

Palm Beach MPO 2040 Long Range Transportation Plan



2.A.2



AMENDMENT #2



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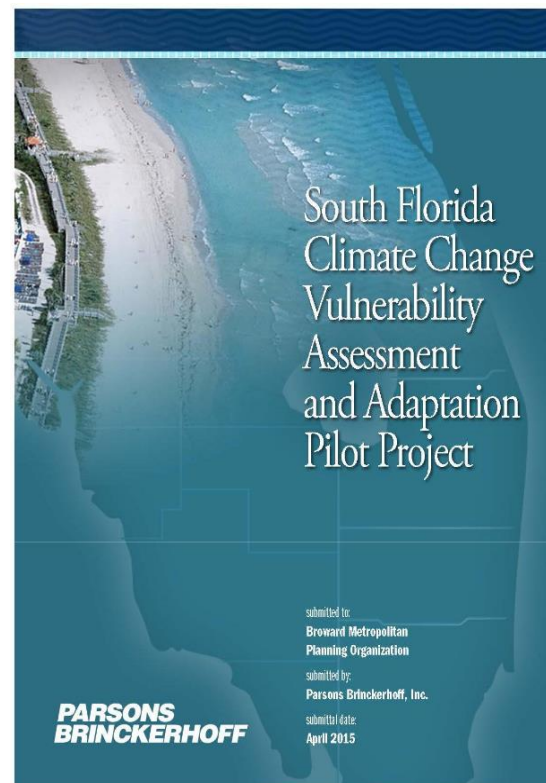
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Environmental Mitigation Strategies

In consultation with various regulatory agencies, the Palm Beach MPO followed a comprehensive planning process that included analysis of potential environmental impacts associated with the final list of desired projects, along with mitigation activities that showed promise for minimizing any significant impacts to the surrounding environment. Such regulatory agencies included the Florida Department of Environmental Protection (FDEP), the Palm Beach County Health Department, the Palm Beach County Department of Environmental Resource Management (ERM) and Parks and Recreation Departments, and other environmental protection communities and businesses. Projects were screened and solicited for regulatory agency comments through the Efficient Transportation Decision Making process, or ETDM, established by the Florida Department of Transportation as a means to support the state's environmental policies. The system provides agencies and other stakeholders the opportunity for early input and consideration of the environment in transportation planning, including linking the Project Development and Environment (PD&E) process with the requirements listed under the National Environmental Policy Act (NEPA). ETDM proactively identifies potential avoidance, minimization, and mitigation opportunities for projects identified and selected by the MPO. When developing the remaining projects in the Desires Plan, a number of state & local resource agency plans were considered during the planning process, including the SIS and Turnpike Master Plans, the TDMs for Palm Tran and SFRTA, and the Intracoastal Waterway Plan. A more detailed description of the MPO's environmental mitigation process is provided in Appendix E.

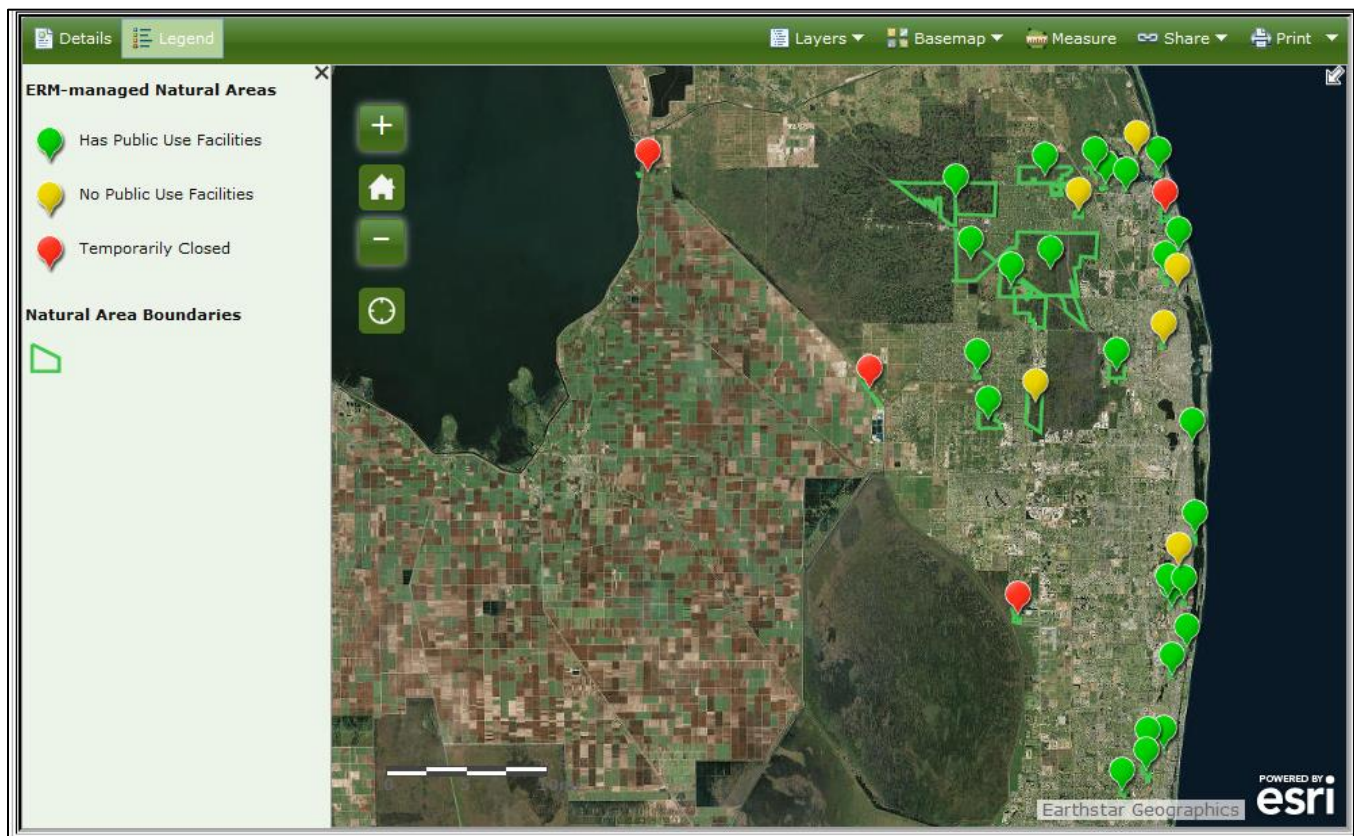
The Southeast Florida Regional Climate Change Compact

In 2009 the Southeast Florida Regional Climate Change Compact was formed between the four southeast counties, including Palm Beach, in an effort to create an Action Plan that establishes strategies for emission reduction through greater energy efficiencies in the built environment, land use, and transportation. The study area expects high amounts of risks associated with climate change due to rising sea level projections, and anticipated increases in tropical storm events. A study was conducted by the Compact that describes the methods used to perform the vulnerability assessment, including limitations of the analysis, and specifically focused on affected roadways and associated infrastructure. The MPO took the Compact's study into consideration when evaluating the cost feasible list of projects.

