taxed on a per-gallon basis, which insulates the revenue stream from price fluctuations, but causes revenues to decline when fuel economy of vehicles increases.

Second, increasing incomes have led to the constant growth in car ownership and annual vehicle miles of travel per person.

Third, commuters and employers are generally resistant to adoption of variable work schedules to reduce or avoid peak hour traffic congestion. However, as congestion increases in major commuter corridors, workers will tend to adjust their work schedule to avoid the worst congestion, and people making non-work trips will shift their travel to less congested times of day, or select different destinations to avoid traffic congestion, even if this is not preferred. When a congested highway is widened, people who had shifted their work commute and non-work travel to avoid congestion tend to shift their travel time back to the peak period.

Fourth, businesses and home buyers become more likely to locate in an area that relies on the previously-congested (but newly widened) road, adding new demand to the equation. This phenomenon is known as “induced demand” for highway travel and helps explain why peak period highway congestion is virtually impossible to eliminate in growing urban areas.

These factors combine to produce a “congested equilibrium” on the highway system in every large, growing urban area. Despite complaints, people’s behavior indicates a preference or tolerance for some degree of traffic congestion rather than embrace some of the potential solutions (higher taxes, shifting work schedules, carpooling or transit). For this reason, transportation planning focuses on managing congestion, and avoids creating public perceptions that peak period traffic congestion can be eliminated.

3.5.4. Visionary Project List

Potential highway improvements identified in the region are included in the table in Figure 3-11. As previously described, the project list was developed based on assessments of traffic congestion, a regional crash evaluation, tourism travel, commuter travel, highway bridge conditions, transit routes, bicycle and pedestrian plans, and public comments.

3.6. Anticipated Funding for Highway Needs

Estimated funding levels for road improvements in the ESMPO study area have been established by ALDOT, and funding is grouped in three categories:

- Capacity – Projects that add lanes to existing roads or construct new road segments;
- Operations and Maintenance – Projects that improve the operations or maintenance condition of the highway system, such as signalization of an intersection, improvements to signal system management, addition of turn lanes at an intersection, addition of paved shoulders on a road, resurfacing or reconstruction of a deteriorated road; and
- MPO Dedicated – may be used for any of the above listed project purposes at the discretion of the MPO.

Figure 3-10 provides details regarding federal and local funding available for highway improvements.

Figure 3-10: Funding Available for ESMPO Highway Improvements

ALDOT Funding Category	Available Federal Funds	Local Matching Funds	Total Federal and Local Funds
Capacity Expansion	31,063,119	7,765,780	38,828,899
MPO Dedicated	31,181,920	7,795,480	38,977,400
Operations and Maintenance	72,116,004	18,029,001	90,145,005
	134,361,043	33,590,261	167,951,304

3.7. Project Ranking, Evaluation, and Prioritization

The results of the technical evaluation and prioritization is presented in the Project Ranking List in Figure 3-12. Projects are grouped by type: Widening, New Roads, and Minor Improvements. Within each group, projects are listed in order by total score on the ranking criteria. The High, Medium, and Low priority suggested for each project is relative within each group of projects.

Federal planning regulations require that Long Range Transportation Plans must be financially constrained. In other words, an estimate of the funding available for transportation improvements from federal, state and local sources must be made, cost estimates developed for potential projects, and then all potential projects are prioritized. The highest priority projects for the MPO are identified in the Financially Constrained plan, and the performance of the plan is measured based only on cost-feasible list of projects.

For the ESMPO LRTP, projects have been evaluated using nine performance indicators, selected to be consistent with the policies and requirements of the Fixing America's Surface Transportation Act (FAST Act).

Four performance indicators measure **mobility** changes resulting from implementation of the highway improvements in the 2045 Plan. These performance indicators are 2045 volume-to-capacity (V/C) ratio (0 to 2 points), congested speeds, and identification of tourism corridors and commuter routes (one point each) based on trip characteristics in each highway corridor. Each of these measures is computed using outputs from the ESMPO travel demand forecasting model. Additional technical details about the project ranking process are provided in Appendix E.

Preservation of the existing transportation in a **state of good repair** is a high priority in the FAST Act. However, given the long horizon of the plan (25 years), no meaningful way to include pavement condition in the project evaluation process was identified, as every road evaluated will require substantial repair and complete resurfacing at least once during the plan period. Instead, bridge condition ratings from ALDOT were used to identify the number of bridges and condition on each project. Structurally deficient bridges (there is only one in the study area) were assigned a 5 point score, while bridges in “Fair” condition were assigned 1 point each, and “Good” bridges receive 0 points. All bridges within the project limits were included in the scoring.

