

Indian River County MPO Long Range Transportation Plan (LRTP) 2035 Update

Cost Feasible Plan Development Summary Report

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COST FEASIBLE PLAN DEVELOPMENT

This summary report documents the development of the Cost Feasible Plan (CFP) for the Indian River County *2035 Long Range Transportation Plan Update* (2035 LRTP Update). In long range transportation planning, a CFP identifies financially viable improvements to an area's transportation network. The CFP is refined from the Needs Plan, which identifies transportation improvements necessary to maintain satisfactory mobility conditions to the year 2035, without consideration of project costs or potential revenue streams available to fund the improvements. The CFP is fiscally constrained; both costs of transportation improvements and revenues expected to be available to fund transportation improvements are considered.

This report summarizes:

- Adopted Needs Plan
- Financial Resources Analysis
 - Year of Expenditure Approach
 - Revenue Forecast
 - Cost Estimates
- Prioritization of Adopted Needs Plan Projects
- Development of Highway Cost Feasible Plan
 - Cost Feasible Plan Alternatives
- Multimodal Improvements
 - Transit Improvements
 - Bicycle and Pedestrian Facility Improvements

These steps are discussed in the following sections.

Adopted Needs Plan

As part of the development of the Needs Plan, traffic demand was projected to the year 2035 using the Greater Treasure Coast Regional Planning Model (GTCRPM). Model data such as traffic volumes and volume-to-capacity (V/C) ratios were examined to identify roadway deficiencies resulting from the growth in travel demand over the 25-year time horizon of the



LRTP. Then, various roadway network improvement alternatives were evaluated to identify which improvements would have the greatest impact on reducing future deficiencies. During this process, the Indian River County MPO Board recommended that the Needs Plan focus on construction of a denser roadway grid network as an option, in order to preclude the need to widen as many roadways. While the construction of a denser roadway grid addresses several capacity deficiencies and eliminates the need to widen some existing roadway corridors, an analysis of this option demonstrated the need for other roadway improvements in addition to the grid densification. An *Enhanced Grid Densification Alternative*, consisting of a combination of constructing a denser roadway grid network and widening several key travel corridors, was advanced as the Adopted Needs Plan for the 2035 LRTP Update.

Financial Resources Analysis

The financial resources analysis, which provides a synopsis of the revenues anticipated to be available to fund transportation improvements in the Indian River County metropolitan planning area through the year 2035, is a key component of the LRTP. In addition to the revenue analysis, costs were estimated for the improvement projects included in the Adopted Needs Plan. The revenues available to fund improvements were then compared to the project costs in order to prioritize Adopted Needs Plan projects in a fiscally constrained scenario.

Year of Expenditure Approach

According to Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) regulations (Statewide and Metropolitan Planning Rule – 72 Federal Register 7224) adopted in 2007, the LRTP financial plan must be developed in year of expenditure (YOE) dollars, rather than in base year dollars as was done in the past. The rationale for this requirement is that cost estimates for transportation improvement projects in LRTPs have understated the costs of the improvements by not taking the effects of inflation into account. Converting the revenues and costs to YOE dollars presents a more accurate depiction of the financial resources associated with the LRTP.

Florida Department of Transportation (FDOT) revenue forecasts are now provided in YOE dollars, and FDOT provides inflation forecasts which can be used to estimate YOE project costs. For several local revenue sources, including gas taxes, local option sales tax, and impact fees, revenue growth rates were developed in consultation with MPO staff.



Revenue Forecast

Revenue streams distributed by the State via FDOT include programs for (1) the strategic intermodal system (SIS)/Florida intrastate highway system (FIHS), (2) other state highway system arterial roadways not designated as part of the SIS or FIHS, and (3) technical and operating/capital assistance for transit. There are several additional county level revenue sources for transportation improvements, including the 1-cent local option sales tax (LOST), 6-cent local option gas tax (LOGT), the 5-cent second local option gas tax (LOGT), the ninth-cent gas tax, and transportation impact fees. For the LRTP revenue forecast, an assumption was made that the 1-cent LOST, which is set to expire in 2019, would be extended to 2035. Another assumption was that the 5-cent second LOGT and the ninth-cent gas tax would be adopted by 2013.

Table 1 presents a summary of the forecast revenues for Indian River County to the year 2035 in YOE dollars. Over the LRTP planning horizon, a total of \$565.1 million in revenues is expected to be available to fund roadway improvements in Indian River County. However, if the 5-cent second LOGT and ninth-cent gas tax are not adopted, the amount of revenues would decrease by \$54.5 million to \$510.6 million, representing an approximately 10 percent reduction in revenues.

Table 1: Projected Revenues (Millions of YOE Dollars)

Capital Revenues	FYs 2016-20	FYs 2021-25	FYs 2026-30	FYs 2031-35	20-Year Total
State					
SIS/FIHS facilities	\$0.3	\$150.8	\$0	\$0	\$151.1
Other arterial roads	\$20.8	\$23.5	\$25.3	\$27.7	\$97.3
Sub-total	\$21.1	\$174.3	\$25.3	\$27.7	\$248.4
County					
1-cent local option sales tax (LOST)	\$18.2	\$20.0	\$22.4	\$25.1	\$85.7
Local option gas tax (LOGT)	\$10.6	\$11.3	\$12.6	\$14.0	\$48.5
2 nd local option gas tax (LOGT) and ninth-cent gas tax	\$12.1	\$13.0	\$14.1	\$15.3	\$54.5
Transportation impact fees	\$33.1	\$33.1	\$30.9	\$30.9	\$128.0
Sub-total	\$74.0	\$77.4	\$80.0	\$85.3	\$316.7
Total	\$95.1	\$251.7	\$105.3	\$113.0	\$565.1

Notes: Sub-totals may not match the sum of individual revenue sources due to rounding



Cost Estimates

For the improvement projects included in the Adopted Needs Plan, base year (2010) cost estimates were developed. The base year cost estimates were then determined for YOE out to year 2035 using inflation factors provided by FDOT. This approach identifies how much the various Adopted Needs Plan improvement projects would cost, depending on the timeframe when the projects are implemented. Items considered in the estimates include costs associated with project development and environment (PD&E) studies, preliminary engineering (PE), right-of-way acquisition, construction, and construction engineering and inspection (CEI).

Table 2 summarizes the cost estimates for the Adopted Needs Plan projects separated into major funding categories, and Table A-1 in the appendix provides cost estimates for the individual Adopted Needs Plan projects. Table 2 illustrates how the YOE methodology accounts for the impacts of inflation to the costs associated with the implementation of the Adopted Needs Plan projects. If, for example, all the Adopted Needs Plan roadway improvement projects were implemented between 2016 and 2020, their cost would be \$610 million. If the same Adopted Needs Plan roadway improvement projects were implemented between 2031 and 2035, their cost would be \$983 million.

Table 2: Estimated Cost of Needs Plan Roadway Projects (millions of YOE dollars)

Funding Source	FYs 2016-20	FYs 2021-25	FYs 2026-30	FYs 2031-35
SIS/FIHS	\$145,000,000	\$170,000,000	\$200,000,000	\$235,000,000
Other state	\$116,000,000	\$136,000,000	\$160,000,000	\$188,000,000
County	\$349,000,000	\$409,000,000	\$478,000,000	\$560,000,000
Total	\$610,000,000	\$715,000,000	\$838,000,000	\$983,000,000

Note: Values were rounded to the nearest million

Prioritization of Adopted Needs Plan Highway Projects

Roadway improvement projects included in the Adopted Needs Plan were prioritized and evaluated based on the following 10 criteria.