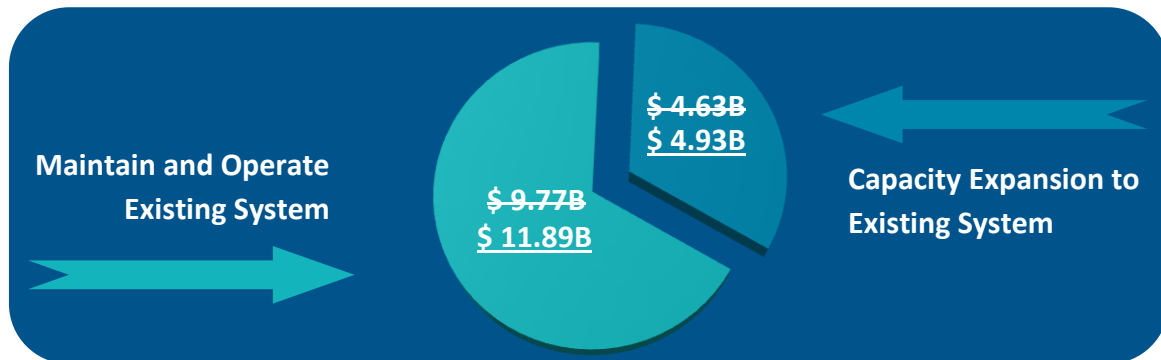


Natural Areas Map

The map below identifies natural areas owned or managed by ERM. This map taken together with other natural areas managed by state, district and municipal agencies constitute the full complement of significant areas to be considered. The MPO seeks to preserve and protect environmentally sensitive lands in Palm Beach County and protect wildlife and endangered species on such lands. These natural areas are accounted for during the MPO's transportation planning process through the advisory committees, which include members from the Florida Department of Transportation's Planning & Environmental Management office, and the Palm Beach County's Planning and Health Departments (including the Environment and Air Pollution section). The advisory committees ensure that studies, plans, and programs submitted to the MPO are technically sufficient, accurate, and comprehensive, enabling the MPO's Board of elected officials to receive input from local staff members in its decision making process. Furthermore, under the Goals, Objectives, and Values (GOVs) section of the 2040 LRTP, the MPO has established a scoring criteria for review of major transportation projects (Desires Plan) that ranks and prioritizes projects submitted to the MPO for potential funding. For the Environmental Stewardship category (Value #7), a maximum of 10 points are available for projects that are both consistent with all applicable local comprehensive plans, and for those projects that are likely to be categorically excluded from the NEPA process or presenting No Significant Impact (EA FONSI).



A summary of the financial revenue resources for both operating and maintaining the existing system and providing capacity expansions to accommodate future needs is presented. The below graph illustrates the *Directions 2040 Plan* distribution between the two categories of funds.



OPERATIONS AND MAINTENANCE

Operating and maintenance revenues represented a substantial portion of the overall revenues projected to be available through the year 2040. Funds to support the existing roadway and transit programs as well as the aviation, seaport, and railway programs are described here.

Roadways

Roadway operating and maintenance funds were identified for the FDOT State Highway System and for the Palm Beach County roadway engineering program.

FDOT State Highway System

Specific revenue estimates for the Palm Beach MPO have been prepared by FDOT's Office of Policy Planning. The forecasts are presented in the document titled "Supplement to the *2040 Revenue Forecast Handbook*, 2040 Revenue Forecast for Palm Beach Metropolitan Planning Area" (see Appendix B). The Supplement includes a Districtwide summary of the projected Florida Department of Transportation (FDOT) State Highway System (SHS) Operating and Maintenance funds for Palm Beach, Broward, Martin, St. Lucie, and Indian River Counties. The Palm Beach MPO estimated the portion of districtwide revenue anticipated for Palm Beach County. Both totals are shown below.

State and Federal O&M Programs (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Districtwide SHS Operating & Maintenance Funds	<u>\$1,534.0</u>	\$306.8	\$1,566.0	\$1,716.0	\$3,770.0	<u>\$7,358.8</u> <u>\$8,892.8</u>
SHS Operating & Maintenance Funds - Estimated PBC Portion	<u>\$692.5</u>	\$138.8	\$752.4	\$821.9	\$1,806.4	<u>\$3,519.5</u> <u>\$4,212</u>

The table below summarizes the Palm Beach County roadway operations and maintenance funds through year 2040. A detailed overview by fiscal year is provided in Appendix B.

Palm Beach County Roadway O&M Program (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Constitutional Gas Tax	<u>\$45.5</u>	\$9.1	\$45.5	\$45.5	\$91.0	\$191.1 <u>\$236.6</u>
County Gas Tax	<u>\$24.5</u>	\$4.9	\$24.5	\$24.5	\$49.0	\$102.9 <u>\$127.4</u>
Other Misc. Funding	<u>\$38.0</u>	\$7.6	\$38.0	\$38.0	\$76.0	\$159.6 <u>\$197.6</u>
Ad Valorem Engineering	<u>\$107.0</u>	\$21.4	\$107.0	\$107.0	\$214.0	\$449.4 <u>\$556.4</u>
LOGT Engineering Operating	<u>\$23.8</u>	\$4.3	\$23.8	\$23.8	\$47.6	\$99.5 <u>\$123.3</u>
LOGT Loan Repayments	<u>\$42.7</u>	\$8.5	\$42.7	\$42.7	\$53.6	\$147.5 <u>\$190.2</u>
Total	<u>\$281.5</u>	\$55.8	\$281.5	\$281.5	\$531.2	\$1,150.0 <u>\$1,431.5</u>

Transit

Tri-Rail and Palm Tran are the major mass transit providers within Palm Beach County. The revenue forecasting methodology for each entity is presented below.

Tri-Rail

The "FY 2014-2023 SFRTA Forward Plan, A Transit Development Plan for SFRTA" dated August 2013 was referenced for the development of the Tri-Rail revenue forecasts and is included in Appendix B. The methodology applied for preparing planning level revenue projections for Tri-Rail through the year 2040 is as follows:

- ◆ **South Florida Rail Corridor (SFRC) Maintenance of Way funds:** These were assumed to remain \$11.5 million per year through the year 2040, consistent with current annual estimates.
- ◆ **Tri-Rail Existing Services Operating Funds:** These funds are comprised of interest, FTA and Federal Highway Administration (FHWA) funds, and the three Counties' individual operating fund contributions of \$1.565 million per year. The combined estimated \$10.06 million per year in revenues was maintained for the duration of the *Directions 2040 Plan* planning period.
- ◆ **Tri-Rail Existing Services Operating - FDOT Subsidy:** Per the SFRTA Forward Plan and Florida House Bill (HB) 599, by 2020 the State dedicated operating assistance will cease upon commencement of a new dedicated local funding source of \$30.1 million per year. That new

dedicated funding source of \$30.1 million was maintained for the revenue projections through year 2040.

- ◆ **Capital Program:** The projected revenues are comprised of Federal Transit Administration (FTA), FDOT, and County individual capital contributions of \$2.67 million per year. A constant \$30.01 million per year was forecast through the year 2040 consistent with the Forward Plan 10 year projections.

Capital investments were, as noted above, included as part of the revenue projections for the Tri-Rail services. Capital revenues are exclusively dedicated to maintaining the existing system and include such expenditures as vehicle purchases and station enhancements. Only a limited portion of the capital funds were available regionally for expansions and/or enhancements to the system.

The operations and maintenance and the capital program funds associated with maintaining the existing Tri-Rail system are presented in the two tables below.

