

# Chapter 8: 2025 and 2015 Cost Affordable Plans

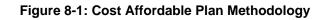
This chapter presents the 2025 Cost Affordable Plan adopted by the MPO board. Included in this chapter is the methodology used to develop the 2025 Cost Affordable Plan and the improvements included in the 2025 Cost Affordable Plan and the 2015 Interim Year Plan. This chapter also includes a summary of the alternatives that were evaluated while developing the 2025 Cost Affordable Plan.

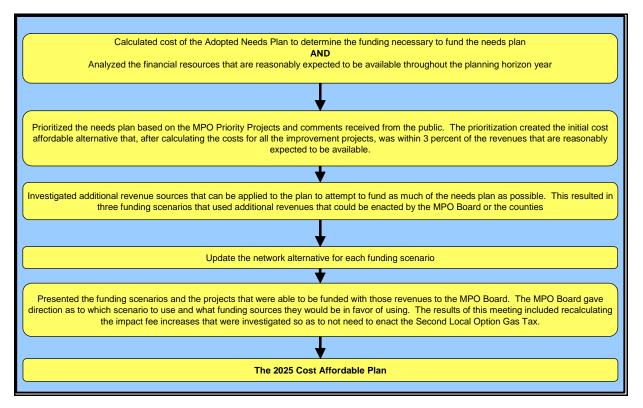
The Cost Affordable Plan has five components: the road system, goods movement, the multi-modal system, Intelligent Transportation Systems, and Travel Demand Management. The plan must also address compliance with the goals and objectives discussed in Chapter 3. A summary of the Efficient Transportation Decision Making process to review the planned improvements are also included in this chapter.

# Methodology

The Cost Affordable Plan was developed using information from the development of the 2025 Needs Plan and other resources available for the evaluation of the plan. The Plan addresses multimodal transportation improvements for the MPO planning area. The methodology used to develop the 2025 Cost Affordable Plan is summarized in greater detail Figure 8-1.







#### Calculated Cost of the Adopted 2025 Needs Plan & Analyzed Available Financial Resources

The first step to develop the 2025 Cost Affordable Plan was to calculate the cost of the 2025 Adopted Needs Plan. Concurrently with calculating the cost of the Adopted Needs Plan, Financial Resources were analyzed to determine what funding would be reasonably expected to be available for the Cost Affordable Plan. The cost of the Adopted Needs Plan and the available financial resources limits the number of projects that can be deemed cost feasible, as well as the amount of revenue that would need to be added to be able to add additional cost feasible improvements.

The revenues available for the Cost Affordable Plan are summarized in Table 8-1. Additional information concerning these revenues, as well as the assumptions used to develop the available revenues are documented in Chapter 6.



Mode of Travel	Base Revenue (X1,000)	Enhanced Revenue (X1,000)	Costs (X1,000)
FIHS/SIS	\$186,827	\$186,827	\$186,827
State	\$55,297	\$55,297	\$137,522
County (1)	\$199,738	\$430,382	\$371,781
Subtotal - Roads	\$441,862	\$672,507	\$696,131
Public Transportation Capital (2)	\$4,792	\$4,792	\$4,792
Bike / Pedestrian	\$9,926	\$22,070 (3)	\$22,070 (4)
Total Capital	\$456,581	\$699,369	\$722,994
Public Transportation Operations & Maintenance (1)	\$57,451	\$57,451	\$57,451
Total Capital and Operations & Maintenance	\$514,032	\$756,820	\$780,445

#### Table 8-1: 2025 Cost Affordable Plan Revenues & Costs

(1) Reflects \$0.3 Million transfer to Public Transportation Capital and \$11.3 Million Transfer to Public Transportation Operations

(2) Reflects \$0.3 Million transfer from County Gas Tax

(3) Includes an additional \$10 Million in sales tax over the current and extended sales tax allocation levels for bicycle and pedestrian capital

(4) Costs assumed to equal revenues; see text.

#### Prioritized the Adopted Needs Plan

The Adopted Needs Plan was prioritized based on comments received from the Consensus Building Workshops and the MPO Standing Committees to develop the initial cost affordable alternative. The costs for the initial cost affordable alternative were calculated to conclude that the total project costs for this alternative was within 3 percent of the available revenues for the cost affordable plan.

To support the evaluation of the initial cost affordable alternative, a Generalized Level of Service Analysis was performed on this alternative. The procedures used in the analysis are discussed in Chapter 4, and the results of the analysis are available in the Technical Appendix Section 8.



#### **Investigated Additional Revenue Sources**

Based on Table 8-1, a shortfall of over \$1.1 billion is forecasted in funding of the Adopted Needs Plan. To reduce this shortfall, additional revenue sources were investigated to be applied to the Cost Affordable Plan. Because of the number of revenue sources that are available and the feasibility of the revenue sources, three funding scenarios were created. The additional revenue assumptions for each funding scenario are displayed in Table 8-2. Each funding scenario built on the previous scenario, so Scenario B included all of Scenario A, and Scenario C included all of Scenarios A and B.

Table 8-2: Funding	Scenario Revenue	Assumptions for the	e 2025 Cost Affordable Plan
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Additional Funding Source	Α	В	С
Extend Sales Tax from 2017 to 2025		√	✓
Increase Impact Fees		~	~
Add Second Local Option Gas Tax			~

Note: This table represents the items presented to the MPO Board. This does not reflect what was approved by the MPO Board

### Update the Network Alternative for each Funding Scenario

Based on the revenues summarized in Table 8-1, additional projects were added to the initial cost affordable alternative to utilize the additional funding. The cost affordable alternatives that were created for the funding scenarios are discussed later in this chapter.

### Presented Funding Scenarios and Cost Affordable Plan Scenarios to the MPO Board

The information from Table 8-2 and the resulting revenues were presented to the MPO Committees and the MPO Board along with the cost affordable scenarios that corresponded to the funding scenarios. Based on this meeting, the MPO Board requested that for the cost affordable plan, Funding Scenario C be changed to exclude the Second Local Option Gas Tax and to increase funding from Transportation Impact Fees to cover the remaining shortfall. Table 8-1 presents the resulting enhanced revenues for the Cost Affordable Plan. This table shows an additional \$243 million in revenue compared to the base revenues.



#### Adopted the 2025 Cost Affordable Plan

The MPO Board formally endorsed the Draft 2025 Cost Affordable Plan on October 26, 2005, thus opening the 45 day public comment period. A summary of the comments received is included in Technical Appendix Section 2G and summarized in the Public Involvement Plan (Chapter 2). The 2025 Cost Affordable Plan was formally adopted on December 14, 2005.

### 2025 Cost Affordable Plan

#### 2025 Cost Affordable Plan Roadway System

The 2025 Cost Affordable number of lanes and road type is illustrated in Map 8-1, with the improved roads summarized in Table 8-3. Based on the improved roads presented in Map 8-1 and Table 8-3, the Cost Affordable Plan will construct approximately 448 lane miles of road, an increase of 26 percent. Improvements are primarily directed to US 27, and SR 19, the major north-south connectors, and CR 48 and US 441, the major east-west connectors.

Traffic demand on this road network was forecasted using the Central Florida Regional Planning Model along to forecast traffic volumes in the year 2025. Using these volumes, a Generalized Level of Service Analysis was performed on the major road network. Systemwide results of the level of service analysis are summarized in Table 8-4, the Road System Performance Evaluation. This report shows that 60 percent of the vehicle miles of travel countywide are forecasted to be traveled on roads that are performing worse than their adopted level of service standard. Table 8-5 summarizes the performance based on physical capacity, which forecasts approximately 29 percent of the roadway network will operate in a condition of severe congestion. The level of service for the road network is illustrated in Map 8-2. This map shows the forecasted level of service for all of the major roads in the county.

Based on coordination with Florida's Turnpike Enterprise and the Orlando Orange County Expressway Authority (OOCEA), the Wekiva Parkway and SR 46 Realignment are shown as "illustrative" projects since planning and feasibility studies were being conducted concurrent with the development of the Lake-Sumter MPO Cost Affordable plan. These projects <u>have not</u> been determined to be cost feasible, but were expected to be funded at the time when this plan was developed.