Safety was evaluated at a regional level, as described in Section 3.4.2; safety evaluations for individual projects were made by reviewing a general crash frequency map for the region and assigning a score from 1 (low crash density) to 3 (high crash density) to each project based on that mapped crash data. This regional crash data review is unavoidably imprecise, but directionally sound.

Each highway project’s potential benefits for **all modes of travel** were measured by evaluating freight movement patterns, planned bicycle and pedestrian needs, and public transit service.

The Truck Network identified in Section 2.5 was used to assign scores of 1 to secondary truck routes and 2 to primary truck routes.

The proposed bicycle and pedestrian networks in this plan were used to assign 1 point to projects in corridors proposed for bicycle and pedestrian facilities.

The fixed route transit services provided by BRATS (two fixed routes) were used to assign 1 point to projects that are traversed by the current BRATS fixed routes.

The compilation of the scores across the 9 categories emphasizes mobility (up to 6 points per project) and safety (up to 3 points per project), but also accounts for other important factors in the project rankings.

The point scores are generalized into High, Medium, and Low priority projects based on the total scores for each project. Decision-makers should understand that there is some unavoidable imprecision in the data used to score projects on the multiple criteria, as well as an unavoidable degree of subjectivity in the project scoring and ranking process.

The priorities recommended for the financially constrained plan are never “set in stone,” are always subject to political considerations which are not factored into the rankings and may be amended over time as priorities and funding constraints change. The Eastern Shore MPO policy committee ultimately determines the projects to be included in the financially constrained plan, with guidance from the technical evaluation of the projects.

3.8. Financially Constrained Projects List

Available funding is not sufficient to widen all of the roads that are predicted to become congested by 2045. The Financially Constrained Project list in Figure 3-13 is tailored to fit available funding and includes only those projects that can be funded through 2045.

Among the widening projects on the Financially Constrained Project List, one “medium” priority project, Daphne Avenue, is listed in financially constrained project list because the next higher ranked projects would not fit within the financial constraint for widening projects, which is estimated to be \$38.8 million. The low total cost of the Daphne Avenue project allowed it to fit within the 25 year financial constraint, while higher ranked projects did not fit within the budget.

Four widening projects are highlighted in the Project Ranking List in Figure 3-12. Because these corridors will become substantially congested by 2045, but funding for widening is not available, the ESMPO Policy Committee may wish to shift these projects into the “minor improvements” category of projects. However, this will cause projects currently at the bottom of the Financially Constrained project list to drop into the Unmet Needs list of projects. Figure 3-15 maps the Financially Constrained projects.

3.9. Unmet Needs List

The projects from the Visionary Plan List that cannot be funded during the planning period are presented in the Unmet Needs List in Figure 3-14.