SFRTA Tri-Rail O&M Program (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
SFRC Maintenance of Way	<u>\$57.5</u>	\$11.5	\$57.5	\$57.5	\$115.0	\$241.5 <u>\$299</u>
Tri-Rail Existing Services Operating	<u>\$287.5</u>	\$53.8	\$287.5	\$321.2	\$764.2	\$1,426.7 <u>\$1,714.2</u>
Tri-Rail Existing Services Operating - FDOT Subsidy	<u>\$150.5</u>	\$30.1	\$150.5	\$150.5	\$301.0	\$632.1 <u>\$782.6</u>
Regional Total	<u>\$495.5</u>	\$95.4	\$495.5	\$529.2	\$1,180.2	\$2,300.3 <u>\$2,795.8</u>
Palm Beach Portion	<u>\$165.2</u>	\$31.8	\$165.2	\$176.4	\$393.4	\$766.8 <u>\$932</u>

SFRTA Tri-Rail Capital Program (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Tri-Rail Existing Services Capital	<u>\$150.1</u>	\$30.0	\$150.1	\$150.1	\$300.1	\$630.3 <u>\$780.4</u>
Regional Total	<u>\$150.1</u>	\$30.0	\$150.1	\$150.1	\$300.1	\$630.3 <u>\$780.4</u>
Palm Beach Portion	<u>\$50.0</u>	\$10.0	\$50.0	\$50.0	\$100.0	\$210.1 <u>\$260.1</u>

Palm Tran

The basis for the Palm Tran operating and maintenance revenue projections were the "Palm Beach County Transit Development Plan (TDP) 2011-2021" dated December 2011 and the "Palm Beach County, FL Fiscal Year 2014 Annual Budget" dated December 2, 2013. The FDOT document titled "Supplement to the 2040 Revenue Forecast Handbook, 2040 Revenue Forecast for Palm Beach Metropolitan Planning Area" was referenced for the federal and state transit funds. Refer to Appendix B for details.

A detailed summary of the year by year revenue forecasts is provided in Appendix B. The following provides an overview of the methodology which was applied for each of the Plan referenced Palm Tran transit revenue resources:

- ◆ **Local Option Gas Taxes (LOGT):** The County's allocation of LOGT funds towards Palm Tran operating, roadway capacity improvements, and roadway engineering operating was assumed for the forecast period. Palm Tran LOGT operating revenue was based on the TDP's projections of \$32.3 million per year for the extent of the Plan.
- ◆ **Ad Valorem Funds:** The County uses Ad Valorem funds for respectively its engineering and its Palm Tran operating and maintenance programs. For Palm Tran, \$15.4 million was assumed through year 2021 based on the TDP. Subsequent years were based on the trends projected in the TDP and correspond to a 2.5 percent growth per year through the year 2040.
- ◆ **Transit Fare/User Fees:** Since a fare increase was being proposed for riders of the Palm Tran buses, the Palm Tran FY 2014 revenue budget of \$15.4 million served as the assumption for FY 2015 to reflect a conservative initial lower ridership in response to the extra cost associated with using the system. Remaining years 2016 through 2040 were projected to increase by 2.25 percent based on the TDP operating inflation rate.
- ◆ **Federal/State Transit:** The estimates include Federal Transit Administration (FTA) Grant funding to Palm Tran, State block grant funding to Palm Tran, Florida Commission for Transportation Disadvantaged grant funding, and smaller capital funds available to FDOT for transit grants.

Palm Tran Local Transit O&M Program (Millions of Dollars)						
CATEGORY	<u>YEARS</u> <u>2015-19</u>	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
LOGT Operating	<u>\$161.3</u>	\$32.3	\$161.3	\$161.3	\$322.6	<u>\$677.5</u> <u>\$838.8</u>
Ad Valorem Operating	<u>\$104.5</u>	\$20.0	\$104.5	\$116.8	\$276.5	<u>\$517.8</u> <u>\$622.3</u>
Fare/User Fees/Charges	<u>\$80.4</u>	\$15.0	\$80.4	\$89.8	\$212.5	<u>\$397.6</u> <u>\$478</u>
Federal/State Transit	<u>\$127.4</u>	\$24.8	\$127.4	\$133.9	\$280.7	<u>\$566.8</u> <u>\$694.2</u>
Total	<u>\$473.6</u>	\$92.1	\$473.6	\$501.7	\$1,092.3	<u>\$2,159.6</u> <u>\$2,633.2</u>

Aviation, Seaport, and Railways

Operating revenues associated with Palm Beach County airports, the Port of Palm Beach, and the railway system are presented. The revenue projections are planning level forecasts and are intended to emphasize the relevance of the airports, the port, and the railways as part of the overall Palm Beach County transportation system. Providing forecasts further serves to acknowledge that these modes are represented in the MPO's TIP.

Aviation

Revenue projections for the four County airports were coordinated with Palm Beach County's Department of Airports. The operations and maintenance forecasted funds are based on the "2015-2019 Capital Improvement Plan (CIP)" and is included in Appendix B. The current CIP operating costs equate to a per year increase of 1.5 percent over the five year period. For purposes of the year 2020 through 2040 projections, a one percent annual growth was determined to be appropriate for forecasting future year airport operating revenues.



The year 2020 through 2040 aviation operating and maintenance funds are shown in the following table. Appendix B includes the detailed analysis by individual fiscal year.

Aviation O&M Program (Millions of Dollars)						
CATEGORY	<u>YEARS</u> <u>2015-19</u>	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Airport Operating & Maintenance	<u>\$336.5</u>	\$67.3	\$346.9	\$364.6	\$785.9	<u>\$1,564.7</u> <u>\$1,901.2</u>

Port of Palm Beach

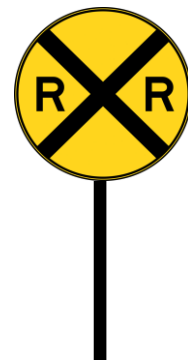
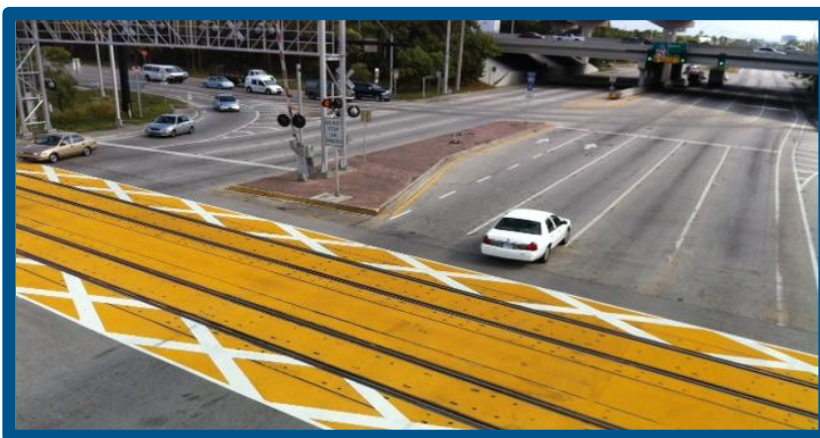


Revenue forecasting for the Port of Palm Beach (POPB) operating and maintenance programs was coordinated directly with the Port's staff (Appendix B). For the operating and maintenance revenues, the direction was to assume a constant \$20 million per year for the planning period. The 2020 through 2040 revenue projections are presented below.