Table 8-3: Adopted Cost Affordable Plan Im	nprovements and Funding Sources
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Table 8-3: Adopted Cost Affordable Plan Improvements and Funding Sources       Description     Future Road     State Revenues     County Revenues*						Net					
	Project Name	Base Road Type	Future Road	Total Cost	State Re		1st LOGT	Inty Revenues*	TIF	Total	Not Funded
			Туре	<b>A</b> AAAA <b>A I A A A A A A A A A A</b>		State-Other	IST LOGT	LOST	IIF	<b>A A A A A A A A A A</b>	Funded
	SR 91 (SULLIVAN RD -to- ORANGE CO. LINE)	4 Lane Freeway	6 Lane Freeway	\$30,345,139	\$ 30,345,139					\$ 30,345,139	
SIS	SR 25 (US 27) (CR 561A -to- O'BRIEN RD)	4 Lane Divided	6 Lane Divided		\$ 78,750,807					\$ 78,750,807	
0	SR 46 BYPASS (SR 46 -to- ORANGE COUNTY LINE)	N/A	4 Lane Freeway		\$ 27,442,277					\$ 27,442,277	
	WEKIVA PKWY (ORANGE COUNTY LINE -to- SEMINOLE CO	N/A	4 Lane Freeway	, , ,	\$ 45,100,800					\$ 45,100,800	
	SR 44 (CR 44 -to- CR 44B)	2 Lane Undivided	4 Lane Divided	\$4,300,051			\$ 262,425				
	SR 50 (SR 25 (US 27) -to- HANCOCK RD)	4 Lane Divided	6 Lane Divided	\$8,900,295				\$ 1,324,774			
	SR 500 (US 441) (CR 44A -to- SR 44)	4 Lane Divided	6 Lane Divided	\$9,070,034			\$ 553,529		\$ 7,166,466	\$ 9,070,034	
	SR 19 (SR 25 (US 27) -to- O)	2 Lane Undivided	4 Lane Divided	\$47,510,597			\$ 2,899,491	\$ 7,071,767	\$ 37,539,340	\$ 47,510,597	
e	SR 19 (CR 561 -to- CR 441 (OLD))	4 Lane Divided	6 Lane Divided	\$11,870,579		\$11,870,579				\$ 11,870,579	
tat	SR 19 / CR 561 CONNECTOR (CR 455 -to- CR 455)	N/A	2 Lane Undivided	\$10,866,557			\$ 663,167	\$ 1,617,445	\$ 8,585,945	\$ 10,866,557	
ŝ		4 Lanes									
	SR 25 (US 27) (CR 25A (S) -to- MAIN ST)	Divided/Undivided	6 Lane Divided	\$18,879,314		\$18,879,314				\$ 18,879,314	
	SR 50 (CR 561 -to- SR 25 (US 27))	4 Lane Divided	6 Lane Divided	\$8,721,827		\$ 8,721,827				\$ 8,721,827	
	SR 500 (US 441) (CR 44B -to- WOLF BRANCH RD)	4 Lane Divided	6 Lane Divided	\$13,139,851		\$ 13,139,851				\$ 13,139,851	
	US 27/US 441 (WEST BOONE CT -to- POLK COUNTY)	4 Lane Divided	6 Lane Divided	\$4,263,353		\$ 2,685,429	\$ 96,298	\$ 234,868	\$ 1,246,758	\$ 4,263,353	
	CITRUS TOWER BLVD (SR 25 (US 27) -to- MOHAWK RD)	2 Lane Divided	4 Lane Divided	\$1,380,047			\$ 84,222	\$ 205,415	\$ 1,090,410	\$ 1,380,047	
	CR 33 (CR 48 -to- CR 470)	2 Lane Undivided	4 Lane Divided	\$1,405,806			\$ 85,794	\$ 209,249	\$ 1.110.763	\$ 1,405,806	
	CR 44 (SR 500 (US 441) -to- CR 452)	2 Lane Undivided	4 Lane Divided	\$27,178,415			\$ 1.658.652		\$ 21,474,362	\$ 27,178,415	
	CR 44 (CR 452 -to- SR 44)	2 Lane Undivided	4 Lane Divided	\$10,770,068			\$ 657,279		\$ 8,509,707		
	CR 460 (CR 468 -to- US 27/US 441)	2 Lane Undivided	4 Lane Divided	\$3,819,912			\$ 233,123		\$ 3,018,210	· · · ·	
	CR 466A (SUMTER CO. LINE -to- US 27/US 441)	2 Lane Undivided	4 Lane Divided	\$34,572,474			\$ 2,109,899		\$ 27,316,597	\$ 34,572,474	
	CR 468 (SR 44 -to- CR 460)	2 Lane Undivided	4 Lane Divided	\$3,799,155			\$ 231,856		\$ 3,001,810	\$ 3,799,155	
	CR 470 (SR 91 -to- SR 25 (US 27))	2 Lane Undivided	4 Lane Divided				\$ 637,295		\$ 8,250,980	\$ 10,442,618	
	CR 561 (SR 25 (US 27) -to- CR 561A)	2 Lane Undivided	4 Lane Divided	\$1,307,727			\$ 79.808		\$ 1,033,269	\$ 1,307,727	
	CRITTEDEN RD (SR 50 -to- SR 33)	N/A	2 Lane Undivided	\$525,776			\$ 32,087		\$ 415,429	\$ 525,776	
	HANCOCK RD (LAKE LOUISA RD -to- SR 50)	2 Lane Undivided	4 Lane Divided	\$10,183,666			\$ 621,492		\$ 8,046,375	\$ 10,183,666	
	HARTLE RD (HARTWOOD MARSH RD -to- SR 50)	2 Lane Undivided	4 Lane Divided	\$6,328,465			\$ 386,215		\$ 5,000,282	\$ 6,328,465	
	HOOKS ST (HANCOCK RD -to- HARTLE RD)	N/A	4 Lane Divided	\$3,985,454			\$ 243.225		\$ 3,149,009	\$ 3.985.454	
	LAKE LOUISA RD (HANCOCK RD -to- SR 25 (US 27))	2 Lane Undivided	4 Lane Divided	\$1,820,958			\$ 111,130		\$ 1,438,786	\$ 1,820,958	
	N. GRASSY LAKE RD (SR 25 (US 27) -to- TURKEY FARMS R	N/A	4 Lane Divided	\$2,928,894			\$ 178,745		\$ 2,314,194	\$ 2,928,894	
	SHELL POND RD (SR 25 (US 27) -to- ORANGE CO. LINE)	N/A	4 Lane Divided	\$10,733,743			\$ 655.062		\$ 8.481.005	\$ 10.733.743	
	TURKEY FARMS RD (CR 50 -to- SULLIVAN RD)	N/A N/A	4 Lane Divided	\$7,470,651			\$ 455.921	1 1	\$ 5.902.753	\$ 7.470.651	
	CR 439 (SR 44 -to- CR 44A)	2 Lane Undivided	4 Lane Divided	\$4,149,958			\$ 253,265		\$ 3,278,988	\$ 4,149,958	
	CR 448 (CR 561 -to- ORANGE COUNTY LN)	2 Lane Undivided	4 Lane Divided	\$14,209,080					\$ 11,226,958	\$ 4,149,958 \$ 14,209,080	
	CR 446 (CR 361 - 10- ORANGE COUNTY EN) CR 44A (ESTES RD -to- CR 439)	2 Lane Undivided	4 Lane Divided	\$6.210.667			\$ 867,156 \$ 379.026		\$ 4.907.207	\$ 6.210.667	
	CR 44A (ESTES RD -10- CR 439) CR 44A (LEG) (CR 44 -to- CR 44A)	2 Lane Undivided	4 Lane Divided	\$2,403,727			\$ <u>379,026</u> \$ 146.695		\$ 1.899.246	\$ 2,403,727	
	CR 455B (FOSGATE RD -to- CR 581)	2 Lane Undivided N/A	4 Lane Divided	\$4,242,849			\$ 258,934		\$ 3,352,384	\$ 4,242,849	
>		4 Lane Divided	6 Lane Divided	\$10,641,230			\$ 256,934 \$ 649,416		\$ 8,407,908		
County	CR 466 (CHULA VISTA AVE -to- US 27/US 441)									\$ 10,641,230	
, R	CR 468 (CR 460 -to CR 466A)	2 Lane Undivided	4 Lane Divided	\$5,517,364			\$ <u>336,715</u> \$ <u>154,993</u>			\$ 5,517,364	
	CR 470 (SUMTER CO. LINE -to- CR 470)	2 Lane Undivided	4 Lane Divided	\$2,539,690			÷		\$ 2,006,674		
	CR 473 (SR 500 (US 441) -to- CR 44)	2 Lane Undivided	4 Lane Divided	\$10,394,875			\$ 634,381		\$ 8,213,257	φ 10,001,010	
	CR 48 (SR 25 (US 27) -to- SR 19)	2 Lane Undivided	4 Lane Divided	\$18,319,599				\$ 2,726,801	\$ 14,474,784		
	CR 48 (N. AUSTIN MERRITT -to- CR 33)	2 Lane Undivided	4 Lane Divided	\$11,764,356				\$ 1,751,078	\$ 9,295,319	· · · ·	
1	CR 50 (LAKESHORE DR -to- SR 25 (US 27))	N/A	2 Lane Undivided	\$391,930			\$ 23,919		\$ 309,674	\$ 391,930	
1	CR 561 (CR 561A -to- SR 19)	2 Lane Undivided	4 Lane Divided	\$32,282,181		ł – – – – – – – – – – – – – – – – – – –		\$ 4,805,077	\$ 25,506,978	\$ 32,282,181	
1	CR 561A (CR 561 -to- FOSGATE RD)	2 Lane Undivided	4 Lane Divided	\$8,342,028		ł – – – – – – – – – – – – – – – – – – –		\$ 1,241,678	\$ 6,591,250	\$ 8,342,028	
	EICHELBERGER (SR 19 -to- CR 561)	2 Lane Undivided	4 Lane Divided	\$3,049,288			\$ 186,093		\$ 2,409,321	\$ 3,049,288	
1	FOSGATE RD (TURNPIKE INTERCHANGE RD -to- CR 455 (V	N/A	4 Lane Divided	\$9,472,721			\$ 578,104		\$ 7,484,640	\$ 9,472,721	
1	GRASSY LAKE RD (TURKEY FARMS RD -to- SULLIVAN RD)	2 Lane Undivided	4 Lane Divided	\$1,331,079			\$ 81,233		\$ 1,051,720	\$ 1,331,079	
1	HARTLE RD (SHELL POND RD -to- HARTWOOD MARSH RD	N/A	4 Lane Divided	\$12,118,273				\$ 1,803,758		\$ 12,118,273	
	JOHNS LAKE RD (HANCOCK RD -to- HARTLE RD)	N/A	2 Lane Undivided	\$1,763,681			\$ 107,634		\$ 1,393,530	\$ 1,763,681	
I	KURT ST (SR 500 (US 441) -to- GOLF LINKS)	2 Lane Undivided	2 Lane Divided	\$890,020			\$ 54,316	\$ 132,476	\$ 703,228	\$ 890,020	