Figure 3-11: Visionary Project List

Type	Project ID	Project Name	Project Scope	Project Termini		Length (mi)
				Begin	End	
Road Widening Projects	W1.1	State Route 225	Widen to 4 lanes	US Highway 31	Blakely Way	1.06
	W1.2	State Route 225	Widen to 4 lanes	Blakely Way	Bay Minette Creek Bridge	1.21
	W1.3	State Route 225	Widen to 4 lanes	Bay Minette Creek Bridge	Bromley Road	3.44
	W2.1	Jimmy Faulkner Drive (CR 27)	Widen to 4 lanes	US Highway 31	Plaza de Toros Drive	0.49
	W2.2	Jimmy Faulkner Drive (CR 27)	Widen to 4 lanes	Plaza de Toros Drive	Sibley Creek	1.90
	W2.3	Jimmy Faulkner Drive (CR 27)	Widen to 4 lanes	Sibley Creek	Bromley Road	2.19
	W3	Bromley Road	Widen to 4 lanes	Jimmy Faulkner Drive (CR 27)	US Highway 31	2.46
	W4.1	US Highway 31	Widen to 4 lanes	Jimmy Faulkner Drive (CR 27)	Old Highway 31	1.32
	W4.2	US Highway 31	Widen to 4 lanes	Old Highway 31	Redmond Lane	2.60
	W4.3	US Highway 31	Widen to 4 lanes	Redmond Lane	State Route 59	1.96
	W5.1	US Highway 98	Widen to 6 lanes	Interstate 10	D'Olive Creek	0.34
	W5.2	US Highway 98	Widen to 6 lanes	D'Olive Creek	North Main Street (Daphne)	1.51
	W6.1	US Highway 90	Widen to 4 lanes	Bay View Drive	County Road 13	1.87
	W6.2	US Highway 90	Widen to 4 lanes	County Road 13	State Route 181	1.29
	W7.1	County Road 13	Widen to 4 lanes	Whispering Pines Road	Champions Way	1.52
	W7.2	County Road 13	Widen to 4 lanes	Champions Way	US Highway 90	1.07
	W8	Champions Way	Widen to 4 lanes	County Road 13	State Route 181	0.89
	W9	Daphne Ave (CR 64)	Widen to 4 lanes	US Highway 98	Pollard Road	0.74
	W10	County Road 64	Widen to 4 lanes	State Route 181	County Road 54E	1.50
	W11.1	State Route 181	Widen to 4 lanes	Mosely Road	CR 32	4.52
W11.2	State Route 181	Widen to 4 lanes	CR 32	US Highway 98	4.20	
W12	I-10 (not ESMPO funded)	Widen to 6 lanes	State Route 181	State Route 59	5.47	
W13	I-10 Bayway	Widen to 8 lanes	Baldwin/Mobile County Line	East of Exit 35	7.60	
New Roads	N1	US 31 to SR 59 Connector	New Roadway	US Highway 31	State Route 59	3.40
	N2	Johnson Road to Glover Lane Connector	New 2 lane road	Johnson Road	Glover Lane	0.70
	N3	Pleasant Road Extension	New 2 lane road	SR 181	Rigsby Road	0.50
	N4	Lawrence Road Connector	New 2 lane road	State Route 104	Gayfer Road Ext.	1.00
	N5	Baldwin Beach Express II	New 4 lane divided road	North end of BBE	Study Area Boundary	24.00
Minor Improvements	M1	The Causeway (US 31-US 90-US 98)	Project scope to be determined	US Highway 98 Interchange	I-10 Interchange	3.40
	M2	State Route 59	Corridor Study and Implementation	US Highway 31	US Highway 90	7.70
	M3	US 90	Left turn lanes, paved shoulders	State Route 181	State Route 59	6.20
	M4.1	County Road 54	Left turn lanes, paved shoulders	County Road 64	County Road 49	5.77
	M4.2	County Road 54	Left turn lanes, paved shoulders	County Road 49	State Route 59	3.39
	M5	State Route 104	Left turn lanes, paved shoulders	State Route 181	County Road 55	6.00
	M6	Volanta Avenue (Not a Federal Aid Route)	Minor improvements and resurfacing	Greeno Road (US 98)	North Section Street	0.80
	M7	County Road 48	Left turn lanes, paved shoulders	State Route 181	County Road 9	3.80
	M8.1	County Road 32	Left turn lanes, paved shoulders	State Route 181	County Road 9	6.17
M8.2	County Road 32	Left turn lanes, paved shoulders	County Road 9	Study Area Boundary	3.52	
M9	US Highway 98	Corridor Study and Implementation	North Main Street (Daphne)	Nichols Avenue	7.94	