- Volume to capacity (V/C) ratio
 - V/C > 1.2 = 1 point
 - V/C > 1.0 < 1.2 = 0.5 points



- $V/C < 1.0 = 0$ points
- Project benefit
 - Improves capacity and eliminates the need to widen an adjacent roadway = 1 point
 - Improves capacity = 0.5 points
- Connectivity
 - Provides a new connection = 1 point
 - Widens an existing roadway = 0 points
- Project location
 - Inside Urban Service Area (USA) = 1 point
 - Partially outside USA = 0.5 points
 - Outside of USA = 0 points
- Emergency evacuation routes
 - Emergency evacuation route = 1 point
 - Not an emergency evacuation route = 0 points
- Truck routes
 - Truck route = 1 point
 - Not a truck route = 0 points
- Intermodal/transit routes
 - Designated intermodal/transit route = 1 point
 - Not a designated intermodal/transit route = 0 points
- Regionalism
 - Improves a road that provides connection to an adjacent county or to a SIS facility = 1 point
 - Does not meet the above criteria = 0 points
- Environmental impacts
 - Minimal impacts = 1 point
 - Unknown/not assessed = 0 points
 - Documented negative impacts = -1 point
- Public input
 - Favorable = 1 point
 - Unknown/mixed input = 0 points
 - Unfavorable = -1 point



Table A-2 in the appendix presents the evaluation of the Adopted Needs Plan projects. The projects in Table A-2 are sorted by their ranking within major funding categories. The results of the evaluation were taken into consideration in the development of the CFP. However, due to the financial constraints associated with the costs of the Adopted Needs Plan projects versus the revenues available to fund the improvements, some projects which perform well in the evaluation will not be able to be included in the CFP because of their high costs. On the other hand, some projects which did not perform as well in the evaluation will be included in the CFP because of their relatively low costs.

Development of Highway Cost Feasible Plan

Given that there is not enough revenue forecast to be available to fund all the Adopted Needs Plan projects, a cost feasible plan (CFP) was developed to guide transportation improvements in Indian River County to the year 2035. The CFP contains Adopted Needs Plan projects grouped into implementation timeframes based on funding availability. The implementation timeframes are from 2016 to 2020, 2021 to 2025, 2026 to 2030, and 2031 to 2035. Since transportation improvement projects that are programmed for implementation by 2015 have their funding sources already allocated, those projects were considered to be committed improvements.

As demonstrated by the information presented in Tables 1 and 2, the cost of the Adopted Needs Plan projects exceeds the amount of revenue forecast to be available to fund those projects. Therefore, some projects in the Adopted Needs Plan cannot be funded because of a shortage of revenue. Alternative CFPs were developed as part of the effort to determine (1) which Adopted Needs Plan projects should be funded and (2) when these projects should be implemented. The CFP was developed in an iterative manner. The CFP alternatives were presented to the MPO committees and citizens for input. Based on the input received during those meetings, alternatives were refined and new alternatives were developed. The following sections summarize the development of the CFP.

Cost Feasible Plan Alternatives – Stage I

During the August/September 2010 MPO Committee and Board meetings, two CFP alternatives (Alternatives A and B) were presented. For both of these CFP alternatives, a set of “core



projects,” which address the County’s most critical mobility needs, were included. Table 3 lists the core projects that are common to both CFP alternatives.

Table 3: Core Cost Feasible Roadway Projects

Roadway	Project Limits	Project Description
I-95	St. Lucie C.L. to Brevard C.L.	Widen from 4 to 6 lanes
US 1	St. Lucie C.L. to Highland Drive	Widen from 4 to 6 lanes
US 1	53 rd Street to CR 512	Widen from 4 to 6 lanes
CR 510	CR 512 to Intracoastal Waterway	Widen from 2 to 4 lanes
CR 512	Willow Street to I-95	Widen from 2 to 4 lanes
Oslo Road	I-95 to 58 th Avenue	Widen from 2 to 4 lanes
43 rd Avenue	St. Lucie C.L. to 16 th Street	Widen from 2 to 4 lanes
66 th Avenue	41 st Street to Barber Street	Widen from 2 to 4 lanes
82 nd Avenue	26 th Street to Laconia Street	New 2-lane road

Note: Some of the above projects may be implemented in phases

Cost Feasible Plan Alternative A

CFP Alternative A includes roadway widenings along key travel corridors exhibiting the greatest travel demand in the GTCRPM. Table 4 lists projects, beyond the core projects identified in Table 3, which are included in CFP Alternative A. Figure 1 depicts the projects and types of improvements for CFP Alternative A, and Table 5 summarizes the CFP Alternative A projects by major funding categories and implementation timeframes. Table A-3 in the appendix provides a detailed implementation plan for the individual CFP Alternative A projects.



Table 4: Alternative A - Cost Feasible Roadway Projects (beyond core projects)

Roadway	Project Limits	Project Description
CR 510	Intracoastal Waterway to SR A1A	Widen from 2 to 4 lanes
Roseland Road	CR 512 to US 1	Widen from 2 to 4 lanes
Indian River Boulevard	20 th Street to 45 th Street	Widen from 4 to 6 lanes
25 th Street SW	27 th Avenue to 58 th Avenue	Widen from 2 to 4 lanes
27 th Avenue	St. Lucie C.L. to Oslo Road	Widen from 2 to 4 lanes
4 th Street	66 th Avenue to 98 th Avenue	New 2-lane road
12 th Street	58 th Avenue to 66 th Avenue	New 2-lane road
33 rd Street	66 th Avenue to 74 th Avenue	New 2-lane road
53 rd Street	58 th Avenue to 82 nd Avenue	New 2-lane road
69 th Street	66 th Avenue to Fellsmere N-S Rd 1	New 2-lane road
58 th Avenue	25 th Street SW to Oslo Road	New 4-lane road
74 th Avenue	Oslo Road to 8 th Street	New 2-lane road
74 th Avenue	26 th Street to 37 th Street	New 2-lane road
98 th Avenue	4 th Street to SR 60	New 2-lane road
5 th Street SW	Old Dixie Hwy to 20 th Avenue	New 2-lane road
Oslo Road Interchange ⁽¹⁾	I-95 at Oslo Road	New Interchange

Notes: Some of the above projects may be implemented in phases

(1) This project is contingent upon FHWA permitting and approval; funding source needs to be identified.