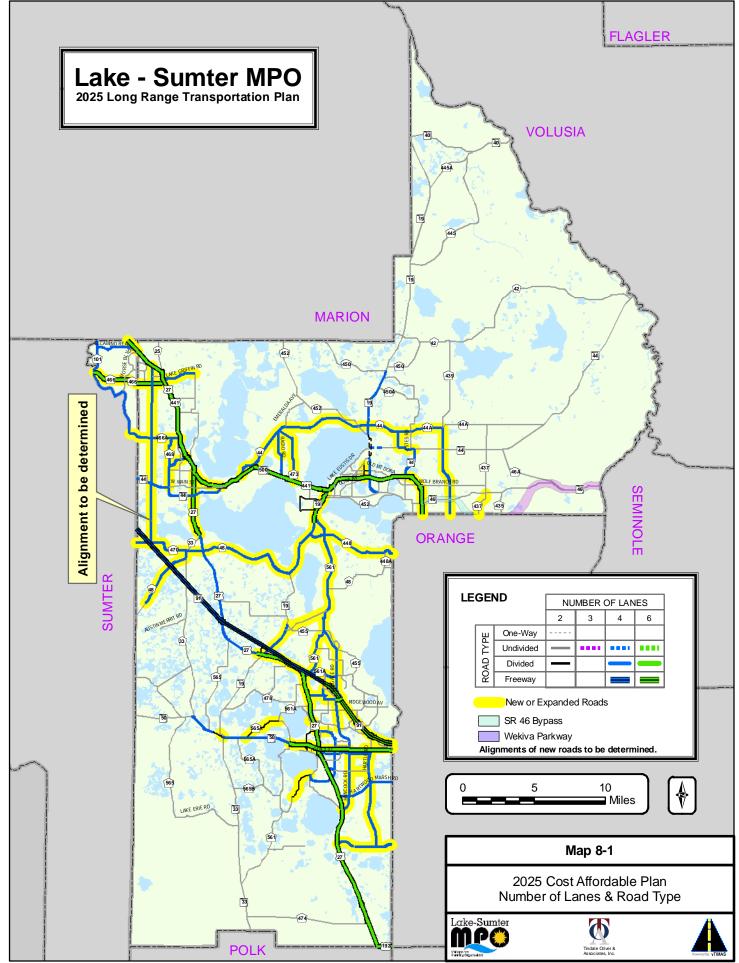
	Project Name	Base Road Type	Future Road	Future Road Total Cost		evenues	County Revenues*				Not
	Project Name	Базе коао Туре	Туре	Type	SIS	State-Other	1st LOGT	LOST	TIF	Total	Funded
	LAKE GRIFFIN RD (LEMMON ST -to- GRAYS AIRPORT RD)	2 Lane Undivided	4 Lane Divided	\$5,736,875			\$ 350,112	\$ 853,911	\$ 4,532,852	\$ 5,736,875	
	LAKESHORE DR (CRESCENT LN -to- LAKE LOUISA RD)	2 Lane Undivided	2 Lane Divided	\$2,118,070			\$ 129,262	\$ 315,266	\$ 1,673,541	\$ 2,118,070	
	LEMON ST (US 27/US 441 -to- LAKE GRIFFIN RD)	2 Lane Undivided	4 Lane Divided	\$422,935			\$ 25,811	\$ 62,952	\$ 334,172	\$ 422,935	
	N. FRONTAGE RD (START -to- CR 50)	N/A	2 Lane Undivided	\$2,611,135			\$ 159,353	\$ 388,657	\$ 2,063,125	\$ 2,611,135	
	RADIO RD (TREADWAY SCHOOL RD -to- CR 44)	2 Lane Undivided	4 Lane Divided	\$4,710,931			\$ 287,500	\$ 701,204	\$ 3,722,227	\$ 4,710,931	
	RANCH RD (WOLF BRANCH RD -to- SR 44)	N/A	4 Lane Divided	\$7,024,364			\$ 428,685	\$ 1,045,549	\$ 5,550,130	\$ 7,024,364	
	NORTH-SOUTH CORRIDOR (SR 91 -to- US 27/US 441)	2 Lane Undivided	4 Lane Divided	\$39,922,508			\$ 2,436,402	\$ 5,942,309	\$ 31,543,796	\$ 39,922,508	
	ROUND LAKE RD (ORANGE CO. LINE -to- WOLF BRANCH R	2 Lane Undivided	4 Lane Divided	\$5,549,539			\$ 338,679	\$ 826,027	\$ 4,384,833	\$ 5,549,539	
	SULLIVAN RD (GRASSY LAKE RD -to- TURKEY FARMS RD)	N/A	2 Lane Undivided	\$1,483,907			\$ 90,560	\$ 220,874	\$ 1,172,473	\$ 1,483,907	
	TURNPIKE INTERCHANGE RD (TURKEY FARM RD -to- FOS	N/A	6 Lane Divided	\$3,512,020			\$ 83,112	\$ 202,706	\$ 1,076,035	\$ 1,361,853	2,150,167 **
	Sta	te SIS (State Intra-State	e Highway System)	\$181,639,023	\$181,639,023					\$181,639,023	
als			Other State Roads	\$137,522,458		\$ 55,297,000	\$ 5,018,079	\$ 12,238,938	\$ 64,968,441	\$137,522,458	
ē			County Roads	\$371,780,709			\$ 22,557,921	\$ 55,018,061	\$ 292,054,559	\$369,630,542	\$2,150,167
			Total	\$690,942,190	\$181,639,023	\$ 55,297,000	\$ 27,576,000	\$67,257,000	\$357,023,000	\$688,792,023	\$2,150,167

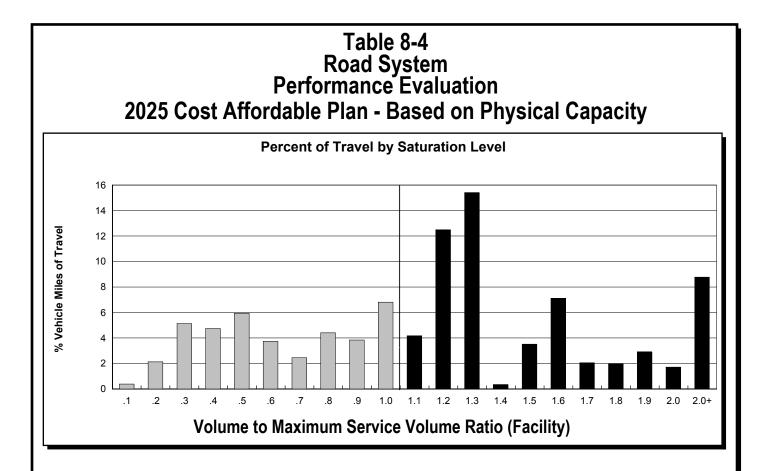
Notes:

#### \* County funding can be used interchangedly among projects

\*\* Developer contribution

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# Percent of VMT with V/MSV Ratio Greater than 1.0: 60.43%

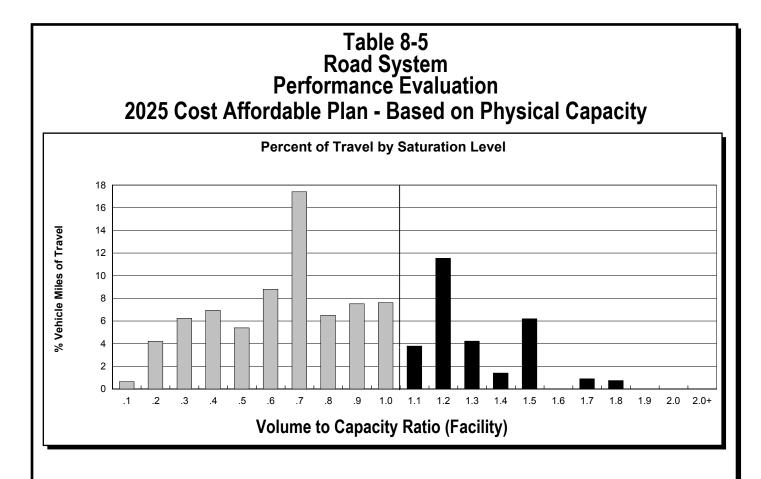
Based on: Maximum Service Volume

Roadway Type	V/MSV Ratio	VMT	% VMT Below STD.	VMC
All Roads	1.2588	663,916	60.43	1,613,543
All State Roads	1.5873	440,399	83.11	524,469
Intrastate Roads (Interstate Only)	1.1679	64,771	100.00	98,791
Intrastate Roads (Non-Interstate Only)	1.4190	89,697	84.94	124,824
Other State Roads	1.7351	285,931	78.71	300,854
County Roads	0.6116	223,517	15.73	1,089,073
All Other Roads	0.0000	0	0.00	0