Figure 3-12: Project Ranking List

Type	Project ID	Project Name	Project Termini		Length (mi)	Total Project Evaluation Score	Planning Level Cost Estimate (millions)	Priority	Recommended for LRTP?	LRTP Cumulative Cost
			Begin	End						
Road Widening Projects	W5.1	US Highway 98	Interstate 10	D'Olive Creek	0.34	11	\$ 2.5	High	YES	2.5
	W4.1	US Highway 31	Jimmy Faulkner Drive (CR 27)	Old Highway 31	1.32	9	\$ 9.8	High	YES	12.3
	W5.2	US Highway 98	D'Olive Creek	North Main Street (Daphne)	1.51	9	\$ 11.2	High	YES	23.5
	W12	I-10 (not an MPO funded project)	State Route 181	State Route 59	5.47	8	TBD	High	YES	Not MPO
	W4.2	US Highway 31	Old Highway 31	Redmond Lane	2.60	8	\$ 18.2	High	YES	41.7
	W4.3	US Highway 31	Redmond Lane	State Route 59	1.96	8	\$ 14.5	Medium	YES	56.2
	W6.2	US Highway 90	County Road 13	State Route 181	1.29	8	\$ 9.5	Medium	NO	
	W10	County Road 64	State Route 181	County Road 54E	1.50	6	\$ 5.6	Medium	YES	61.8
	W9	Daphne Ave (CR 64)	US Highway 98	Pollard Road	0.74	6	\$ 5.5	Medium	YES	67.2
	W7.1	County Road 13	Whispering Pines Road	Champions Way	1.52	6	\$ 11.2	Medium	NO	
	W11.1	State Route 181	Mosely Road	CR 32	4.52	5	\$ 33.4	Medium	NO	
	W6.1	US Highway 90	Bay View Drive	County Road 13	1.87	5	\$ 13.8	Medium	NO	
	W2.2	Jimmy Faulkner Drive (CR 27)	Plaza de Toros Drive	Sibley Creek	1.90	5	\$ 14.1	Low	NO	
	W3	Bromley Road	Jimmy Faulkner Drive (CR 27)	US Highway 31	2.46	5	\$ 18.2	Low	NO	
	W1.3	State Route 225	Bay Minette Creek Bridge	Bromley Road	3.44	4	\$ 25.5	Low	NO	
	W7.2	County Road 13	Champions Way	US Highway 90	1.07	4	\$ 7.9	Low	NO	
	W11.2	State Route 181	CR 32	US Highway 98	4.20	3	\$ 31.1	Low	NO	
	W1.2	State Route 225	Blakely Way	Bay Minette Creek Bridge	1.21	3	\$ 9.0	Low	NO	
	W2.1	Jimmy Faulkner Drive (CR 27)	US Highway 31	Plaza de Toros Drive	0.49	3	\$ 3.6	Low	NO	
	W2.3	Jimmy Faulkner Drive (CR 27)	Sibley Creek	Bromley Road	2.19	3	\$ 16.2	Low	NO	
W1.1	State Route 225	US Highway 31	Blakely Way	1.06	3	\$ 7.8	Low	NO		
W8	Champions Way	County Road 13	State Route 181	0.89	2	\$ 6.6	Low	NO		
New Roads	N2	Johnson Road to Glover Lane Connector	Johnson Road	Glover Lane	0.70	3	\$ 2.5	High	YES	69.7
	N3	Pleasant Road Extension	SR 181	Rigsby Road	0.50	2	\$ 2.6	Medium	YES	72.3
	N1	US 31 to SR 59 Connector	US Highway 31	State Route 59	3.40	2	\$ 8.5	Medium	TBD	-
	N4	Lawrence Road Connector	State Route 104	Gayfer Road Ext.	1.00	2	\$ 2.5	Medium	YES	74.8
Minor Improvements	M2	State Route 59	US Highway 31	US Highway 90	7.70	11	\$ 11.6	High	YES	86.3
	M9	US Highway 98	North Main Street (Daphne)	Nichols Avenue	7.94	6	\$ 11.9	High	YES	98.2
	M5	State Route 104	State Route 181	County Road 55	6.00	6	\$ 12.0	High	YES	110.2
	M1	The Causeway (US 31-US 90-US 98)	US Highway 98 Interchange	I-10 Interchange	3.40	5	\$ 6.8	Medium	YES	117.0
	M8.1	County Road 32	State Route 181	County Road 9	2.65	4	\$ 5.3	Medium	YES	122.3
	M3	US 90	State Route 181	State Route 59	6.20	4	\$ 12.4	Medium	YES	134.7
	M4.1	County Road 54	County Road 64	County Road 49	5.77	4	\$ 11.5	Low	YES	146.3
M4.2	County Road 54	County Road 49	State Route 59	3.39	3	\$ 6.8	Low	YES	153.1	

	M6	Volanta Avenue (<i>Not a Federal Aid Route</i>)	Greeno Road (US 98)	North Section Street	0.80	3	\$ 1.0	Low	YES	154.0
	M7	County Road 48	State Route 181	County Road 9	3.80	3	\$ 7.6	Low	YES	161.6
	M8.2	County Road 32	County Road 9	Study Area Boundary	3.52	2	\$ 7.0	Low	NO	
							\$ 385.2		TOTAL	\$ 161.63