Table 5: Alternative A - Estimated Cost of Roadway Projects (millions of YOE dollars)

Funding Source	FYs 2016-20	FYs 2021-25	FYs 2026-30	FYs 2031-35
SIS/FIHS	\$0	\$141,000,000	\$0	\$0
Other state	\$19,000,000	\$25,000,000	\$30,000,000	\$24,000,000
County	\$70,000,000	\$79,000,000	\$73,000,000	\$87,000,000
Total	\$89,000,000	\$245,000,000	\$103,000,000	\$111,000,000

Note: Values were rounded to the nearest million

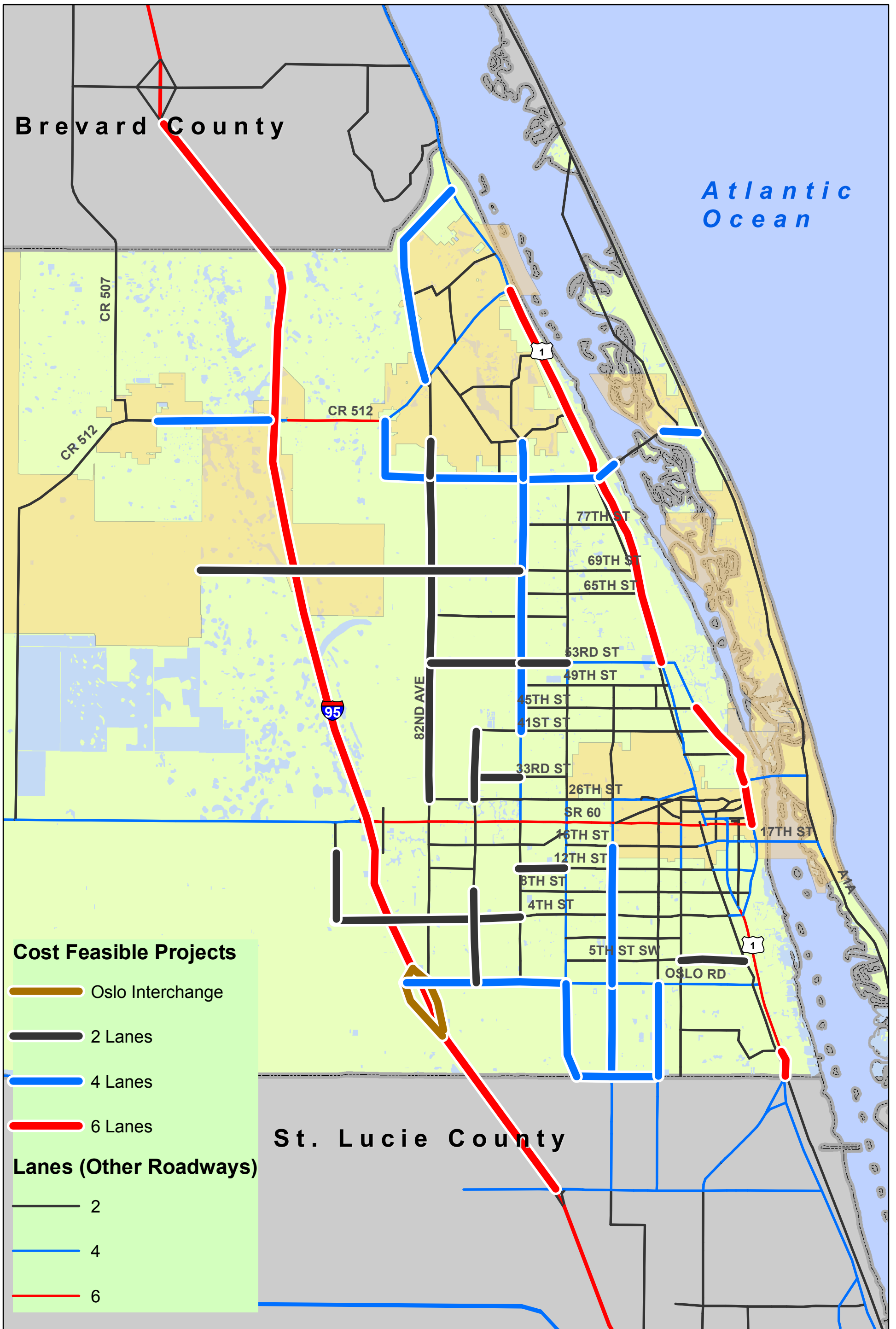


Figure 1
2035 Cost Feasible Plan - Alternative A



Cost Feasible Plan Alternative B

CFP Alternative B emphasizes new roadway construction aimed at developing a denser roadway grid network within the County’s urban service boundary. Table 6 lists projects, beyond the core projects identified in Table 3, which are included in CFP Alternative B. While Figure 2 depicts the projects and types of improvements for CFP Alternative B, Table 7 summarizes the CFP Alternative B projects by major funding categories and implementation timeframes. Table A-4 in the appendix provides a detailed implementation plan for the individual CFP Alternative B projects.

Table 6: Alternative B - Cost Feasible Roadway Projects (beyond core projects)

Roadway	Project Limits	Project Description
CR 510	Intracoastal Waterway to SR A1A	Widen from 2 to 4 lanes
Indian River Boulevard	20 th Street to 45 th Street	Widen from 4 to 6 lanes
Fleming Street	Airport Perimeter Road to CR 512	Improved 2-lane road
Airport Perimeter Road	US 1 to Roseland Road	New 2-lane road
4 th Street	66 th Avenue to 98 th Avenue	New 2-lane road
12 th Street	58 th Avenue to 74 th Avenue	New 2-lane road
33 rd Street	66 th Avenue to 74 th Avenue	New 2-lane road
53 rd Street	58 th Avenue to 66 th Avenue	New 2-lane road
69 th Street	66 th Avenue to Fellsmere NS Rd-1	New 2-lane road
58 th Avenue	25 th Street SW to Oslo Road	New 2-lane road
74 th Avenue	Oslo Road to 8 th Street	New 2-lane road
74 th Avenue	26 th Street to 37 th Street	New 2-lane road
98 th Avenue	4 th Street to SR 60	New 2-lane road
1 st Street SW	58 th Avenue to 82 nd Avenue	New 2-lane road
5 th Street SW	Old Dixie Hwy to 20 th Avenue	New 2-lane road
5 th Street SW	58 th Avenue to 82 nd Avenue	New 2-lane road
17 th Street SW	20 th Avenue to 58 th Avenue	New 2-lane road
Oslo Road Interchange ⁽¹⁾	I-95 at Oslo Road	New Interchange

Notes: Some of the above projects may be implemented in phases

(1) This project is contingent upon FHWA permitting and approval; funding source needs to be identified.

Table 7: Alternative B - Estimated Cost of Roadway Projects (millions of YOE dollars)

Funding Source	FYs 2016-20	FYs 2021-25	FYs 2026-30	FYs 2031-35
SIS/FIHS	\$0	\$141,000,000	\$0	\$0
Other state	\$19,000,000	\$25,000,000	\$30,000,000	\$24,000,000
County	\$70,000,000	\$79,000,000	\$72,000,000	\$86,000,000
Total	\$89,000,000	\$245,000,000	\$102,000,000	\$110,000,000