Seaport O&M Program (Millions of Dollars)						
CATEGORY	<u>YEARS</u> 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Port of Palm Beach Operating & Maintenance	<u>\$100.0</u>	\$20.0	\$100.0	\$100.0	\$200.0	<u>\$420.0</u> <u>\$520.0</u>

Railways

No operations and maintenance revenue projections were prepared for the railway program. It was acknowledged that the program is funded annually by FDOT on a statewide basis.



CAPACITY EXPANSION

Funds that can be applied to provide capacity expansion beyond the existing transportation system have been identified for the various transportation modes associated with the MPO's TIP. An overview of the methodology utilized in preparing the revenue forecasts for the years 2020, 2021-2025, 2026-2030, and 2031-2040 is presented. The application of the funds and how they were utilized to derive the Year 2040 Cost Feasible Plan are discussed in detail in Section 8, Cost Feasible Plan.

SIS and Turnpike

Strategic Intermodal System (SIS) and the Florida's Turnpike are distinguished from other revenue sources within the Plan. For these funds, the projects identified as being cost feasible for the adopted Plan equate to the amount of revenues forecast to be available. Appendix C provides a table summary of the individual Cost Feasible Plan SIS and Turnpike projects in terms of total estimated Year of Expenditure (YOE) capital costs.

Strategic Intermodal System



FDOT has identified specific SIS cost feasible projects and corresponding project costs in its "SIS FY 2019/2020 through FY 2023/2024 Second Five Year Plan" and its "SIS FY 2024 through FY 2040 Long Range Cost Feasible Plan." These revenue resources are included in Appendix C. The project costs have been summarized for each of the Plan phasing years and are shown in the table below.

Strategic Intermodal System Capacity Program (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
SIS Plans (Highway)	\$499.0	\$42.0	\$369.3	\$473.1	\$190.4	\$1,074.8
						\$1,573.8

Florida's Turnpike

The Florida's Turnpike Enterprise is a FDOT statewide program which funds or finances major capital improvements via tolls collected on the Turnpike's facilities. The "Turnpike's Master Plan" referenced separately a Ten-Year Finance Plan and a List of Unfunded Needs Projects, as previously described in Section 6, Desires Plan. The projects determined to be cost feasible with respect to the *Directions 2040 Plan* consist of four major capacity improvements within the Palm Beach County boundaries. These improvements served as the basis for the Florida's Turnpike revenues projected and were based on average costs per mile and per interchange as coordinated with Turnpike staff.



The below table provides a summary of the Florida's Turnpike capacity expansion funds by Plan phasing years.

Florida's Turnpike Capacity Program (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Turnpike (Highway)	\$0.0	\$0.0	\$868.9	\$0.0	\$113.1	\$982.1 \$982.0

Highway, Transit, Freight, and Non-Motorized

For capacity expansion, the highway, transit, and freight revenues were presented together. This was based on the fact that the revenue allocated to the MPO can be applied to any of these transportation improvements. Palm Beach County funds are presented here as well. The County's funds were exclusively dedicated to highway improvements.

The referenced revenues are described as follows:

- ◆ **Other Arterials Construction & ROW Funds:** Federal and state revenues available to the MPO to implement major state highway, transit, and freight projects, non-motorized improvements, and programs established by the MPO. This funding is primarily intended to improve the state highway system but up to ten percent of these funds can be used on "Off-System", or non-state owned facilities.
- ◆ **Other Arterials Preliminary Engineering Funds:** Per the Revenue Handbook, an additional 22 percent of the Other Arterials Construction & ROW estimates is available to design the planned projects and programs.
- ◆ **Transportation Management Areas Funds:** Federal funds available to the MPO for projects and programs identified by the MPO.
- ◆ **Transportation Alternatives (TALU) Funds:** Federal funds available to the MPO to accomplish non-motorized infrastructure and safe routes to school projects.

The Transportation Alternatives Program "provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects..."

Federal Highway Administration, MAP-21 Guidance

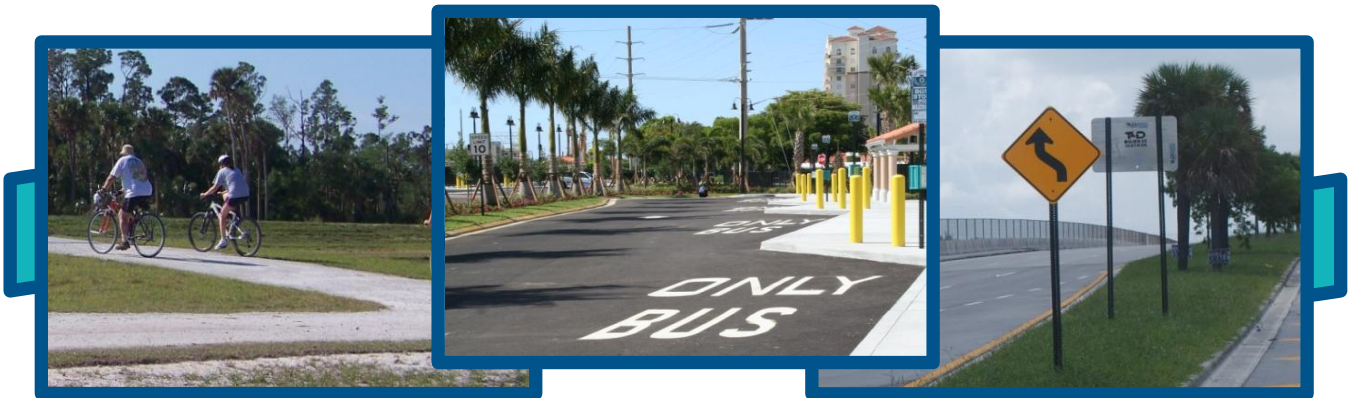
The below table summarizes the MPO funds that were available to allocate to highway, transit, freight and non-motorized projects. The funds are provided in terms of the Plan phasing years.

State and Federal Capacity Programs-MPO Allocated (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Other Arterials Construction & ROW	<u>\$226.6</u>	\$50.8	\$226.6	\$214.3	\$468.8	\$960.5 <u>\$1,187.1</u>
Other Arterials PE (Additional 22%)	<u>\$49.9</u>	\$11.2	\$49.9	\$47.1	\$103.1	\$211.3 <u>\$261.2</u>
TMA Funds	<u>\$85.3</u>	\$17.1	\$85.3	\$85.3	\$170.6	\$358.3 <u>\$443.6</u>
TALU (>200,000 population)	<u>\$8.4</u>	\$1.7	\$8.4	\$8.4	\$16.8	\$35.3 <u>\$43.7</u>

Palm Beach County Roadway Capacity Program (Millions of Dollars)						
CATEGORY	<u>YEARS</u> <u>2015-19</u>	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
LOGT Capacity Improvements	<u>\$5.0</u>	\$1.0	\$5.0	\$5.0	\$41.8	<u>\$52.8</u> <u>\$57.8</u>
Impact Fees Capacity Improvements	<u>\$137.8</u>	\$37.8	\$137.3	\$71.9	\$43.2	<u>\$290.2</u> <u>\$428.0</u>

Districtwide FDOT Funds

The Palm Beach MPO's Supplement to the 2040 Revenue Handbook was consulted for information on funds that the FDOT would be allocating to the counties within District 4. The FDOT Districtwide funds resources consist of three revenue sources.