#### **Definition of Terms:**

V/MSV Ratio: Volume to Maximum Service Volume Ratio VMT: Vehicle Miles of Travel % VMT Below STD: The percentage of Vehicle Miles of Travel where Volume to Maximum Service Volume (V/MSV) => 1 VMC: Vehicle Miles of Capacity

Network: Lake-Sumter MPO Base: 2010ec Analysis: 2025ca



# Percent of VMT with V/C Ratio Greater than 1.0: 28.76%

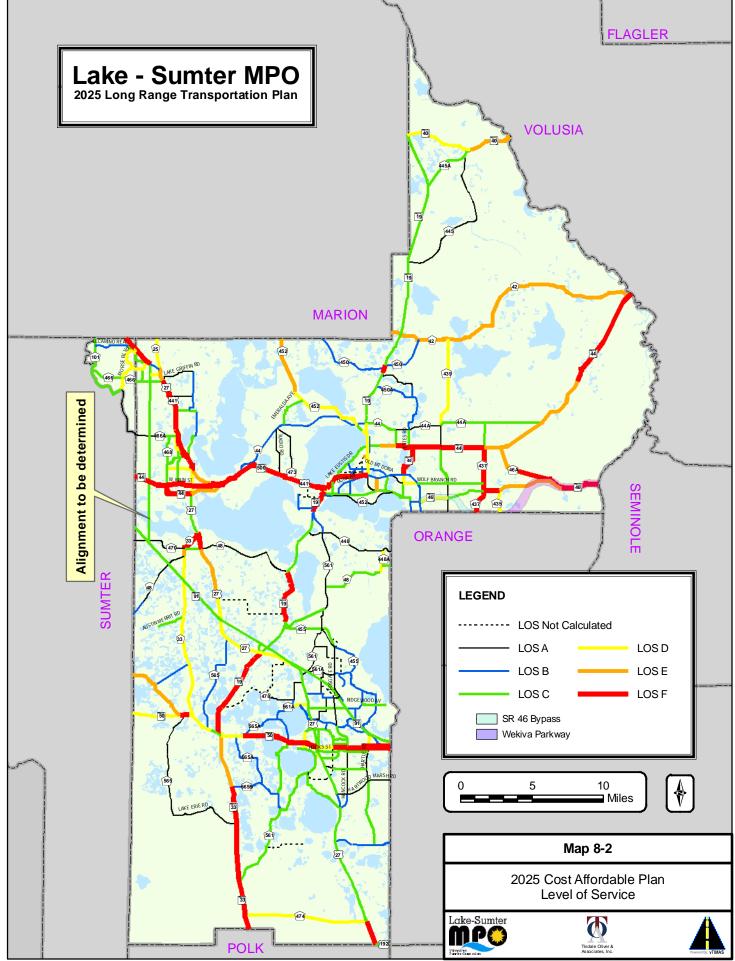
Based on: Physical Capacity

Roadway Type	VC Ratio	VMT	% VMT With V/C>1	VMC
All Roads	0.7755	663,916	28.76	1,613,543
All State Roads	0.9250	440,399	39.42	524,469
Intrastate Roads (Interstate Only)	0.6586	64,771	0.00	98,791
Intrastate Roads (Non-Interstate Only)	0.7634	89,697	6.74	124,824
Other State Roads	1.0361	285,931	58.61	300,854
County Roads	0.4807	223,517	7.76	1,089,073
All Other Roads	0.0000	0	0.00	0

#### **Definition of Terms:**

VC Ratio: Volume to Capacity Ratio VMT: Vehicle Miles of Travel % VMT With V/C>1: The percentage of Vehicle Miles of Travel where Volume to Capacity Ratio (VC Ratio) > 1 VMC: Vehicle Miles of Capacity

Network: Lake-Sumter MPO Base: 2010ec Analysis: 2025ca



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#### 2025 Cost Affordable Plan Goods Movement

Goods movement in the Lake-Sumter MPO area is primarily served by the State Road System. These roads are forecasted to function worse than the overall road system. Based on Table 8-5, 83 percent of the vehicle miles of travel on these roads are forecasted to operate below standard, and 28 percent of the vehicle miles of travel are forecasted to operate with a volume to physical capacity ratio greater than 1.0.

#### 2025 Cost Affordable Plan Multi-Modal System

The multi-modal system for the county includes three components: Transit, Pedestrian facilities, and Bicycle facilities.

SAFETEA-LU placed an increased emphasis on multimodal capacity and regionalism. The Lake~Sumter MPO 2025 LRTP is a multimodal plan that includes bicycle/pedestrian and transit projects, including multi-use trails and fixed route bus service. In addition, the MPO has a strong desire to expand its multimodal nature and will consider such ideas as bringing commuter rail from Orlando to Tavares, working with the Leesburg International Airport to commence commercial passenger flights, and bringing water taxi to Mount Dora, Tavares, Eustis and Leesburg through the Chain of Lakes. As for regionalism, the LRTP development was based on the Central Florida Regional travel demand model. Further, the MPO promotes regionalism through participation with the Central Florida MPO Alliance, where regional roadway corridors are prioritized for future State funding.

### Transit Improvements

No operating fixed-route transit service in Lake County is provided in Lake County as of 2005. Based on the Transit Development Plan, Lake County plans to provide fixed route transit service on five routes. Also, the Central Florida Regional Transit Authority, or LYNX, will extend two routes into Lake County as a cooperative regional effort. These transit routes are illustrated on Map 8-3. This 2025 Cost Feasible Plan fully funds the implementation and continued operation of these transit routes. Table 8-6 summarizes the costs of transit operations and maintenance for the years 2011 to 2025.



#### Pedestrian Improvements

The sidewalk plan was developed by developing an inventory of the existing sidewalks in 2000 and comparing them to the roadways in the urbanized area. It is expected that any roadway projects constructed as Existing + Committed improvements or in the Cost Affordable Roadway Plan in the urbanized area will include the construction of sidewalks. The additional sidewalk facilities are illustrated in Map 8-4. Table 8-7 includes the cost of the pedestrian facility improvements in the Cost Affordable Plan. The Cost Affordable Plan includes 100,000 per year of boxed funds to be used for the construction of bicycle, pedestrian, and multi-use trail improvements.

#### Bicycle Facility Improvements

The bicycle facilities plan was developed by developing an inventory of the existing bicycle facilities in 2000, and with the assumption that bicycle facilities, whether it be on-street bike lanes or a paved shoulder, will be constructed with any the Existing + Committed roadway improvement and with improvements in the Cost Affordable Roadway Plan. The bicycle facilities are illustrated on Map 8-5. The cost of the bicycle facility improvements are included in Table 8-7. The Cost Affordable Plan includes 100,000 per year of boxed funds to be used for the construction of bicycle, pedestrian, and multi-use trail improvements.

SAFETEA-LU requires the inclusion of proposed transportation and transit enhancement activities in the LRTP. The Lake~Sumter MPO 2025 LRTP includes transit and bicycle/pedestrian enhancement projects. The MPO is currently seeking Surface Enhancement (SE) funds for several trail projects, including for the South Lake Trail, Tav-Lee Trail, Fruitland Park Trail and Lady Lake Trail. The MPO will be updating its Transit Development Plan (TDP) to include a 10-year planning horizon by September 2008.

Lake County also has an extensive Rails-to-Trails program and has funded the construction of the proposed Rails-to-Trails path illustrated on both Maps 8-4 and 8-7, and supporting, where possible, constructing the Candidate Rails-to-Trails projects illustrated on Maps 8-4 and 8-5. The costs of the multi-use trails are included in Table 8-7. The Cost Affordable Plan includes 100,000 per year of boxed funds to be used for the construction of bicycle, pedestrian, and multi-use trail improvements.



Category	Cost (X1,000)
Operating Costs	\$55,727
Maintenance Costs	\$4,649
TOTAL	\$60,376

Table 8-6: Transit Operating and Maintenance Costs, 2011 to 2025

#### Table 8-7: Pedestrian, Bicycle, and Multi-Use Trail Costs, 2011 to 2025

Category	Cost (X1,000)
Pedestrian	\$0
Bicycle Facilities	\$0
Multi-Use Trails *,**	\$11,466
Boxed Funds ***	\$10,604
TOTAL	\$22,070