Note: Values were rounded to the nearest million

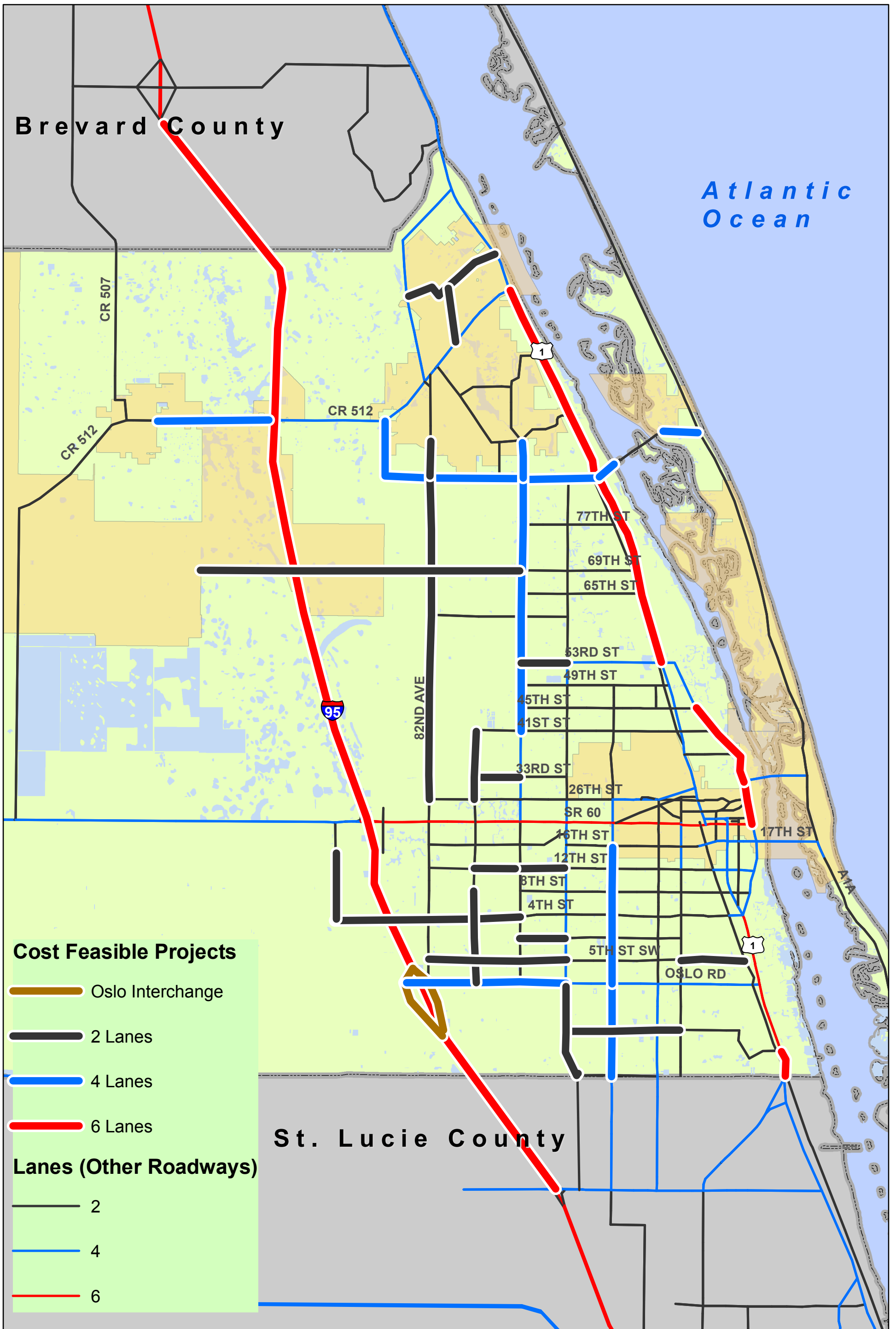


Figure 2
2035 Cost Feasible Plan - Alternative B



MPO Committee Input

Both the MPO Committees and Board expressed preference for Alternative A; however, the MPO Board recommended developing a new CFP alternative based on the assumption that neither the second local option gas tax (LOGT) nor the ninth-cent gas tax will be adopted. Based on this input, CFP Alternative B was dropped from further consideration and a new reduced revenue alternative was developed.

Cost Feasible Plan Alternatives – Stage II

During the next phase of the CFP development, Alternative A was refined based on additional project cost information and refined revenue projections, and the new CFP Alternative C was developed based on the reduced revenue scenario. For both of these CFP alternatives, the set of “core projects” that was previously defined in Table 3 was maintained with the exception that widening of US 1 between CR 510 and CR 512 was no longer maintained as a core project.

Cost Feasible Plan Alternative A (Revised)

Table 8 lists projects, beyond the core projects identified in Table 3, which are included in CFP Alternative A. The differences between the initial and revised CFP Alternative A are listed below.

- Widening of 26th Street between 43rd Avenue and 58th Avenue is included
- Widening of US 1 between CR 510 and CR 512 is removed
- Widening of CR 510 between SR A1A and Intracoastal Waterway is removed
- Extension of 33rd Street between 66th Avenue and 74th Avenue is removed
- Extension of 74th Avenue between 26th Street and 33rd Street is removed

Figure 3 depicts the projects and types of improvements for CFP Alternative A, and Table 9 summarizes the CFP Alternative A projects by major funding categories and implementation timeframes. Table A-5 in the appendix provides a detailed implementation plan for the individual CFP Alternative A projects.

Figure 4 depicts the forecast volume to capacity (V/C) ratios for CFP Alternative A. As depicted in Figure 4, the traffic volumes on a number of roadway segments are forecast to exceed the V/C ratios for their adopted level of service (LOS D). Some of these capacity deficiencies carry over



from the Adopted Needs Plan, where policy decisions were made not to widen roadways such as US-1 to 6 lanes through Sebastian, SR A1A to 4 lanes, and portions of SR 60 and US-1 to 8 lanes. Additional capacity deficiencies result from there not being enough revenues to fund all the Adopted Needs Plan projects. Roadways exhibiting capacity deficiencies are prime candidates for congestion management process strategies, and traffic operations and intersection improvements.

Table 8: Alternative A - Cost Feasible Roadway Projects (beyond core projects)

Roadway	Project Limits	Project Description
Roseland Road	CR 512 to US 1	Widen from 2 to 4 lanes
Indian River Boulevard	20 th Street to 45 th Street	Widen from 4 to 6 lanes
26 th Street	43 rd Avenue to 58 th Avenue	Widen from 2 to 4 lanes
27 th Avenue	St. Lucie C.L. to Oslo Road	Widen from 2 to 4 lanes
4 th Street	66 th Avenue to 98 th Avenue	New 2-lane road
5 th Street SW	Old Dixie Hwy to 20 th Avenue	New 2-lane road
12 th Street	58 th Avenue to 66 th Avenue	New 2-lane road
25 th Street SW	27 th Avenue to 58 th Avenue	New 2-lane road
53 rd Street	58 th Avenue to 82 nd Avenue	New 2-lane road
58 th Avenue	25 th Street SW to Oslo Road	New 2-lane road
69 th Street	66 th Avenue to Fellsmere N-S Rd 1	New 2-lane road
74 th Avenue	Oslo Road to 8 th Street	New 2-lane road
98 th Avenue	4 th Street to SR 60	New 2-lane road
Oslo Road Interchange ⁽¹⁾	I-95 at Oslo Road	New Interchange