Each of the three resources is described as follows:

- ◆ **Transportation Alternatives (TALT) Funds:** Federal funds available to FDOT to accomplish non-motorized infrastructure and safe routes to school projects within District 4.
- ◆ **Transportation Regional Incentive Program (TRIP) Funds:** State funds available to FDOT to accomplish regionally significant projects within District 4 that provide 50% non-state matching funds.
- ◆ **New Starts Transit Funds:** Per the FDOT New Starts Program guidelines, transit projects eligible for funding include rail transit and bus rapid transit (BRT) systems. Specifically, "This program also allows a dollar for dollar match of local funds towards project costs for projects funded with state and local funds only."

The Districtwide capacity funds are summarized in the table on the next page.

State and Federal Capacity Programs-FDOT Allocated (Millions of Dollars)						
CATEGORY	<u>YEARS</u> <u>2015-19</u>	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Districtwide TALT	<u>\$23.3</u>	\$4.7	\$23.3	\$23.3	\$46.6	\$97.9 <u>\$121.2</u>
Districtwide TRIP	<u>\$9.1</u>	\$0.6	\$9.1	\$9.1	\$18.2	\$37.0 <u>\$46.1</u>
Districtwide New Starts Transit	<u>\$174.0</u>	\$31.5	\$174.0	\$174.0	\$349.0	\$728.5 <u>\$902.5</u>

Aviation, Seaport, and Railways

Capacity improvement revenues forecast for the airports, the POPB, and the railways programs were prepared to represent general planning level projections. They served to provide an overview of the anticipated funds that were identified to be available to fund expansion of the existing programs, with the knowledge that the funding would be dependent on the individual operator's resources and ultimately its master plans.

Aviation

A forecast of the Palm Beach County airport capital revenues was prepared based on coordination with the Palm Beach County Division of Airports. Since the capital revenue varies from year to year depending on needs, the per year capital revenues fluctuate between fiscal years. The current five year pattern was assumed to repeat every five years and a one percent annual growth was applied to account for future year costs.



A detailed summary of the airport capacity revenue forecasts, by fiscal year, is included in Appendix B. The below table summarizes the revenue projections by Plan phasing years.

Aviation Capacity Program (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Airport Capacity	<u>\$0.0</u>	\$6.6	\$93.2	\$98.0	\$211.2	\$409.0

Port of Palm Beach



The procedure used for forecasting the Port's Capacity funds was based on direct coordination with the POPB. The capital revenues were derived to be consistent with the capital projects anticipated by the Port to be implemented over the 21 year time period and therefore vary from one year to the next.

The below table provides an overview of the POPB capital revenues projections. Appendix B provides the detailed per year summary.

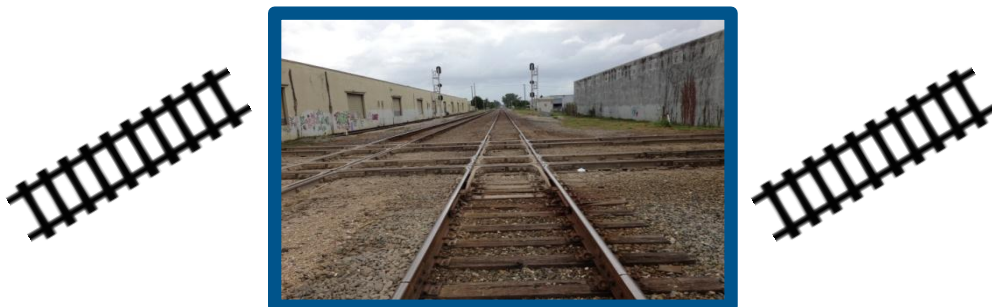
Seaport Capacity Program (Millions of Dollars)						
CATEGORY	YEARS 2015-19	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Port of Palm Beach Capacity	<u>\$0.0</u>	\$15.2	\$47.0	\$47.5	\$96.0	\$205.7

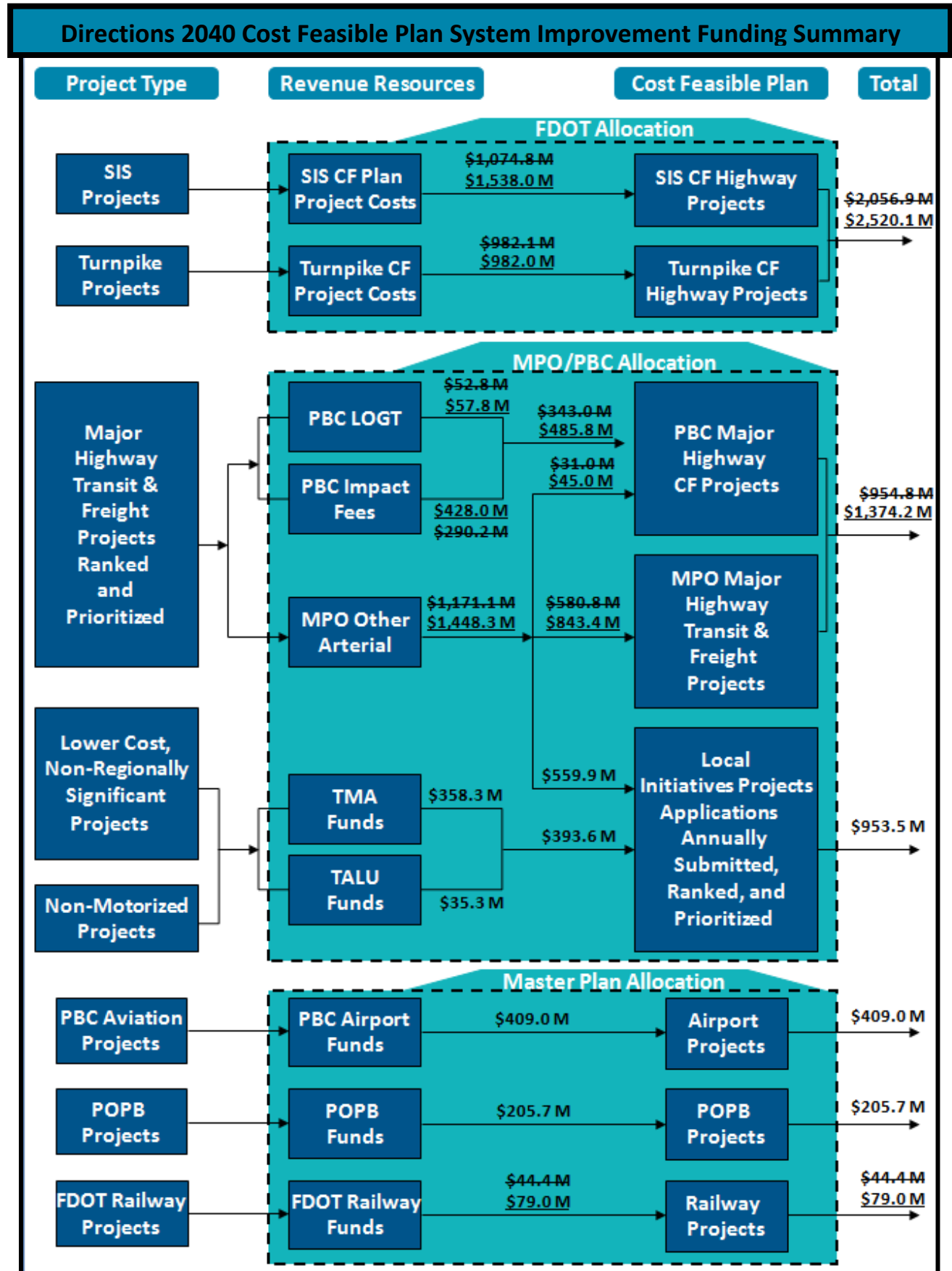
Railways

Since FDOT's railway program is a statewide funded program, the types of projects implemented within individual MPOs are dependent on the needs as established on a statewide basis. The capacity project revenue totals represented in the MPO's 2015-2019 Transportation Improvement Plan (TIP) range from one million to nearly 50 million dollars per fiscal year. The TIP is included in Appendix B. For planning level projections, \$1.5 million per year was assumed for the duration of the Plan with the addition of a 3.3 percent annual growth to account for inflation in accordance with the FDOT Revenue Handbook.