Figure 3-13: Financially Constrained Projects List

Project Type	Project No.	Project Name	Project Termini		Length (mi)	Total Project Evaluation Score	Planning Level Cost Estimate (millions)	Priority	Recommended for LRTP?	LRTP Cumulative Cost
			Begin	End						
Road Widening Projects	W5.1	US Highway 98	Interstate 10	D'Olive Creek	0.34	11	\$ 2.5	High	YES	2.5
	W4.1	US Highway 31	Jimmy Faulkner Drive (CR 27)	Old Highway 31	1.32	9	\$ 9.8	High	YES	12.3
	W5.2	US Highway 98	D'Olive Creek	North Main Street (Daphne)	1.51	9	\$ 11.2	High	YES	23.5
	W4.2	US Highway 31	Old Highway 31	Redmond Lane	2.60	8	\$ 18.2	High	YES	41.7
	W4.3	US Highway 31	Redmond Lane	State Route 59	1.96	8	\$ 14.5	Medium	YES	56.2
	W9	Daphne Ave (CR 64)	US Highway 98	Pollard Road	0.74	6	\$ 5.5	Medium	YES	61.6
	W10	County Road 64	State Route 181	County Road 54E	1.50	6	\$ 5.6	Medium	YES	67.2
New Roads	N2	Johnson Road to Glover Lane Connector	Johnson Road	Glover Lane	0.70	3	\$ 2.5	High	YES	69.7
	N3	Pleasant Road Extension	SR 181	Rigsby Road	0.50	2	\$ 2.6	Medium	YES	72.3
	N4	Lawrence Road Connector	State Route 104	Gayfer Road Ext.	1.00	2	\$ 2.5	Medium	YES	74.8
Minor Improvements	M2	State Route 59	US Highway 31	US Highway 90	7.70	11	\$ 11.6	High	YES	86.3
	M9	US Highway 98	North Main Street (Daphne)	Nichols Avenue	7.94	6	\$ 11.9	High	YES	98.2
	M5	State Route 104	State Route 181	County Road 55	6.00	6	\$ 12.0	High	YES	110.2
	M1	The Causeway (US 31-US 90-US 98)	US Highway 98 Interchange	I-10 Interchange	3.40	5	\$ 6.8	Medium	YES	117.0
	M8.1	County Road 32	State Route 181	County Road 9	2.65	4	\$ 5.3	Medium	YES	122.3
	M3	US 90	State Route 181	State Route 59	6.20	4	\$ 12.4	Medium	YES	134.7
	M4.1	County Road 54	County Road 64	County Road 49	5.77	4	\$ 11.5	Low	YES	146.3
	M4.2	County Road 54	County Road 49	State Route 59	3.39	3	\$ 6.8	Low	YES	153.1
	M6	Volanta Avenue (Not a Federal Aid Route)	Greeno Road (US 98)	North Section Street	0.80	3	\$ 1.0	Low	YES	154.0
M7	County Road 48	State Route 181	County Road 9	3.80	3	\$ 7.6	Low	YES	161.6	
TOTAL									161.63	

NOTE: High Priority projects should be addressed in the first 10 years of plan implementation

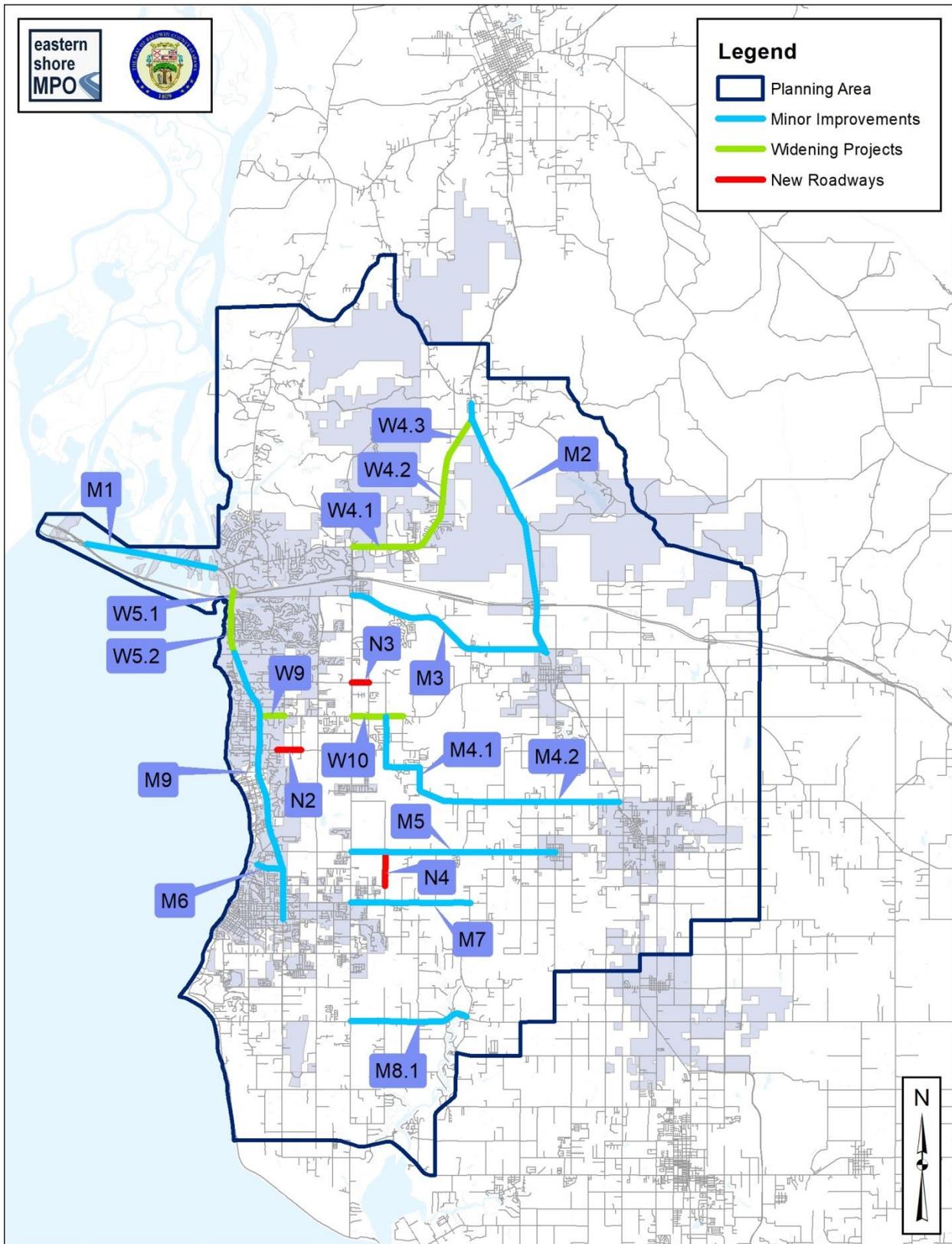
*Projected funding levels based on allocations from previous years; funding sources include ALDOT Capacity, Operations and Maintenance, and MPO Designated funds.