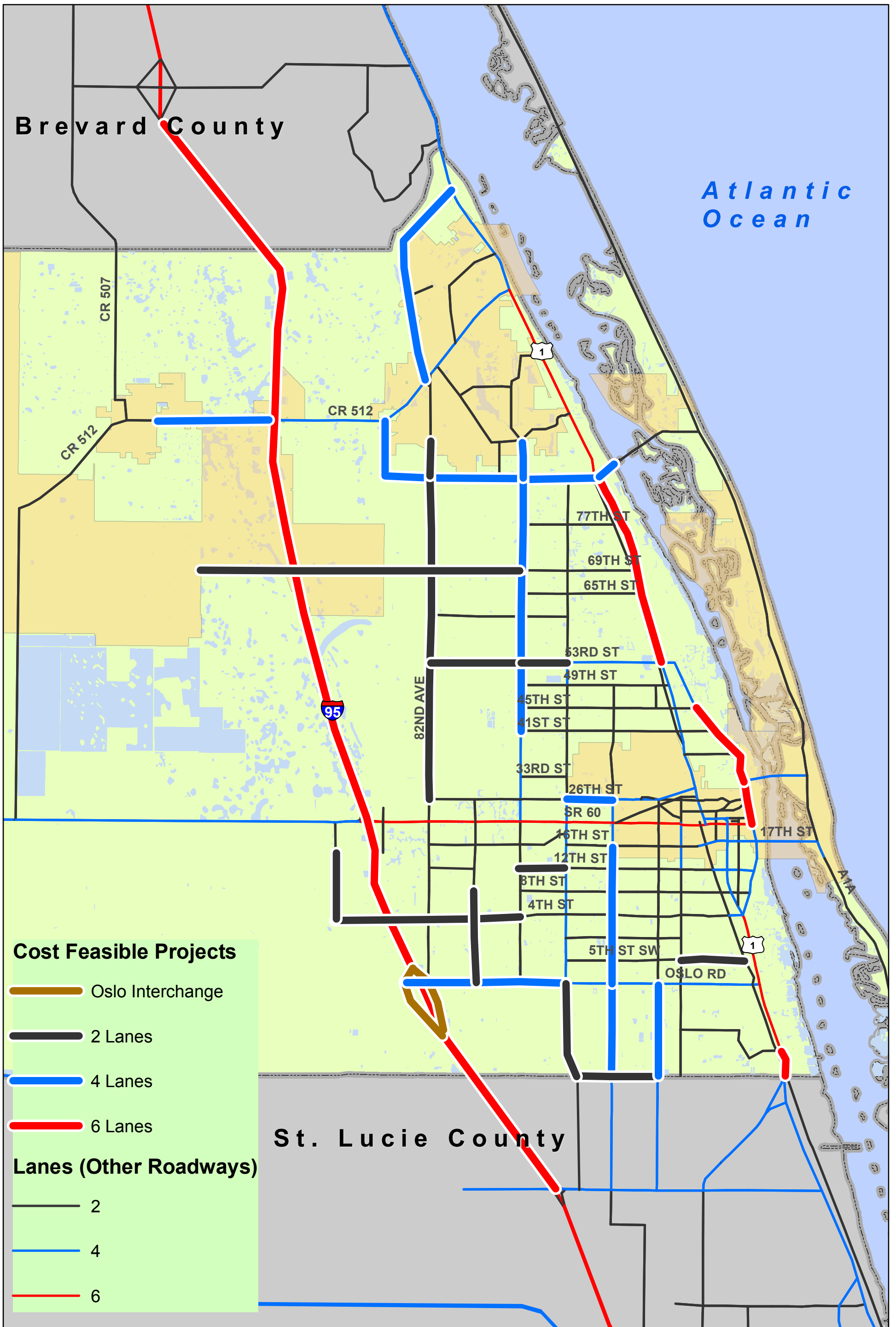
Notes: Some of the above projects may be implemented in phases

(1) This project is contingent upon FHWA permitting and approval; funding source needs to be identified.

Table 9: Alternative A - Estimated Cost of Roadway Projects (millions of YOE dollars)

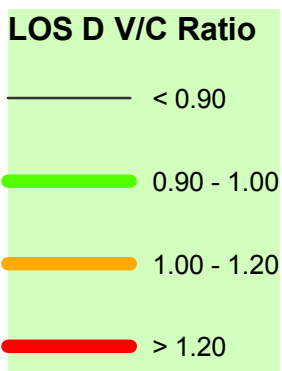
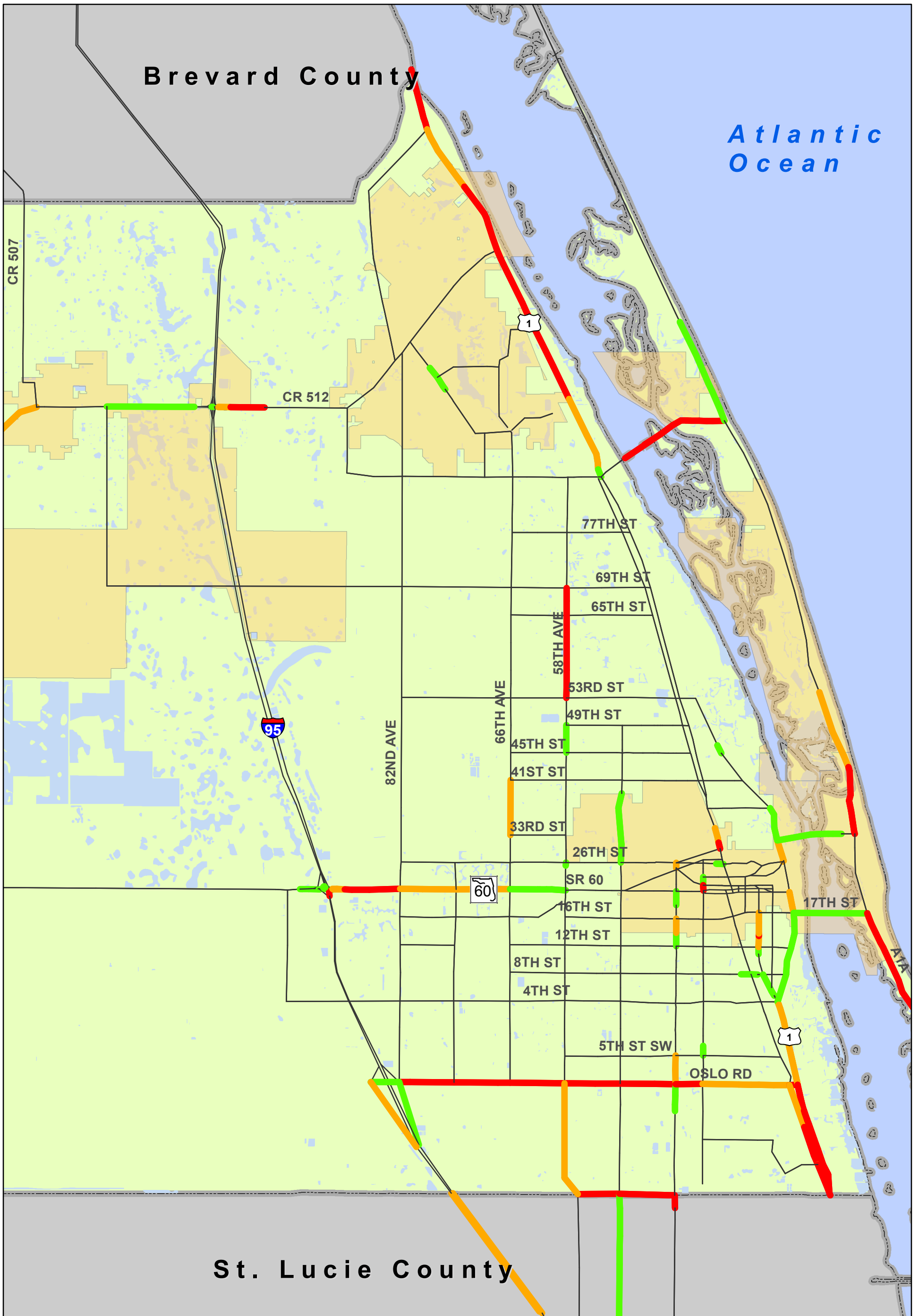
Funding Source	FYs 2016-20	FYs 2021-25	FYs 2026-30	FYs 2031-35
SIS/FIHS	\$0	\$141,000,000	\$0	\$0
Other state	\$21,000,000	\$12,000,000	\$35,000,000	\$28,000,000
County	\$70,000,000	\$75,000,000	\$82,000,000	\$85,000,000
Total	\$91,000,000	\$228,000,000	\$117,000,000	\$113,000,000

Note: Values were rounded to the nearest million



**Indian River County
2035 Long Range Transportation Plan Update**

**Figure 3
2035 Cost Feasible Plan - Alternative A**



**Indian River County
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**Figure 4
2035 Cost Feasible Plan - Alternative A**





Cost Feasible Plan Alternative C

CFP Alternative C was developed with the assumption that neither the 5-cent second LOGT nor the ninth-cent gas tax would be adopted within the LRTP planning horizon. This assumption results in approximately \$54.5 million less revenue for county funded roadway projects between 2016 and 2035. Table 10 lists projects, beyond the core projects identified in Table 3, which are included in CFP Alternative C. Figure 5 depicts the projects and types of improvements for CFP Alternative C, and Table 11 summarizes the CFP Alternative C projects by major funding categories and implementation timeframes. Table A-6 in the appendix provides a detailed implementation plan for the individual CFP Alternative C projects.