Annual forecasts are presented in Appendix B and the below table summarizes the revenues by Plan phasing periods.

Railway Capacity Program (Millions of Dollars)						
CATEGORY	<u>YEARS</u> <u>2015-19</u>	YEAR 2020	YEARS 2021-25	YEARS 2026-30	YEARS 2031-40	TOTAL
Railway Capacity	<u>\$34.6</u>	\$1.5	\$8.3	\$9.7	\$24.9	<u>\$44.4</u> <u>\$79.0</u>





PROJECTS FUNDED WITH STRATEGIC INTERMODAL SYSTEM & TURNPIKE REVENUES										
Map No.	Facility Name	From	To	Improvement	2015-2040 Total Capital Cost (Million\$)	2015-2019	2020	2021-2025	2026-2030	2031-2040
Proposed Strategic Intermodal System Improvements										
H-9	I-95	@ Donald Ross Rd		Interchange Improvement	\$4.5	C				
H-25	I-95	@ Blue Heron Blvd		Interchange Improvement	\$2.8	R/C				
H-65	I-95	@ Linton Blvd		Interchange Improvement	\$20.9	C				
H-64	I-95	@ Atlantic Ave		Interchange Improvement	\$9.4	D/R/C				
H-69	I-95	@ Spanish River Blvd		New Interchange	\$81.9	R/C				
H-44	Southern Blvd/SR 80	L-8 Canal	Crestwood/Forest Hill Blvd	Widen 4L to 6L	\$46.3	R/C				
H-1	SR 710	Martin/PBC Line	W of Indiantown Rd	Widen 2L to 4L	\$10.0	D/R/C				
H-6	SR 710	W of Indiantown Rd	W of Pratt Whitney Rd	Widen 2L to 4L	\$41.3	D/R/C				
H-29	SR-710	W of Congress Ave	W of Australian Ave	Widen 2L to 4L	\$42.0	R/C				
	SR 710	Australian Ave	Old Dixie Hwy	Widen 2L to 4L	\$75.0	D/R/C				
H-67	I-95 Managed Lanes	Broward/PBC Line	Linton Blvd	Add Managed Lanes	\$165.0	D/C	C	C		
H-57	I-95	@ Gateway Blvd		Interchange Improvement	\$87.9	D	R/C			
H-46	I-95	@ SR 80		Interchange Improvement	\$116.7	D	C			
H-20	SR 710	Northlake Blvd	Blue Heron Blvd	Widen 4L to 6L	\$35.3	D	R/C			
H-15	SR 710	PGA Blvd	Northlake Blvd	Widen 4L to 6L	\$63.3		C			
H-14	I-95	@ Central Blvd or PGA Blvd		Interchange Improvement	\$86.7	D		C		
H-58	I-95	@ Boynton Beach Blvd		Interchange Improvement	\$97.7		D/R	R/C		
H-42	I-95	@ Palm Beach Lakes Blvd		Interchange Improvement	\$150.1			D/R/C		
H-48	I-95	@ 10th Ave N		Interchange Improvement	\$53.3			D/R/C		
H-52	I-95	@ 6th Ave S		Interchange Improvement	\$71.4			D/R/C		
H-56	I-95	@ Hypoluxo Rd		Interchange Improvement	\$73.9			D/R/C		
H-54	I-95	@ Lantana Rd		Interchange Improvement	\$86.7			D/R	C	
H-4	I-95 Managed Lanes	Indiantown Rd	Martin/PBC Line	Add Managed Lanes	\$56.4		D	R	C	
H-11	SR 710	W of Seminole Pratt Whitney Rd	PGA Blvd	Widen 4L to 6L	\$59.6					R/C
Proposed Turnpike Improvements										
H-27	Turnpike Mainline	Okeechobee Blvd/Jog Rd (Mile Post 98)	PGA Blvd (Mile Post 109)	Widen 4L to 6L	\$296.2			D/R/C		
H-45	Turnpike Mainline	Boynton Bch Blvd (Mile Post 86)	Okeechobee Blvd/Jog Rd (Mile Post 98)	Widen 4L to 6L	\$274.9			D/R/C		
H-59	Turnpike Mainline	Broward/PBC Line (Mile Post 73)	Boynton Bch Blvd (Mile Post 86)	Widen 6L to 8L	\$297.8			D/R/C		
H-55	Turnpike	@ Hypoluxo Rd		New Interchange	\$113.1					D/R/C

Note: D = Design (Preliminary Engineering & PD&E)

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PROJECTS FUNDED WITH OTHER ARTERIALS & TRANSIT REVENUES										
Map No.	Facility Name	From	To	Improvement	2015-2040 Total Capital Cost (Million\$)	2015-2019	2020	2021-2025	2026-2030	2031-2040
MPO Local Initiatives Program										
-	Local Initiatives Program			Annual allocation used to fund lower cost, non-regionally significant projects proposed by local	\$953.5	D/C	D/C	D/C	D/C	D/C
Proposed Palm Beach MPO Funded Highway and Transit Projects										
-	FEC			Upgrade Rail Crossings to Improve Safety for Vehicular and Non-motorized crossing maneuvers and	\$9.1	D/C				
T-26	New Tri-Rail Station	Glades Rd	Boca Raton	New Station on CSX Corridor	\$18.5	D/C				
-	SFRTA Layover	At Maintenance Facility		Rail Preservation Project	\$36.1	D/C				
T-23	Palm Tran South Bus Facilities Expansion			Design and construction to accommodate expansion	\$5.4	D/C				
T-13	Northwood Connection Phase I	NW Quadrant on CSX Mainline	SE Quadrant on FEC Mainline	Rail Capacity Project	\$21.1	D/C				
T-13	Northwood Connection Phase II	SW Quadrant on CSX Mainline	NE Quadrant on FEC Mainline	Rail Capacity Project	\$23.0	D/C				
	South Central FL Express Cane Block			Rail Capacity Project	\$21.0	R/C				
	Villa Rica Siding Extension			Rail Capacity Project	\$4.8	R/C				
H-33	SR 7	Okeechobee Blvd	60th St	Widen 2L to 4L	\$26.7	D/C				
H-19	SR 7	60th St	Northlake Blvd	New 4L	\$53.5	D/C				
T-12	Palm Tran North Bus Facilities Expansion	Electronics Way	South of 36th Street	Design and construction to accommodate expansion	\$4.2	D	C			
T-3	Tri-Rail Extension - New Service	West Palm Beach Station	New Jupiter Station	New Service to Jupiter on FEC corridor via Northwood Crossover with Preliminary Estimated 3 station	\$75.0	D/R	R	R/C		
T-2	New Tri-Rail Station	Toney Penna Dr	Jupiter	Tri-Rail Coastal Link station on FEC corridor	Included		R	R/C		
T-4	New Tri-Rail Station	PGA Blvd	Palm Beach Gardens	Tri-Rail Coastal Link station on FEC corridor	Included		R	R/C		
T-11	New Tri-Rail Station	45th Street	West Palm Beach	Tri-Rail Coastal Link station on FEC corridor	Included		R	R/C		
T-20	New Tri-Rail Station	PBIA	West Palm Beach	Additional Tri-Rail Station on CSX Corridor	\$22.5			R/C		
T-19	Express Bus via US 1	E Camino Real	Indiantown Road	New express bus service with associated multimodal corridor improvements	\$54.5			D/R/C		
T-17	Express Bus via Military Tr	Boca Intermodal Center	WPB Intermodal Center	New express bus service	\$3.9			C		
T-25	Express Bus via Glades Rd	SR 7	US 1	New express bus service	\$3.9			C		
H-62	Atlantic Ave/SR 806	SR 7	W of Lyons Rd	Widen 2L to 4L	\$29.1		D	R/C		
H-63	Atlantic Ave/SR 806	Lyons Rd	Jog Rd	Widen 4L to 6L	\$25.3	D/R		R/C		