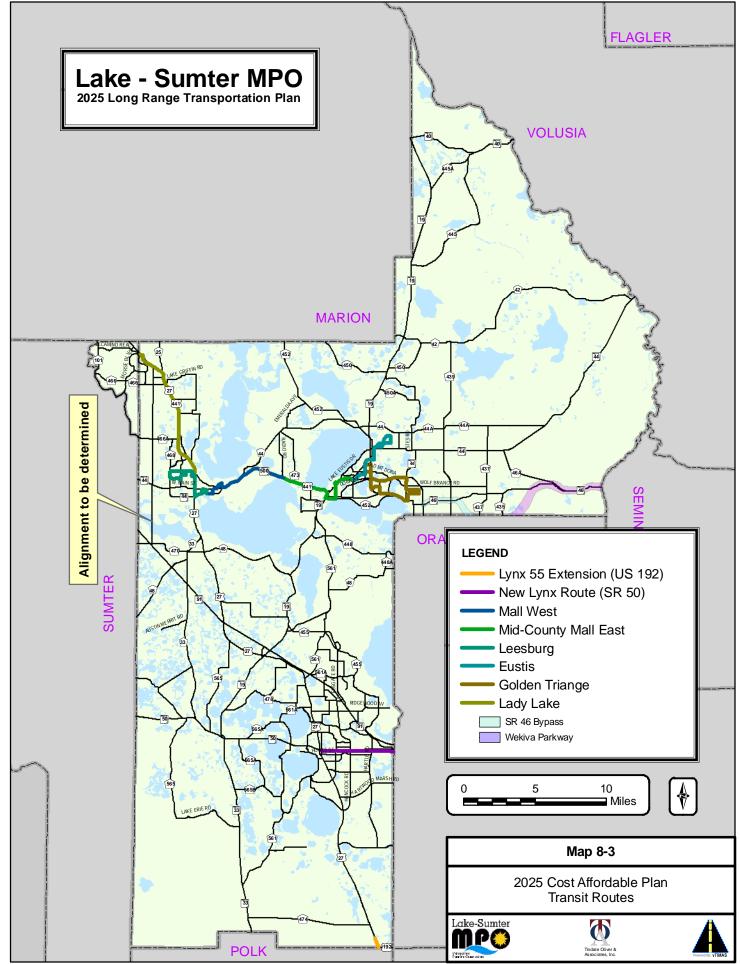
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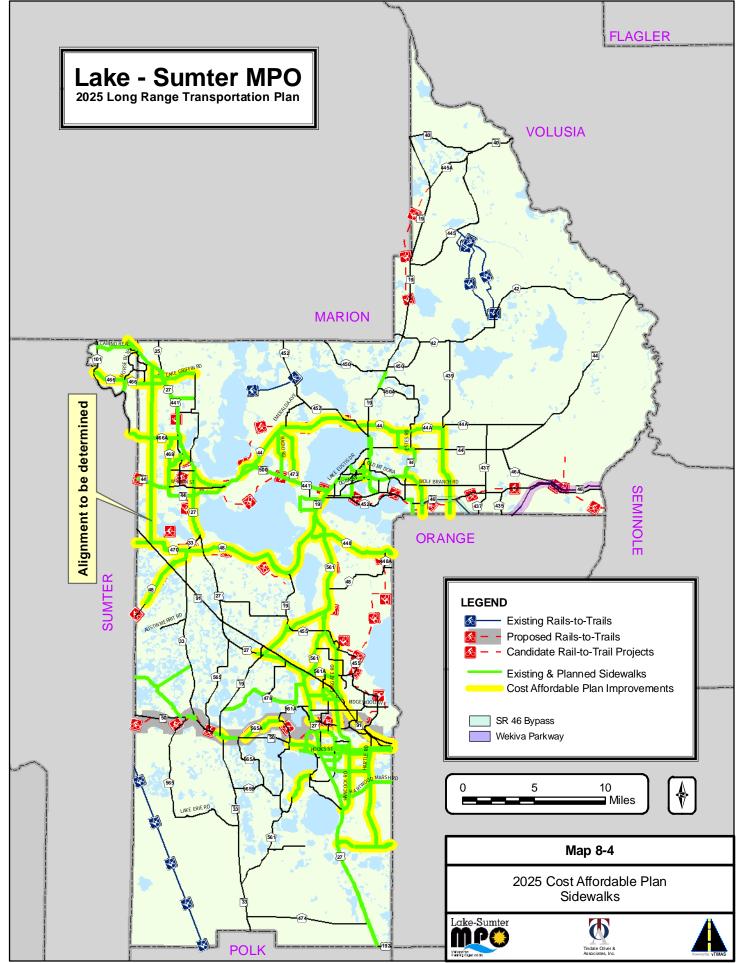
Roadway improvement projects in urbanized areas include sidewalks and bicycle facilities in the roadway improvement costs. Roadway improvement projects in rural areas include bicycle facilities in the roadway improvement costs

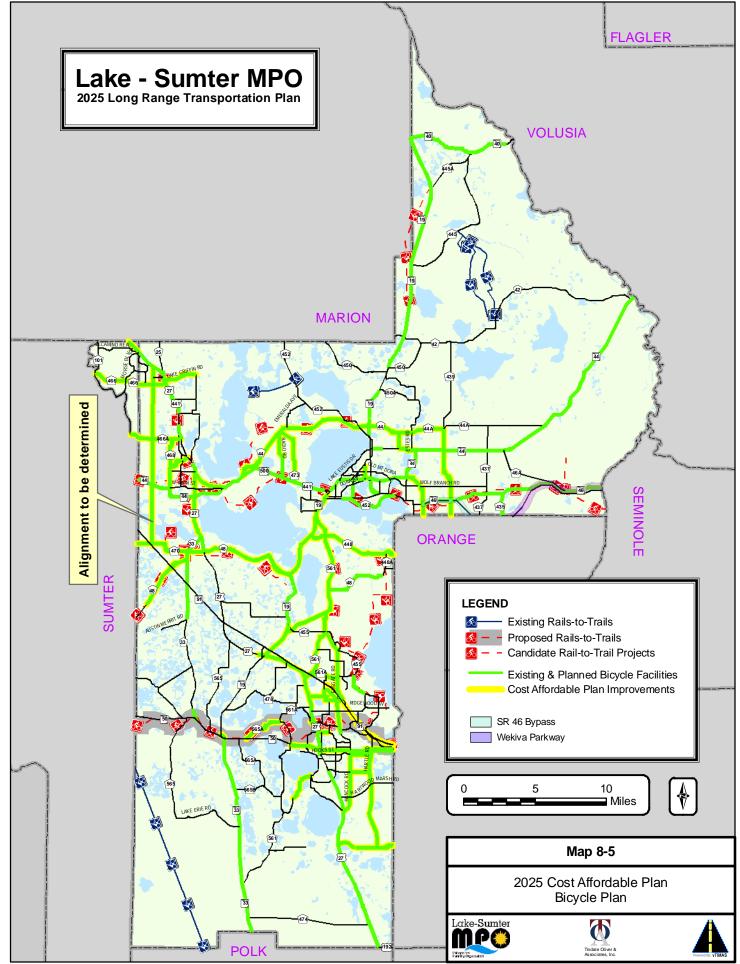
\* Costs to include multi-use trails along SR 46 and Wekiva Parkway are expected to be included in the construction costs for those projects

\*\* Includes Proposed Rails-to-Trails Projects

\*\*\* These can be allocated to sidewalks, bicycle facilities, and multi-use trails as prioritized by the MPO at a later date







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#### Goals Attainment for the 2025 Cost Affordable Plan

As summarized in Table 8-8, many parts of the Long Range Transportation Plan and the Cost Affordable Plan were designed to specifically meet the goals of the Long Range Transportation Plan. More information on the Goals and Objectives for the Long Range Transportation Plan are included in Chapter 3 of this document.

#### Table 8-8: Cost Affordable Goals Attainment

GOAL 1: Provide a multi-modal transportation system that serves the local and regional movement of and connections among people, jobs, goods, and services.

In the Cost Affordable Plan, transit needs are fully funded, including 5 Lake County routes and 2 LYNX Routes

With every road project, sidewalks and bicycle facilities are constructed as part of the project as appropriate

Funding is set aside in addition to the base funding to support bicycle and pedestrian projects, including Rails-to-Trails projects

GOAL 2: Provide a transportation system that is safe for residents, visitors and businesses

Lake County has developed a Crash Data Management System to identify high crash locations

GOAL 3: Preservation of Lake and Sumter Counties' investment in transportation in a cost-feasible manner.

Lake County is currently in the early stages of developing a corridor preservation plan to identify corridor needs in the future.

There is provision in the cost and revenue projections for maintenance of roadways

GOAL 4: A transportation system that is coordinated and consistent with current and future agency plans of Lake and Sumter Counties, its communities and neighbors.

The Lake-Sumter MPO Board and Committees include representatives from the local governments, their planning departments, and their citizens

Lake-Sumter MPO was involved in district-wide coordination meetings that included representatives from Florida DOT District 5 and all area Metropolitan Planning Organizations and Transportation Planning Organizations

GOAL 5: An aesthetically pleasing transportation system which minimizes impact on the social resources, communities, and the natural and built environment.

The Cost Affordable Plan includes the Efficient Transportation Decision Making process, which is designed to identify environmental, social, and archaeological impacts from projects identified in the plan

The Long Range Transportation Plan Process included two Consensus Building Workshops and three discussion group workshops

Two discussion group workshops were used to identify impacts to minorities, Hispanic populations, and low-income populations.



#### Intelligent Transportation Systems

Intelligent Transportation Systems, or ITS, represents the application of advanced data monitoring and communications to enhance the functionality and capacity of the transportation infrastructure. While specific ITS applications are beyond the scope of this Long Range Transportation Plan, FDOT has specifically planned for some ITS applications in their ITS 10 Year Plan, and the MPO will address ITS through the implementation of its Congestion Management System process.

SAFETEA-LU has changed the terminology from "Congestion Management <u>System</u> (CMS)" to "Congestion Management <u>Process</u> (CMP)," placing more emphasis on operations, and requiring a metropolitan-wide strategy to address congestion. In anticipation of Transportation Management Area (TMA) designation after the 2010 Census, the Lake~Sumter MPO intends to soon develop a CMP for Lake and Sumter Counties. Early steps will include the development of a congestion database for each County including all major roadway segments, their current traffic counts, any reserved trips, facility types, and service volumes. These traffic databases will be used to assist MPO staff, Committees and the Board in the project prioritization process, as well as with an effort to create a countywide transportation concurrency management system/data clearinghouse for Lake County. The MPO will be open to working with Sumter County on a similar system, as well.