Figure 6 depicts the forecast volume to capacity (V/C) ratios for CFP Alternative C. As depicted in Figure 6, the traffic volumes on a number of roadway segments are forecast to exceed the V/C ratios for their adopted level of service (LOS D). CFP Alternative C exhibits greater capacity deficiencies than CFP Alternative A, particularly along CR 512 to the west of I-95 and along 27th Avenue and 58th Avenue in the southern part of Indian River County.

Table 10: Alternative C - Cost Feasible Roadway Projects (beyond core projects)

Roadway	Project Limits	Project Description
Roseland Road	CR 512 to US 1	Widen from 2 to 4 lanes
Indian River Boulevard	20 th Street to 45 th Street	Widen from 4 to 6 lanes
26 th Street	43 th Avenue to 58 th Avenue	Widen from 2 to 4 lanes
4 th Street	66 th Avenue to 98 th Avenue	New 2-lane road
25 th Street SW	27 th Avenue to 58 th Avenue	New 2-lane road
53 rd Street	58 th Avenue to 66 th Avenue	New 2-lane road
58 th Avenue	25 th Street SW to Oslo Road	New 2-lane road
98 th Avenue	4 th Street to SR 60	New 2-lane road
Oslo Road Interchange ⁽¹⁾	I-95 at Oslo Road	New Interchange

Notes: Some of the above projects may be implemented in phases

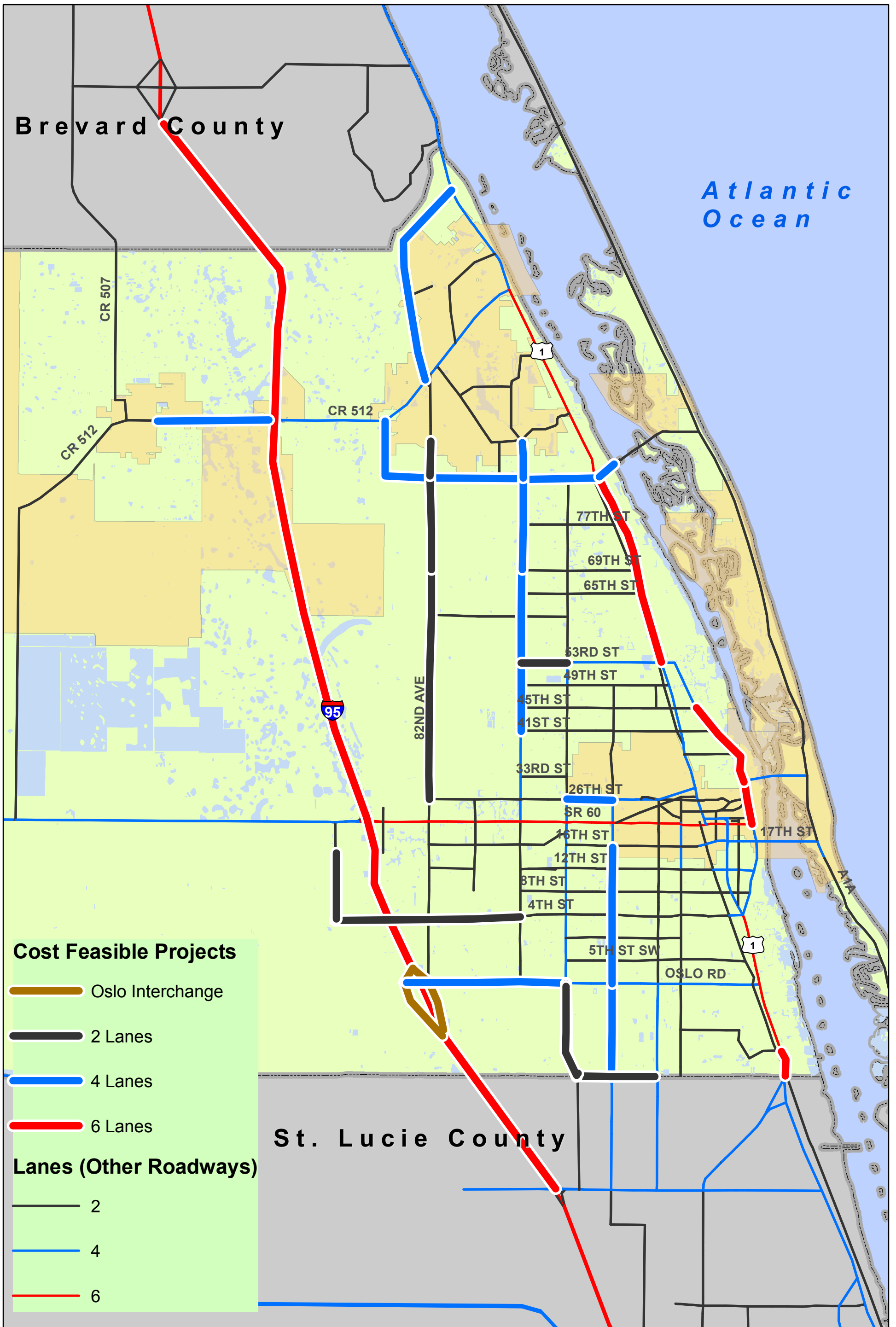
(1) This project is contingent upon FHWA permitting and approval; funding source needs to be identified.



Table 11: Alternative C - Estimated Cost of Roadway Projects (millions of YOE dollars)

Funding Source	FYs 2016-20	FYs 2021-25	FYs 2026-30	FYs 2031-35
SIS/FIHS	\$0	\$141,000,000	\$0	\$0
Other state	\$21,000,000	\$12,000,000	\$35,000,000	\$28,000,000
County	\$58,000,000	\$67,000,000	\$60,000,000	\$70,000,000
Total	\$79,000,000	\$220,000,000	\$95,000,000	\$98,000,000