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PROJECTS FUNDED WITH OTHER ARTERIALS & TRANSIT REVENUES (CONT'D)

Map No.	Facility Name	From	To	Improvement	2015-2040 Total Capital Cost (Million\$)	2015-2019	2020	2021-2025	2026-2030	2031-2040
H-76	US 27 Connector	SR 80/US 27	SR 715	New 2L	\$26.6			D	R/C	
H-70	Potomac Rd	E-3 Canal	Military Tr	Widen 2L to 4L	\$3.3			D	R/C	
T-24	Tri-Rail Park & Ride Expansion	Yamato Rd	Boca Raton	New parking garage (420 spaces)	\$11.0				C	
T-1	Express Bus via I-95	Indiantown Rd	WPB Intermodal Center	New express bus service	\$4.6				C	
T-14	Express Bus via SR 7/Okeechobee Blvd	Mall at Wellington Green	WPB Intermodal Center	New express bus service	\$4.6				C	
T-28	Glades Area Intermodal Center	@SR80/US441/Hooker Hwy/Main St	Belle Glade	Proposed passenger intermodal center	\$19.3				D/R/C	
H-7	Island Way Southern Ext.	Indiantown Rd	Central Blvd	New 2L	\$10.3			D	R/C	
H-73	Hooker Hwy/SR 812	SR 715	US 441	Widen 2L to 4L	\$11.4			D	R/C	
H-77	Boutwell Rd	Lake Worth	10th Ave N	Widen 2L to 3L	\$9.2				D/R/C	
T-8	Tri-Rail Extension - New Service	Mangonia Park Station	Blue Heron Blvd/VA Hospital	Extend existing service on CSX corridor. Includes new station noted below:	\$63.4				D/R	C
T-7	New Tri-Rail Station	Blue Heron Blvd	Riviera Beach	Additional Tri-Rail Station on CSX Corridor	\$28.5				D/R	C
T-10	Tri-Rail Park & Ride Expansion	45th Street	Mangonia Park	New parking garage (300 spaces) and improved bus circulation	\$10.0					C
T-15	Tri-Rail Park & Ride Expansion	WPB Intermodal Center	West Palm Beach	New parking garage (450 spaces)	\$15.1					C
T-22	Express Bus via SR 7/Lake Worth Rd go US 1	Mall at Wellington Green	US 1 in Lake Worth	New express bus service	\$5.9					C
T-18	Express Bus via SR 80/ Australian Ave	Glades Area Intermodal Center	WPB Intermodal Center	New express bus service	\$5.9					C
T-21	Express Bus via SR 7	Broward Co	Mall at Wellington Green	New express bus service	\$5.9					C
T-5	Express Bus via Turnpike	Broward Co	Palm Beach Gardens	New express bus service	\$5.9					C
T-9	Express Bus via Persimmon Blvd /SR 7/Okeechobee Blvd	SPW/Persimmon Blvd	WPB Intermodal Center	New express bus service	\$5.9					C
T-6	Express Bus via SPW Rd/Northlake Blvd/Military Tr/PGA Blvd	SPW/Persimmon Blvd	Palm Beach Gardens Station	New express bus service	\$5.9					C
T-27	Boca Intermodal Center	At Tri-Rail Station near Glades Rd	Boca Raton	Proposed passenger intermodal center	\$24.6					D/R/C
H-43	SR 7	Okeechobee Blvd	Belvedere Rd	Widen 6L to 8L	\$14.9				D/R	C
H-74	SR 715	S Main St	Hooker Hwy	Widen 2L to 4L	\$39.3				D/R	C
H-13	PGA Blvd/SR 786	SR 710/Beeline Hwy	Ryder Cup Blvd	Widen 2L to 4L	\$30.7					D/R/C
H-39	Okeechobee Blvd Extension	SR 80/CR880 Intersection	Seminole Pratt Whitney Rd	New 2L - MPO funded portion of total cost is shown	\$31.0					D/R/C

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PROJECTS FUNDED WITH COUNTY IMPACT FEES, LOCAL GAS TAX, OR PRIVATE FUNDS										
Map No.	Facility Name	From	To	Improvement	2015-2040 Total Capital Cost (Million\$)	2015-2019	2020	2021-2025	2026-2030	2031-2040
Proposed Palm Beach County Funded Highway Projects										
H-5	Church St	Limestone Creek Rd	W of Central Blvd	Widen 2L to 3L	\$0.3	R/C				
H-16	Congress Ave Ext	Northlake Blvd	Alt. A1A	New 2L	\$8	R/C				
H-60	Flavor Pict Rd	SR 7	Lyons Rd	New 2L	\$5	C				
H-28	Haverhill Rd	N of 45th Street	Bee Line Hwy	Widen 2L to 5L	\$10	C				
H-51	Haverhill Rd	Lantana Rd	Lake Worth Rd	Widen 2L to 4L	\$10	R/C				
H-12	Hood Rd	E of Florida's Turnpike	W. of Central Blvd	Widen 2L to 4L	\$7	R/C				
H-36	Jog Rd Extension	Roebuck Road	45th Street	New 4L	\$30	R/C				
H-72	Lyons Rd	Broward/PB County Line	SW 18th St	Widen 4L to 6L	\$2	R/C				
H-66	Lyons Rd	Clint Moore Rd	Atlantic Ave	Widen 2L to 4L	\$13	R/C				
H-17	Northlake Blvd	Seminole Pratt Whitney Rd	Coconut Blvd	Widen 2L to 4L	\$14	R/C				
H-68	Old Dixie Hwy	Yamato Rd	Linton Blvd	Widen 2L to 3L	\$13	R/C				
H-21	Old Dixie Hwy	Park Ave	Northlake Blvd	Widen 2L to 3L	\$3	C				
H-38	Roebuck Rd	SR 7	Jog Rd	New 4L	\$50	C				
H-37	Roebuck Rd	Jog Rd	Haverhill Rd	Widen 2L to 4L	\$3	R/C				
H-26	Royal Palm Beach Blvd	60th St	Orange Blvd	Widen 2L to 4L	\$4	R/C				
H-18	Seminole Pratt Whitney Rd	Orange Blvd	Northlake Blvd	Widen 2L to 4L (drainage 6L)	\$7	C				
H-23	Silver Beach Rd	E of Congress Ave	Old Dixie Hwy	Widen 2L to 3L	\$3	R/C				
H-49	Lyons Rd	Lantana Rd	Lake Worth Rd	Widen 2L to 4L	\$8.2	D	R/C			
H-47	Lyons Rd	Lake Worth Rd	Stribling Wy	New 2L	\$8.8		D/R/C			
H-75	Avenue E Extension	US 27 Connector	SR 715	New 2L	\$10.8		D/R/C			
H-3	Indiantown Rd	Jupiter Farms Rd	W of Florida's Turnpike	Widen 4L to 6L	\$5.8		D/R/C			
H-34	45th St	Haverhill Rd	W of Military Tr	Widen 4L to 6L	\$4.1		D/R/C			
H-22	Park Ave Extension	Old Dixie Highway	Congress Avenue	New 2L	\$3.6		D/R	C		
H-41	Okeechobee Blvd	Crestwood Blvd	W of Royal Palm Beach Blvd	Widen 4L to 6L	\$3.6			D/R/C		
H-40	Okeechobee Blvd	Seminole Pratt-Whitney Rd	West of Crestwood Blvd	Widen 2L to 4L	\$32.1			D/R/C		
H-50	Polo Road	Lake Worth Rd	Lyons Rd	New 2L	\$10.2			D/R/C		
H-71	Boca Rio Rd	Palmetto Park Rd	Glades Rd	Widen 2L to 4L	\$16.5			D/R/C		