Available Funding	\$ 167.95
Remainder to Program	\$ 6.32

Figure 3-14: Unmet Needs List

Project Type	Project ID	Project Name	Project Termini		Length (mi)	Project Evaluation Score	Planning Level Cost Estimate (millions)
			Begin	End			
Road Widening Projects	W1.1	State Route 225	US Highway 31	Blakely Way	1.06	3	\$ 7.8
	W1.2	State Route 225	Blakely Way	Bay Minette Creek Bridge	1.21	3	\$ 9.0
	W1.3	State Route 225	Bay Minette Creek Bridge	Bromley Road	3.44	4	\$ 25.5
	W11.1	State Route 181	Mosely Road	CR 32	4.52	5	\$ 33.4
	W11.2	State Route 181	CR 32	US Highway 98	4.20	3	\$ 31.1
	W12	I-10 (<i>not an MPO funded project</i>)	State Route 181	State Route 59	5.47	8	TBD
	W13	I-10 Bayway	Baldwin/Mobile County Line	East of Exit 35	7.60	TBD	TBD
	W2.1	Jimmy Faulkner Drive (CR 27)	US Highway 31	Plaza de Toros Drive	0.49	3	\$ 3.6
	W2.2	Jimmy Faulkner Drive (CR 27)	Plaza de Toros Drive	Sibley Creek	1.90	5	\$ 14.1
	W2.3	Jimmy Faulkner Drive (CR 27)	Sibley Creek	Bromley Road	2.19	3	\$ 16.2
	W3	Bromley Road	Jimmy Faulkner Drive (CR 27)	US Highway 31	2.46	5	\$ 18.2
	W6.1	US Highway 90	Bay View Drive	County Road 13	1.87	5	\$ 13.8
	W6.2	US Highway 90	County Road 13	State Route 181	1.29	8	\$ 9.5
	W7.1	County Road 13	Whispering Pines Road	Champions Way	1.52	6	\$ 11.2
	W7.2	County Road 13	Champions Way	US Highway 90	1.07	4	\$ 7.9
W8	Champions Way	County Road 13	State Route 181	0.89	2	\$ 6.6	
New Roads	N1	US 31 to SR 59 Connector	US Highway 31	State Route 59	3.40	2	\$ 8.5
	N5	Baldwin Beach Express II	North end of BBE	MPO Boundary	24.00	TBD	\$ 200.0
Minor Improvements	M8.2	County Road 32	County Road 9	Study Area Boundary	3.52	2	\$ 7.0
						Total	\$ 423.6

Figure 3-15: Recommended Financially Constrained Projects



3.10. Financial Plan

The estimates of available funding for this LRTP are based on guidance from ALDOT regarding expected annual revenues for capacity expansion projects, operations and maintenance projects, and MPO designated funding. The table below presents the funds projected in each of these categories, which were used to develop the financially constrained project lists. The financial plan has focused on the highway funding available for the plan. Figure 3-10 on page 46 provides details on the nearly \$168 million in highway system funding that is projected to be available to the Eastern Shore MPO through the planning period.

The recently adopted transit plan addressed the financial environment for transit, although this has been dramatically changed by the challenges associated with the COVID-19 pandemic and the associated impacts on transit ridership and revenue.

Alternative Funding Sources

The Rebuild Alabama Act (RAA) established an annual grant program open to all local governments, which can be used to fund projects on any public road or bridge. Funds awarded through the RAA Grant program must be spent or obligated within one year of the award date, and projects are limited to a total award of \$250,000. Funds may not be expended on right-of-way acquisition, preliminary engineering, or utility relocation. Because of the program guidelines and funding limits, resurfacing projects appear to be the most common use of RAA grants so far. Additional details are available on the ALDOT website.