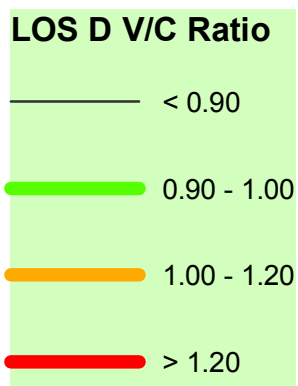
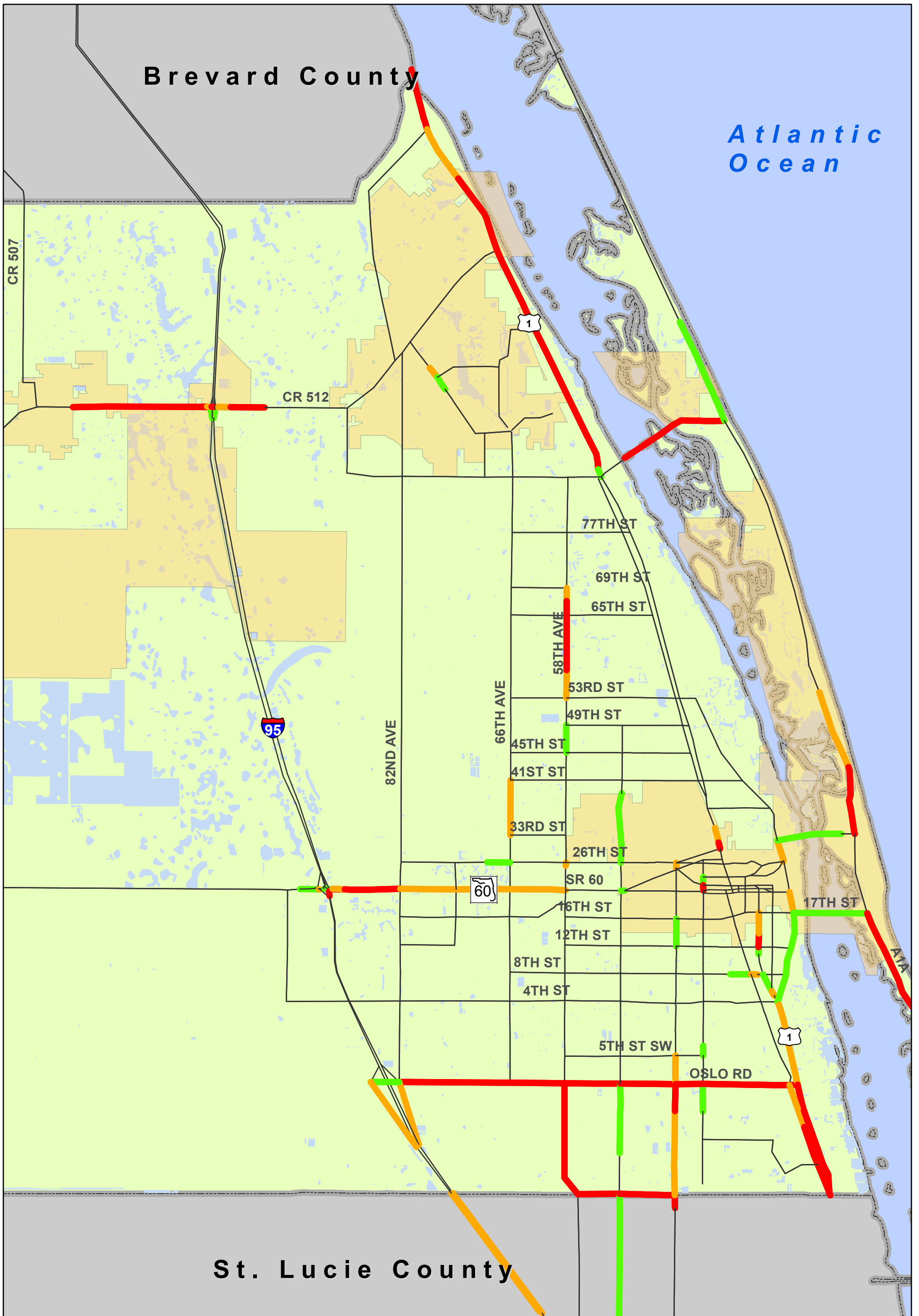
Note: Values were rounded to the nearest million



**Indian River County
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**Figure 5
2035 Cost Feasible Plan - Alternative C**





**Indian River County
2035 Long Range Transportation Plan Update**

**Figure 6
2035 Cost Feasible Plan - Alternative C**





Comparison of CFP Alternatives A and C

The CFP Alternative C, which assumes less revenue for the county funded highway projects in comparison to the CFP Alternative A, results in fewer roadway improvement projects. If the 5-cent second LOGT and the ninth-cent gas tax are not adopted as assumed in CFP Alternative C, the projects listed in Table 12 may not be implemented.

Table 12: Roadway Improvement Projects Not Included in CFP Alternative C

Roadway	Project Limits	Project Description
27 th Avenue	St. Lucie C.L. to Oslo Road	Widen from 2 to 4 lanes
5 th Street SW	Old Dixie Hwy to 20 th Avenue	New 2-lane road
12 th Street	58 th Avenue to 66 th Avenue	New 2-lane road
53 rd Street	66 th Avenue to 82 nd Avenue	New 2-lane road
69 th Street	66 th Avenue to Fellsmere N-S Rd 1	New 2-lane road
74 th Avenue	8 th Street to Oslo Road	New 2-lane road

Measures of Effectiveness

Measures of Effectiveness (MOEs) can be used to evaluate and compare alternatives. The network utilization and congestion indicators for Alternatives A and C are presented in Table 13. In general, Alternative C results in slightly more congested conditions than Alternative A, exhibiting more roadway segments operating below their adopted level of service standard and increased travel times reflecting additional delay.



Table 13: Measures of Effectiveness (2035)

MOE	Alternative A	Alternative C
Centerline miles	567.4	548.7
Centerline miles over LOS D	47.3	52.7
% Centerline miles over LOS D	8.3	9.6
Vehicle miles traveled (VMT)	9,141,418	9,054,846
VMT over LOS D	1,793,121	2,097,622
% VMT over LOS D	19.6	23.2
Vehicle hours traveled (VHT)	286,774	292,346
VHT over LOS D	89,582	105,652
% VHT over LOS D	31.2	36.1
Mean system speed	31.9	31.0

Adopted Cost Feasible Plan Alternative

CFP Alternative A was advanced as the preferred CFP for the 2035 LRTP Update. The implementation of CFP Alternative A is forecast to result in fewer vehicle miles traveled in congested conditions and fewer vehicle hours traveled because of reduced delays. CFP Alternative A also more effectively accomplishes several of the goals of the 2035 LRTP Update such as providing a better connected roadway grid network. Based on the results of the evaluation of CFP Alternatives A and C, the MPO Board adopted CFP Alternative A as the preferred option for the 2035 LRTP Update.



Multimodal Improvements

The LRTP includes multimodal improvements that benefit transit, freight, pedestrian, and bicycle users. The highway plan includes improvements along corridors that are important for freight movement. The following sections address how long-term transit, bicycle, and pedestrian improvements are identified and implemented in Indian River County.

Transit Improvements

The *Strategic Service Plan* outlined in the Indian River County Transit Development Plan (TDP) identifies needs for transit service and specific improvements to meet those needs over a ten-year period. Service improvements outlined in the plan include (1) extending weekday and Saturday operations to provide service over a longer portion of the day and (2) implementing frequency improvements to achieve headways of thirty minutes on high performing routes. These service improvements are the highest priority transit improvements in Indian River County. To better serve transportation disadvantaged population within the community, the TDP recommends extending Route 4 from South Vero Plaza to Lakewood Park in St. Lucie County via US-1.

The TDP is updated on an annual basis (minor TDP Updates), and a major TDP Update is required every five years. Future TDP Updates will continue to guide transit service improvements in Indian River County.