Currently, one major ITS application in the MPO area is electronic toll collection used on the Florida Turnpike. Based on the FDOT ITS 10 Year Plan, the Turnpike will also add additional video surveillance and vehicle detection systems throughout the Turnpike including portions in Lake and Sumter Counties.

It is expected that the Wekiva Parkway and portions of the SR 46 Bypass will support the SunPass automated toll collection system on the tolled portions of these roadways. Additional ITS projects may be funded using operational funding resources.

SAFETEA-LU increased the emphasis on operational and management strategies. Still being a new agency, in new urbanized areas, the Lake~Sumter MPO will work with its member governments to commence development of such strategies, placing an increased emphasis on Intelligent Transportation System (ITS). The MPO will work with FDOT and Lake and Sumter Counties to enhance intersection operations, with the use of signal optimization, coordination and synchronization. As these efforts progress, the MPO will initiate a Management and Operations Subcommittee to the Technical Advisory Committee (TAC) to more monitor these types of needs and to develop funding strategies. Upon designation as a TMA, additional funding sources, such as XU funds, will be made available to the MPO for such projects.



### **Travel Demand Management**

Travel Demand Management (TDM) can provide additional mobility alternatives and reduce traffic congestion and pollution through strategies designed to shape the use of roadways. The primary strategies of TDM feasible for the Lake-Sumter MPO area include:

- Increasing Vehicle Occupancy
- Alternative Work Hours
- Telecommuting

This section includes a description of the major components of each TDM strategy and how it applies to Lake and Sumter Counties.

#### Increasing Vehicle Occupancy

There are several strategies that can be employed to increase vehicle capacity. These strategies include:

- Carpooling
- Vanpooling
- Employer Transportation Coordinators
- High Occupancy Vehicle (HOV) Lanes
- CBD Parking Management

Carpooling and Vanpooling are defined as two or more occupants in a vehicle. This can be a group of friends or neighbors carpooling to save gas or share parking costs, a group of employees through the assistance of Employer Transportation Coordinators, or through a metropolitan area Rideshare service. The Central Florida Regional Transportation Authority, or Lynx, currently operates an organized carpool/vanpool program where they provide a vehicle for a monthly fee that covers maintenance and insurance for a van that can be used daily for vanpooling to work. Joining or creating a Vanpool through this site can be undertaken by neighbors, friends, or Employer Transportation Coordinators.

While Employer Transportation Coordinators would organize Carpools and Vanpools, they can also utilize the Lynx Bus Pass Consignment Service. This makes it easy for employers to provide incentives to use transit as their mode of travel to and from work. This option is available for establishments along the Lynx routes. A similar service can be used in Lake County.



High Occupancy Vehicle lanes are lanes that are striped or separated from the roadway for use by vehicles that have 2, 3, or more occupants. This promotes carpooling by allowing carpoolers to use a special lane(s) that normally operate at a better level of service than the surrounding lanes. More developed HOV implementations can include separate entrance and exit ramps for HOV lanes. These implementations will normally maintain a barrier-separated HOV lane system, which can provide incentives to carpoolers in the case of a traffic incident on the normal traffic lanes. Limited success has been observed with implementation of HOV lanes in the region, primarily on I-4 to the south and west of Lake County.

To work in tandem with HOV lanes and Carpooling/Vanpooling, parking can be managed in a CBD area at a high cost to encourage Carpooling and Vanpooling. However, this strategy only works in large central cities, which makes its application in Lake and Sumter Counties potentially less effective.

#### Alternative Work Hours

Alternative work hours include programs where employers allow employees to begin and end work at alternative times. This provides benefits to employers because they can alleviate localized traffic problems for large offices, and they can also coordinate work efforts among different offices in different time zones easier. This option is best utilized when traffic in an area has a short duration of congestion. Employees can benefit from this because they spend less time in traffic, and the flexibility can reduce personal schedule conflicts.

Alternative work hours can include:

- Flex Time Flex time is where employees would be allowed to flex their arrival and departure times to their workplace. Many companies that provide this benefit require employees to be in the office between certain hours, from 8:30 AM to 3:00 PM, for example, and require them to be in the office for a certain time period, such as 8 hours.
- Compressed Work Week A Compressed Work Week is where employees would work a normal work week in fewer days, such as working four 10 hour days instead of five 8 hour days.
- Staggered Hours Staggered hours is where arrival and departure times for groups in a company are staggered so that everyone is not entering and leaving at the same time. This technique is most effective for very large companies or companies in very congested locations.

Alternative work hours is not a TDM technique that is easy for a government to implement without the cooperation of major employers. Governments can maintain alternative work hour programs, however, and can provide information to companies that request it.



#### **Telecommuting**

Telecommuting is a technique that allows employees to work from home during hours that otherwise may require a commute trip. This can be most effective when an employment activity does not need to be performed at a fixed location. This technique requires coordination between the employer and employee, since employees need to have the necessary equipment to work at home, such as a computer, telephone, sometimes a fax machine or a printer, and software. The employer needs to have network systems in place to for employees to be able to work off-site, such as Virtual Private Networking, or VPN, which allows employees to connect to their office network through the Internet, and remote access to email. The employer may also need to maintain policies that reduce or eliminate the possibility of sensitive information being compromised.

#### **Efficient Transportation Decision Making**

The Efficient Transportation Decision Making (ETDM) Process creates an association between transportation and environmental resource planning initiatives through full and early participation between multiple agencies. This early participation that involves interactive agency involvement is expected to improve the decision making process as well as provide a forum for dispute resolution. As a result, ETDM will allow an opportunity to greatly reduce the time, effort and cost to effect transportation decisions. Efficiency is gained by two screening events, the planning and programming screens, which are built into the current transportation planning process. An Environmental Technical Advisory Team (ETAT), which consists of planning, regulatory and resource protection agencies, has been established with an appointed representative from each agency with the responsibility to coordinate transportation reviews within their respective agency.

As a part of the planning phase of the ETDM process the Environmental Screening Tool (EST) was used to generate analyses on environmental and socio-cultural issues. The EST was used to evaluate the potential project effects of candidate projects. The EST is an important application to the ETDM process because it allows agency participation and community involvement throughout the ETDM process. This application provides tools to:

- Input and update information about transportation projects
- Perform standardized analyses
- Gather and report comments about potential project effects
- Provide information to the public

This application brings together information about a project and provides analytical and visualization tools that help combine and communicate that information.



The evaluation of the potential projects using the EST was one criterion in the project prioritization process contributing to the identification of cost feasible projects throughout the Metropolitan Planning Organization (MPO) area. The following methodology describes how each of the eleven resources was measured in terms of defining potential environmental effects of candidate projects. Each candidate project in the Needs Assessment was evaluated for potential impacts to each of the eleven resource issues.

The list of natural and/or sociocultural resources that were evaluated is listed in Table 8-9 along with a description of the resource.

SAFETEA-LU requires a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. The ETDM Process is used to identify these potential environmental and socio-cultural mitigations through the use of the EST. ETDM allows early identification of these environmental issues and assists with the permitting process. Several projects from the Lake~Sumter MPO 2025 Long Range Transportation Plan have undergone an ETDM Planning Screen, including US 441, SR 19, SR 40, SR 44 (formerly CR 44B) and SR 50. In coordination with the Florida Department of Transportation, District 5, the MPO will continue to send new projects from the 2025 LRTP through the planning screen.



### Table 8-9: ETDM Resource Effect Evaluation

Resource	Basis for potential effect	Types	Determination of Effect
Contaminated Sites	Total Number of Sites Identified	Petroleum Tanks	Total Number of Sites
Containinated Sites	Within 500 Feet of the Project	Solid Waste Facilities	Within the Buffer Area
	Corridor	Superfund Hazardous Waste Sites	
		Toxic Release Inventory Sites	
		Gasoline Stations	
		Hazardous Waste Sites	
		National Priority List Sites	
Farmlands	Acreage of Farm Land Within 500	Prime Farm Land	Total Acreage
r armanus	Feet of the Project Corridor		
Floodplains	Total Acreage of Floodplains	FEMA Flood Insurance Rate Maps 1996	Total Acreage
i loouplains	Identified Within 500 Feet of the	<ul> <li>Special Flood Hazard Areas</li> </ul>	
	Project Corridor		
Historic and Archaeological	Total Number of Sites Within 500	Florida Site File Historic and Archaeological	Total Number of Sites
······	Feet of the Project Corridor	Sites	
		Florida Site File Cemeteries	
		Florida Site File Historic Standing Structures	
		<ul> <li>National Register of Historic Places</li> </ul>	
Infrastructure	Total Number of Sites Within 500	Sewage Treatment Facilities	Total Number of Sites
	Feet of the Project Corridor	Water Treatment Facilities	
		Federal Aviation Administration Obstructions	
Recreation Areas	Total Acreage of the Recreation	Florida State Parks	Total Acreage
	Areas Within 500 Feet of the Project	Short Trails and Overlooks	
	Corridor	Greenway Ecological Priority Linkages	

Source: Florida ETDM



Each project was characterized as having potentially high, moderate or low effects to the natural and/or socio-cultural environment during the project development phase. Minimal potential impacts suggest that there is a high probability for avoiding or minimizing impacts to environmental resources. Moderate potential impacts indicate that there is a high probability for minimizing potential impacts to environmental resources. Substantial potential impacts suggest that environmental mitigation measures may be needed. A comprehensive approach was utilized to ensure that no potential resources were overlooked.