Transportation Alternative Program (TAP) funds are administered by ALDOT and awarded competitively statewide for MPOs with populations under 200,000. TAP is a primary source of funding for bicycle and pedestrian improvements, and projects up to a total cost of \$800,000 are eligible for funding (\$640,000 federal funds and \$160,000 local match provided by the project sponsor).

Extraordinary funding sources have proven problematic, as illustrated by opposition to tolls that were proposed for the I-10 Bayway. It seems likely that local option sales taxes would also meet with opposition, particularly in light of the recent increases in state motor fuel taxes. As a result, this LRTP has not anticipated any substantial funding from tolls or local option sales taxes.

3.11. Additional Lanes on Interstate 10 Bayway

The I-10 Mobile River Bridge and Bayway project is a proposal to increase the capacity of I-10 by constructing a new six-lane bridge, across the Mobile River, and increase the capacity across Mobile Bay from four to eight lanes. The proposed project would originate in Mobile County and extend eastward to Baldwin County. For the purpose of this plan, only the Baldwin County section is included in the Visionary Element. The project would increase the capacity of the I-10 Bayway to meet existing and predicted future traffic volumes. The funding for the additional lanes on the project has not yet been determined. However, the project is a priority for the State of Alabama, and the Eastern Shore and Mobile MPOs and has been identified as a capacity project and is included in the Visionary Projects and Unmet Needs lists.

3.12. Bicycle and Pedestrian System Needs

A detailed assessment and recommendations for bicycle and pedestrian network improvements for the study area is beyond the scope of this plan. The existing 2014 Bicycle and Pedestrian Plan was reviewed, field observations of existing facilities were conducted, and local bicycle and pedestrian advocates were consulted. MPO staff is currently working to update the Bicycle and Pedestrian Plan for the MPO and provided valuable insights that have guided recommendations here.

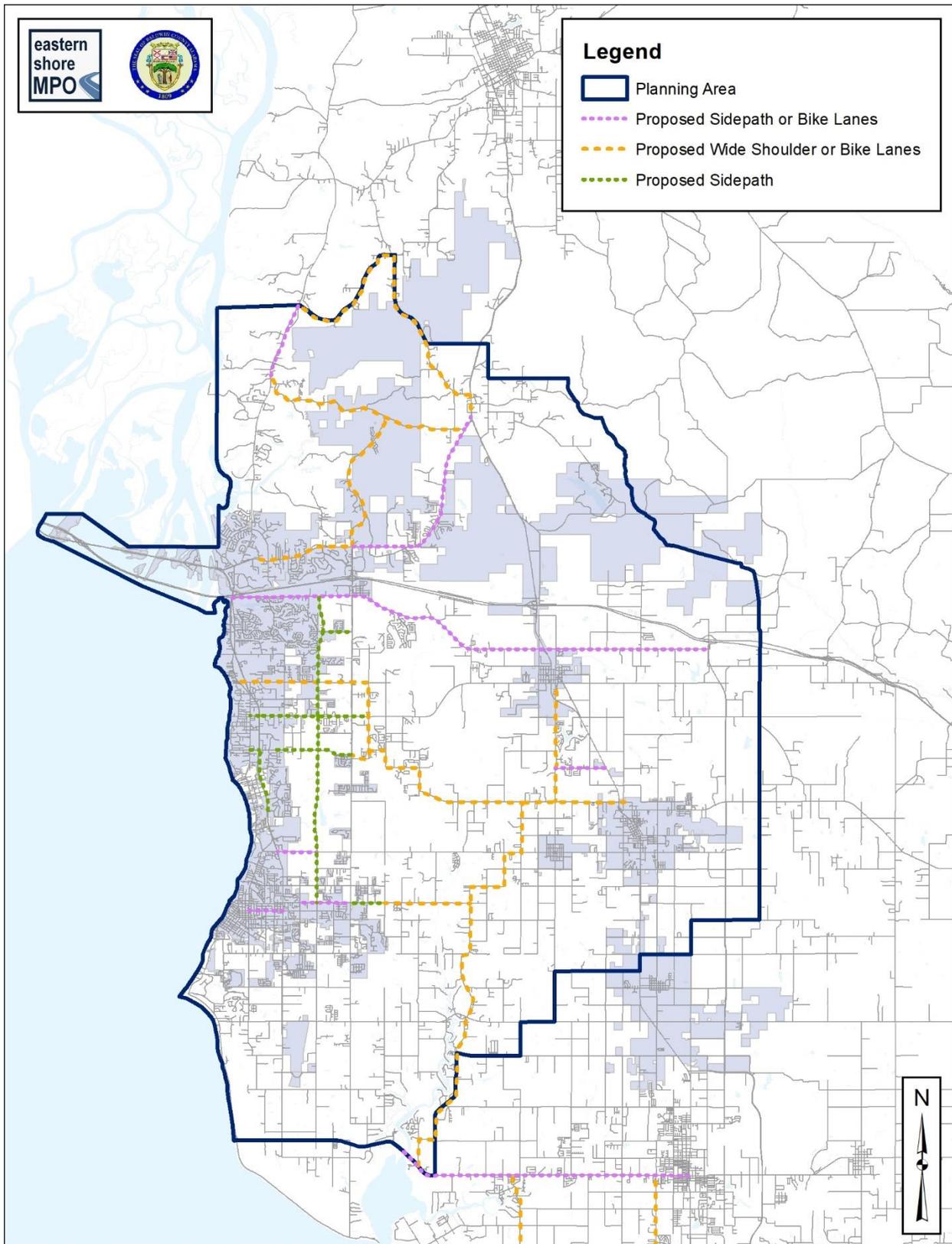
Comments from the public on the on-line survey conducted in April 2020 -- along with maps of existing sidewalks, bike lanes, wide paved shoulders, wide shared-use lane, and the EST -- make it clear that there is broad general support in the region for improved bicycle and pedestrian facilities and a better, more connected system of facilities.