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PROJECTS FUNDED WITH COUNTY IMPACT FEES, LOCAL GAS TAX, OR PRIVATE FUNDS (CONT'D)

Map No.	Facility Name	From	To	Improvement	2015-2040 Total Capital Cost (Million\$)	2015-2019	2020	2021-2025	2026-2030	2031-2040
H-31	60th St	Seminole Pratt Whitney Rd	140th Ave N	New 2L	\$21.4			D/R/C		
H-61	Flavor Pict Road	Lyons Rd	Hagen Ranch Rd	New 2L	\$12.6			D/R/C		
H-30	Seminole Pratt-Whitney Rd	Persimmon Blvd	60th Street	Widen 2L to 4L	\$19.3			D/R/C		
H-24	Silver Beach Rd	Old Dixie Hwy	US 1	Widen 2L to 3L	\$12.5			D/R/C		
H-10	Seminole Pratt Whitney Rd	N of Northlake Blvd	SR 710	New 2L	\$67.9			D/R	C	
H-35	45th St	I-95	Congress Ave	Widen 6L to 8L	\$7.8			D/R	C	
H-53	Lantana Rd	Lyons Rd	Hagen Ranch Rd	Widen 4L to 6L	\$35.7			D/R		R/C
H-2	Indiantown Rd	Pratt-Whitney Rd	131st Trail N	Widen 2L to 4L	\$28.0			D	R	C
H-39	Okeechobee Blvd Extension	SR 80/CR880 Intersection	Seminole Pratt Whitney Rd	New 2L - PBC portion of total cost is shown	\$34.1			D	R	C
Proposed Privately Funded Transit Projects										
T-16	New All Aboard Florida Station	Datura/Evernia	WPB	Station and new high-speed service to Ft. Lauderdale, Miami, and Orlando	Private \$		n/a	n/a	n/a	n/a
Proposed Privately Funded Highway Projects										
H-32	Persimmon Blvd	Seminole Pratt Whitney Rd	140th Ave N	New 4L	Private \$		n/a	n/a	n/a	n/a
Proposed Privately Funded Freight Projects										
T-28	Proposed Intermodal Logistic Ctr	W of SR 715	US 27	Freight Logistic Facility	Private \$		n/a	n/a	n/a	n/a

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The Directions 2040 Cost Feasible Plan Transit and Freight Projects and the Cost Feasible Highway Projects are illustrated in the maps on the next four pages. The project identification numbers are included in the maps for easy coordination with the Cost Feasible Plan tables.

Summary of Cost Feasible Plan Revenue

The presented Directions 2040 Cost Feasible Plan tables and maps focus on the transportation system improvements adopted through the year 2040. It is critical to acknowledge that approximately two thirds of the overall available revenue for the period FY 2015 through FY 2040 consists of funds for maintaining and operating the existing system. The below figure illustrates the breakdown in funds.



APPENDIX E: ENVIRONMENTAL MITIGATION PROCESS

FEDERAL REGULATION

According to 23 CFR 450.322 (f), the metropolitan transportation plan shall, at a minimum, include:

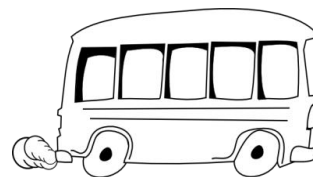
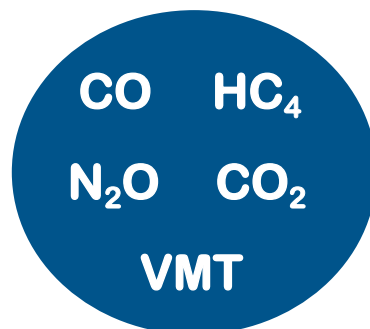
(7) A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The discussion shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timeframes for performing this consultation;

MITIGATION

The Palm Beach MPO utilizes the following approach sequence at the planning level when a transportation project may present a potential environmental concern:

- ◆ **Avoid impacts altogether**
- ◆ **Minimize a proposed activity/project size or its involvement**
- ◆ **Rectify the impact by repairing, rehabilitating, or restoring the affected environment**
- ◆ **Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action**
- ◆ **Compensate for environmental impacts by providing appropriate or alternate environmental resources of equivalent or greater value, on or off-site**

Areas of potential impacts that the MPO monitors include wetlands and water resources, forestry and habitats, streams and waterways, and threatened (or endangered) species. Potential mitigation challenges, on the other hand, include lack of funding for mitigation projects and programs, lack of available wetland mitigation bank credits, improperly assessing cumulative impacts of projects, and permitting issues with the county, local, state and federal regulatory agencies. These challenges are minimized through collaboration between the MPO and various stakeholders, including regulatory agencies, the public and other interested parties, and through the public involvement process.



Sample Mitigation Plan

For a project with potential environmental impacts, a Conceptual Mitigation Plan will be developed to document the potential to eliminate and/or reduce wetland impacts and to determine feasible mitigation options for unavoidable wetland and species habitat impacts associated with the project's construction. Mitigation of unavoidable direct, secondary and cumulative impacts is required for the issuance of Water Management District and U.S. Army Corps of Engineers (USACE) permits. The report will thoroughly examine a variety of mitigation options to avoid and minimize impacts to wetlands, surface waters, and protected species, including:

- ◆ Reduction of the project footprint (use of smaller facilities and/or associated drainage area)
- ◆ Application of retained earth walls (where feasible)
- ◆ Reduction in design speed or incorporation of design variances and/or exceptions
- ◆ Reduction in project lighting
- ◆ Alignment selection to maximize separation from environmental resources and reduce secondary impacts
- ◆ Inclusion of barrier fencing and wildlife crossings for species preservation

Mitigated vs Unmitigated Areas

When it is not possible to reduce or eliminate environmental impacts, compensating mitigation can serve to protect, preserve, and enhance the nearby land and water resources. The following graphic is a side-by-side comparison showing the differences between a mitigated natural area (Sweet Bay) and an unmitigated natural area (Avenir). The mitigation activities in the Sweet Bay natural preserve have significantly restored the area's natural habitat.