Table 8-10 lists the categorization of potential effects for each identified environmental resource followed by a description of how each issue was considered in the environmental evaluation.

The series of long range transportation plans that included this Lake-Sumter MPO Long Range Transportation Plan were the first to integrate the ETDM component into the planning process. The timing and content of the ETDM has continued to evolve during the development of this transportation plan. Results from the initial screening of projects from the Long Range Transportation Plan were not available at the time when the adopted plan was documented. Future submittals and results of the ETDM screening process will be included in the ongoing planning activities of the MPO and future amendments to the transportation plan as appropriate.



Resource	Resources Measured	Potential Effects
	Less than 5 sites	Minimal
Contaminated Sites	Between 5 and 10 sites	Moderate
	Greater than 10 sites	Substantial
	Less than 5 acres	Minimal
Farmlands	Between 5 and 10 acres	Moderate
	Greater than 10 acres	Substantial
	Less than 5 acres	Minimal
Floodplains	Between 5 and 10 acres	Moderate
	Greater than 10 acres	Substantial
	Less than 5 sites	Minimal
Historic and Archaeological	Between 5 and 10 sites	Moderate
	Greater than 10 sites	Substantial
	Less than 5 sites	Minimal
Infrastructure	Between 5 and 10 sites	Moderate
	Greater than 10 sites	Substantial
	Less than 5 acres	Minimal
Recreation Areas	Between 5 and 10 acres	Moderate
	Greater than 10 acres	Substantial
Section 4(f)	No Sites	Minimal
	Sites Present	Substantial
	Less than 5 acres	Minimal
Special Designations	Between 5 and 10 acres	Moderate
	Greater than 10 acres	Substantial
	Total Maximum Daily Loads Absent	Minimal
Water Quality and Quantity	Total Maximum Daily Loads Present	Substantial
	Less than 5 acres	Minimal
Wetlands	Between 5 and 10 acres	Moderate
	Greater than 10 acres	Substantial
		Minimal
Wildlife and Habitat	Determined on an individual project basis	Moderate
	0000	Substantial

#### Table 8-10: Resources, Measures, and Potential Effects

Source: Florida ETDM



### 2015 Interim Year Plan

The 2015 Interim Year Plan is a subcomponent of the overall 2025 Cost Affordable Plan and was developed in a similar fashion to the 2025 Plan, where the 2025 Cost Affordable Plan was prioritized based on the MPO Priority Projects and comments received from the public. This plan used the revenues that were approved by the MPO Board and adjusted to the year 2015. The number of lanes and road type for the Interim Year Plan are illustrated in Map 8-6. The improvements from 2011 to 2015 are also summarized in Table 8-11. This plan was not input into a travel demand model, and therefore performance information is not available.

	Project Name	Base Road Type	Future Road Type	Total Cost
SIS	SR 91 (SULLIVAN RD -to- ORANGE CO. LINE)	4 Lane Freeway	6 Lane Freeway	\$50,345,139
State	SR 44 (CR 44 -to- CR 44B)	2 Lane Undivided	4 Lane Divided	\$4,300,051
	SR 50 (SR 25 (US 27) -to- HANCOCK RD)	4 Lane Divided	6 Lane Divided	\$8,900,295
	SR 500 (US 441) (CR 44A -to- SR 44)	4 Lane Divided	6 Lane Divided	\$9,070,034
County	CITRUS TOWER BLVD (SR 25 (US 27) -to- MOHAWK RD)	2 Lane Divided	4 Lane Divided	\$1,380,047
	CR 33 (CR 48 -to- CR 470)	2 Lane Undivided	4 Lane Divided	\$1,405,806
	CR 44 (SR 500 (US 441) -to- SHADY ACRES RD	2 Lane Undivided	4 Lane Divided	\$27,178,415
	CR 44 (CR 452 -to- SR 44)	2 Lane Undivided	4 Lane Divided	\$10,770,068
	CR 460 (CR 468 -to- US 27/US 441)	2 Lane Undivided	4 Lane Divided	\$3,819,912
	CR 466A (SUMTER CO. LINE -to- US 27/US 441)	2 Lane Undivided	4 Lane Divided	\$34,572,474
	CR 468 (SR 44 -to- CR 460)	2 Lane Undivided	4 Lane Divided	\$3,799,155
	CR 470 (SR 91 -to- SR 25 (US 27))	2 Lane Undivided	4 Lane Divided	\$10,442,618
	CR 561 (SR 25 (US 27) -to- CR 561A)	2 Lane Undivided	4 Lane Divided	\$1,307,727
	CRITTEDEN RD (SR 50 -to- SR 33)	N/A	2 Lane Undivided	\$525,776
	HANCOCK RD (LAKE LOUISA RD -to- SR 50)	2 Lane Undivided	4 Lane Divided	\$10,183,666
	HARTLE RD (HARTWOOD MARSH RD -to- SR 50)	2 Lane Undivided	4 Lane Divided	\$6,328,465
	HOOKS ST (HANCOCK RD -to- HARTLE RD)	N/A	4 Lane Divided	\$3,985,454
	LAKE LOUISA RD (HANCOCK RD -to- SR 25 (US 27))	2 Lane Undivided	4 Lane Divided	\$1,820,958
	N. GRASSY LAKE RD (SR 25 (US 27) -to- TURKEY FARMS RD)	N/A	4 Lane Divided	\$2,928,894
	SHELL POND RD (SR 25 (US 27) -to- ORANGE CO. LINE)	N/A	4 Lane Divided	\$10,733,743
	TURKEY FARMS RD (CR 50 -to- SULLIVAN RD)	N/A	4 Lane Divided	\$7,470,651
Totals	State SIS (State Intra-State Highway System)			\$50,345,139
	Other State Roads			\$22,270,380
	County Roads			\$138,653,829
			Total	\$211,269,348

#### Table 8-11: 2015 Interim Year Plan Projects



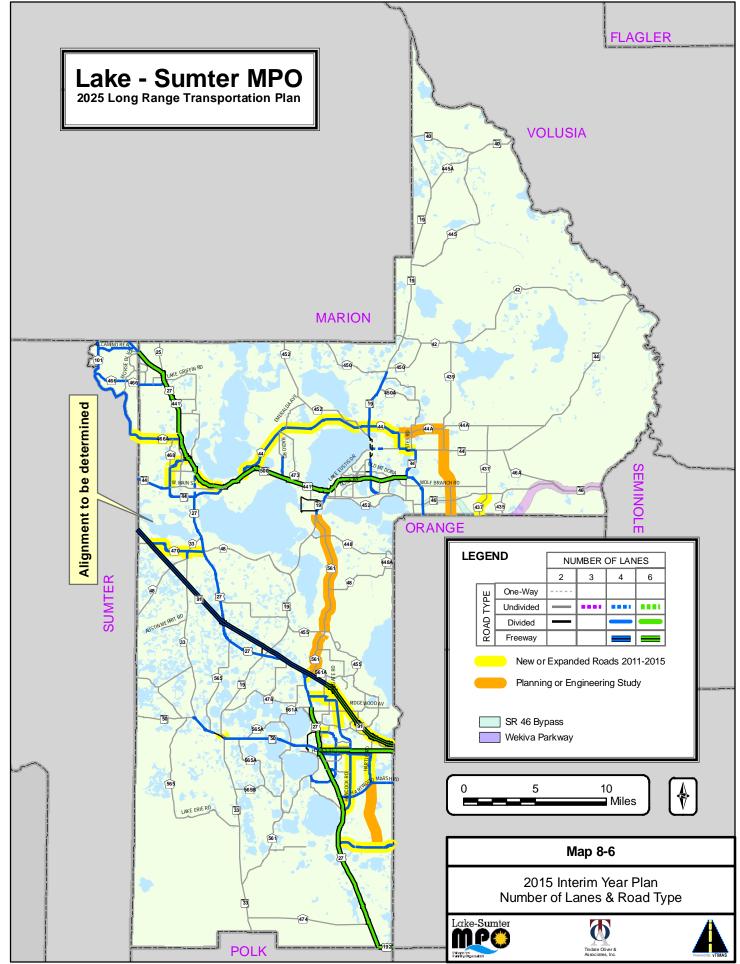
# **Cost Affordable Alternatives**

As part of the Cost Affordable Plan Development Process, 4 alternative scenarios were evaluated for the year 2025. These alternatives are summarized in this section, and detailed information can be found in the Technical Appendix Section 8.