The older developed areas in the cities and towns in the study area generally have reasonably connected and usable sidewalk networks. However, the many sidewalks that have been constructed in newer subdivisions across the region are rarely connected with any destinations – schools, employment centers, shopping centers -- by sidewalks or multi-use paths on regional roads and highways.

The improvements identified in Figure 3-16 is based on a review of current bicycle and pedestrian planning efforts and field observations. The MPO staff is continuing to update the Bicycle and Pedestrian Plan for formal adoption by the MPO. Funding for implementation of elements of the Bicycle Plan that are not included in the road improvement projects in the Financially Constrained Project List will come primarily through the Transportation Alternatives Program (TAP), described above. Where improvements are identified in the Bicycle and Pedestrian Plan, those improvements should be included in the scope of road improvement projects along those routes.

The type of improvements suggested in each of the corridors is flexible in this recommended planning framework for bicycle and pedestrian facilities. A thorough review of each corridor for constructability is beyond the scope of work for this plan, so some flexibility is indicated in the type of improvement that may best fit the corridor. As road improvements are designed to implement the highway improvements in this LRTP, design issues, rights-of-way, and cost of construction will need to be considered in selecting the most appropriate bicycle and pedestrian improvement for each corridor.

Figure 3-16: Bicycle and Pedestrian Network



3.13. Transit System Needs

A transit plan was prepared and adopted in 2018, but much has changed about the transit system in the interim. Most of the festival-related service that the system previously provided will no longer be operated. In addition, BRATS is evaluating ways to leverage ridesharing services in efforts to develop improved efficiency and reduce costs per rider. Dramatic changes in service delivery and operations associated with the COVID-19 pandemic have made it difficult to assess trends in the service. BRATS currently is evaluating options for restructuring and improving the system, but the assessment is not yet complete.

3.14. Truck Freight System Needs

As noted previously, essentially all freight in the study area is moved by truck on the highways. A truck network is identified based on truck traffic volumes in Section 2.5. Critical segments in the truck system are US 31, a portion of which is proposed for widening, and SR 59, which is identified as a route where a corridor study should be done to identify strategies for addressing anticipated traffic congestion and addressing freight needs, as continued warehouse and distribution activity is expected north of I-10. Improvements to I-10 and SR 181 also will address freight movement in the region. Improvements proposed on US 98 at I-10, and between US 98 and SR 181 on Daphne Avenue should help address truck deliveries to the multiple retail destinations existing on US 98 and the expected expansion of retail and employment activity along SR 181.

3.15. Plan Review and Approval

MPO committees including the CAC, TAC, and BPAC, as well as the MPO Policy Board, met in July 2020 to review and approve the Draft LRTP. Public meetings scheduled in March 2020 were preempted by stay at home orders due to the COVID-19 pandemic; public input on the existing conditions and regional needs assessment of the plan were conducted in an on-line survey format that produced far greater participation and more detailed public input than is normally ever produced by open house public meetings.

MPO committees including the CAC, TAC, and BPAC, as well as the MPO Policy Board, are scheduled to meet in September 2020 to review and approve the Final LRTP, which may be revised in response to MPO committee input and public comment. The public engagement strategy for the draft plan is somewhat dependent upon COVID-19 developments, but regardless of whether public open house meetings can be held, an on-line survey platform to communicate key findings and recommendations of the planning process to the public will be used for the draft final plan review.