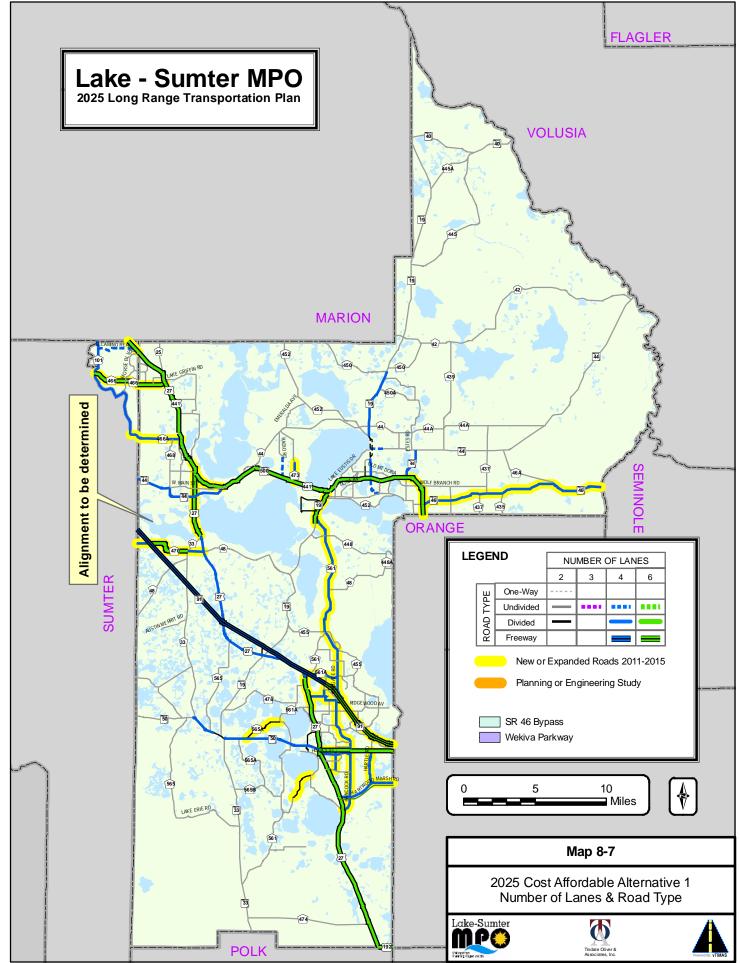
The first alternative, the Initial Cost Affordable Alternative, consisted of a base-revenues situation where no additional revenues were pursued. The number of lanes and road type for this alternative is illustrated in Map 8-7. The forecasted level of service for this alternative is illustrated in Map 8-8.

An additional alternative, alternative 2, was created based on public input on the first alternative and to provide an initial cost affordable that uses all available enhanced revenues. The number of lanes and road type for this alternative is presented in Map 8-9. This alternative was not input into a travel demand model, so performance information is not available.

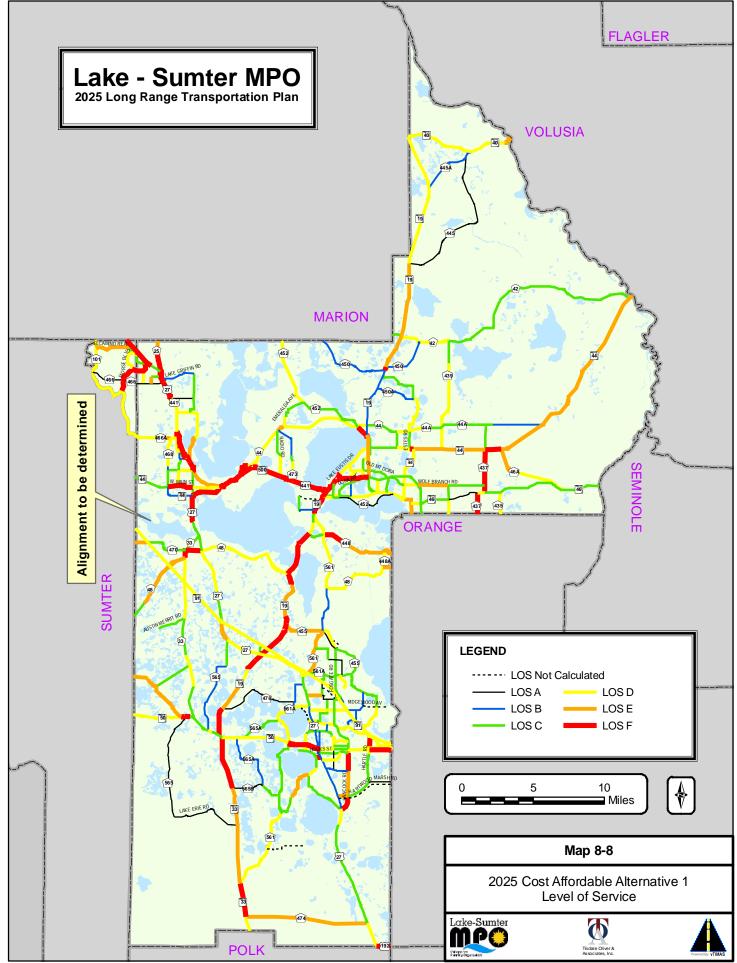
The final three alternatives, Alternatives 3A, 3B, and 3C included additional revenue options. These alternatives were not input into the travel demand model, so performance information is not available. Map 8-10 presents the number of lanes and road type for all three alternatives. All of the alternatives build on the prior alternative; in the order of A being the lowest cost and revenue alternative to C being the highest cost with the most enhanced revenue options.



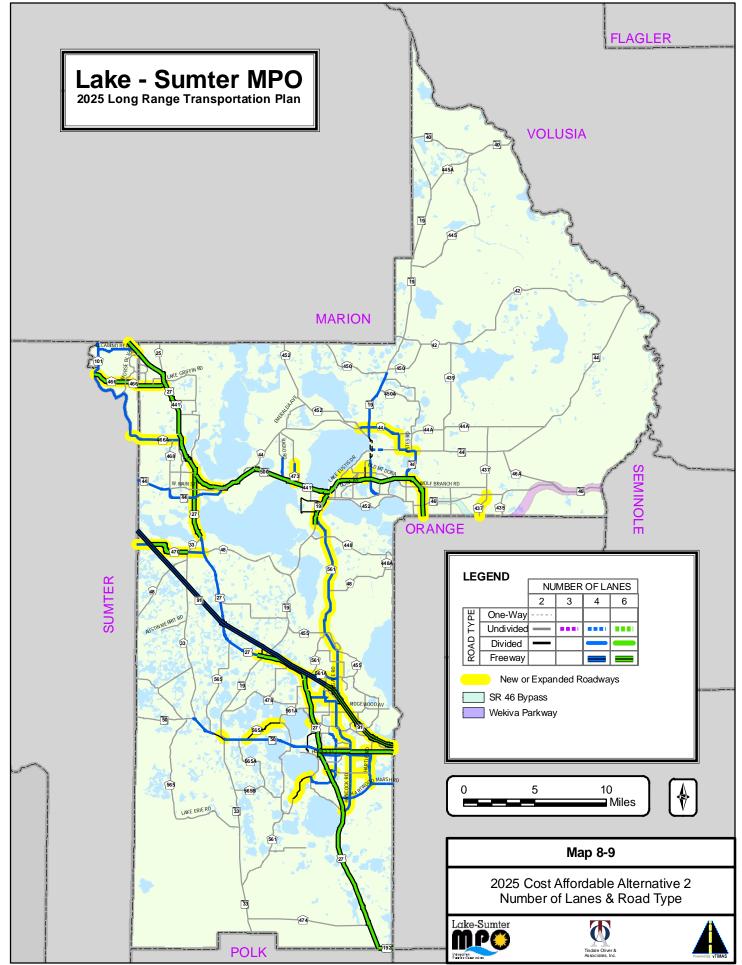
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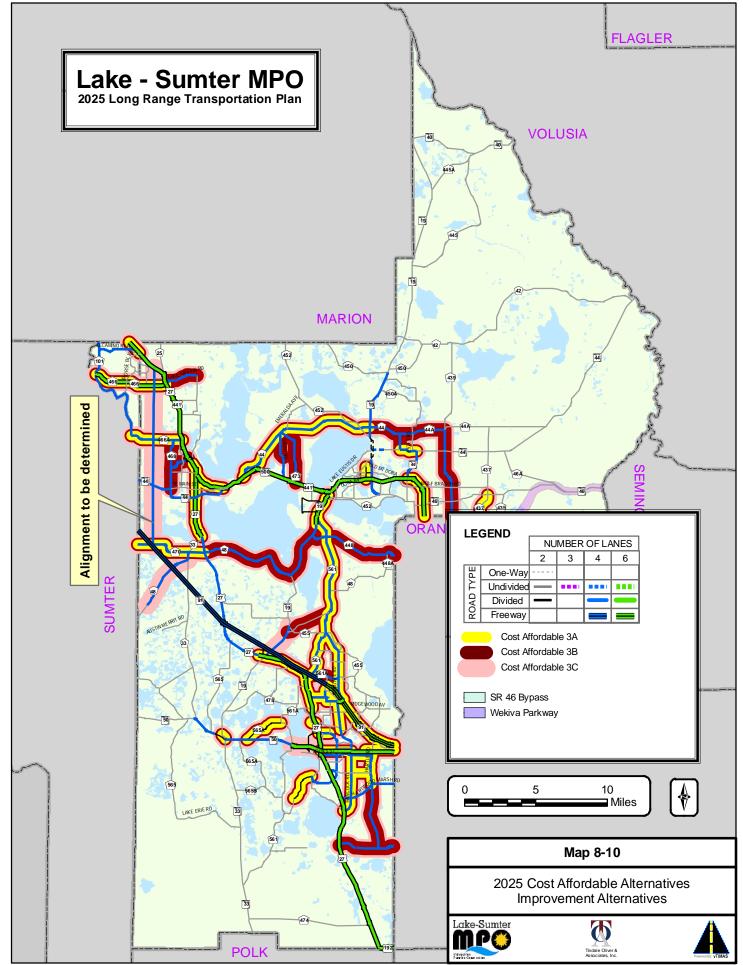


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