Additional transit improvements will be targeted to corridors exhibiting transit supportive land use patterns including a higher density/intensity of uses, a mix of land uses within close proximity, and interconnected street networks of a pedestrian scale with convenient and direct connections to transit stops. Based on the Land Use Vision Plan adopted as part of the 2035 LRTP Update, corridors which offer the highest potential for transit ridership include US-1, CR 512, and SR 60. Transit improvements which may be targeted to these transit priority corridors include service improvements, enhanced stops and transfer hubs, and intelligent transportation system (ITS) enhancements such as real-time passenger information and transit signal priority.

Bicycle and Pedestrian Facility Improvements

Bicycle and pedestrian facility improvements may be implemented as part of overall roadway improvement projects or as standalone projects. Bicycle and pedestrian facility improvements may be incorporated as “complete streets” elements to overall roadway improvement projects.



Complete street elements may include sidewalks, bike lanes (or wide paved shoulders), comfortable and accessible transit stops, crossing opportunities, etc. Indian River County allocates \$200,000 per year of gas tax revenues to construct bicycle and pedestrian facilities as standalone projects. In addition, State Enhancement Funds may also be utilized to implement bicycle and pedestrian facility improvement projects.

Bicycle and pedestrian facility improvements are identified through the MPO's planning process. The MPO last completed a major update of its Bicycle and Pedestrian Plan in 2004. In addition, the MPO completed Greenways Plans for Central Indian River County in 2007 and for North Indian River County in 2008. The MPO anticipates completing a Bicycle and Pedestrian Plan Update in 2011 and a South Indian River County Greenways Plan in 2012. These plans will continue to guide bicycle and pedestrian facilities improvements in Indian River County.



APPENDIX

Table A-1: Indian River County 2035 LTRP Update - YOE Cost of Needs Plan Projects

SIS Corridors					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
I-95 widening from St. Lucie County Line to Brevard County Line	Widening from 4 lanes to 6 lanes	\$120,502,358.54	\$141,329,902.07	\$166,240,051.83	\$195,540,748.48
Oslo Road Interchange	New interchange at Oslo Road and I-95	\$24,475,935.37	\$28,706,338.95	\$33,765,984.45	\$39,717,419.48
Sub-Total		\$144,978,293.91	\$170,036,241.02	\$200,006,036.28	\$235,258,167.96
Non-SIS State Highways and County Roads Expected to be Federalized					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
US 1 from 53rd St to CR 510	Widening from 4 lanes to 6 lanes	\$18,082,121.59	\$21,207,422.86	\$24,945,344.36	\$29,342,094.48
US 1 from CR 510 Schumann Dr	Widening from 4 lanes to 6 lanes	\$16,025,646.32	\$18,795,507.85	\$22,108,316.45	\$26,005,025.25
US 1 from Shumann Dr to CR 512	Widening from 4 lanes to 6 lanes	\$8,676,977.55	\$10,176,700.29	\$11,970,398.05	\$14,080,244.61
US 1 from Highland Dr to St. Lucie County Line	Widen from 4 lanes to 6 lanes	\$2,918,723.85	\$3,433,164.51	\$4,038,278.08	\$4,750,046.15
Indian River Blvd from 20th St to Merrill Barber Bridge	Widen from 4 lanes to 6 lanes	\$5,127,704.15	\$6,031,489.38	\$7,094,571.58	\$8,345,027.70
CR 510 from SR A1A to Intracostal WWY	Widen from 2 lanes to 4 lanes	\$2,837,405.37	\$3,289,330.49	\$3,813,235.56	\$4,420,585.12
Oslo Road from I-95 to 58th Ave	Widen from 2 lanes to 4 lanes	\$10,462,948.71	\$12,271,357.46	\$14,434,249.72	\$16,978,363.30
82nd Avenue from 26th St to 69th St	Construct a 2-lane undivided road	\$20,181,041.94	\$23,738,058.32	\$27,922,017.83	\$32,843,422.54
82nd Avenue from 69th St to CR 510	Construct a 2-lane undivided road	\$8,318,782.59	\$9,785,012.43	\$11,509,673.11	\$13,538,314.44
26th Street from 43rd Ave to 58th Ave	Widen from 2 lanes to 4-lanes	\$9,111,231.15	\$10,686,009.98	\$12,569,476.29	\$14,784,913.59
26th Street from 58th Ave to 66th Ave	Widen from 2 lanes to 4-lanes	\$8,608,430.42	\$10,096,305.52	\$11,875,833.27	\$13,969,012.28
Sub-Total		\$110,351,013.62	\$129,510,359.07	\$152,281,394.29	\$179,057,049.46
County and Municipal Roadways					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
Roseland Rd from CR 512 to US1	Widen from 2 lanes to 4 lanes	\$19,459,563.03	\$22,558,966.92	\$26,152,025.50	\$30,317,365.15
CR 510 from CR 512 to 66th Avenue	Widen from 2 lanes to 4 lanes	\$37,469,670.12	\$43,437,617.14	\$50,356,103.40	\$58,376,525.16
CR 510 from 66th Avenue to US 1	Widen from 2 lanes to 4 lanes	\$14,300,079.44	\$16,577,711.36	\$19,218,110.99	\$22,279,057.83
CR 510 from US 1 to ICWW	Widen from 2 lanes to 4 lanes	\$4,533,016.87	\$5,255,008.94	\$6,091,995.62	\$7,062,292.59
CR 512 from I-95 to Willow Street	Widen from 2 lanes to 4 lanes	\$7,818,656.22	\$9,063,965.46	\$10,507,620.16	\$12,181,211.64
CR 512 from I-95 to CR 510	Widen from 4 lanes to 6 lanes	\$17,335,823.20	\$20,096,970.39	\$23,297,896.75	\$27,008,647.68
Indian River Blvd from Merrill Barber Bridge to 45th St	Widen from 4 lanes to 6 lanes	\$7,959,844.19	\$9,227,641.00	\$10,697,364.98	\$12,401,177.88
66th Ave from 41 St to 69th Street	Widen from 2 lanes to 4 lanes	\$27,038,123.85	\$31,803,737.53	\$37,409,316.06	\$44,002,907.73
66th Ave from 69th Street to CR 510	Widen from 2 lanes to 4 lanes	\$15,450,356.49	\$18,173,564.30	\$21,376,752.03	\$25,144,518.70
25th Street SW from 27th Ave to 58th Ave	Construct/upgrade a 2-lane undivided road	\$6,039,704.48	\$7,104,234.63	\$8,356,393.91	\$9,829,252.96
27th Ave from Oslo Rd to St. Lucie County Line	Widen from 2 lanes to 4 lanes	\$8,266,348.00	\$9,695,098.00	\$11,403,911.00	\$13,413,911.00
43rd Ave from St Lucie County line to Oslo Rd	Widen from 2 lanes to 4 lanes	\$11,676,706.00	\$13,694,899.00	\$16,108,699.00	\$18,947,943.00
43rd Ave from Oslo Rd to 16th St	Widen from 2 lanes to 4 lanes	\$17,080,792.00	\$20,033,024.00	\$23,563,951.00	\$27,717,224.00
Fellsmere N-S Rd 1 from CR 512 to 69th St	Construct a 2-lane undivided road	\$14,090,371.45	\$16,573,874.64	\$19,495,108.53	\$22,931,225.49
Fellsmere N-S Rd 2 from CR 512 to 69th St	Construct a 2-lane undivided road	\$14,090,371.45	\$16,573,874.64	\$19,495,108.53	\$22,931,225.49
74th Avenue from 26th St to 33rd St	Construct a 2-lane undivided road	\$2,229,811.69	\$2,622,827.90	\$3,085,115.33	\$3,628,883.37
Fleming St from Airport Perimeter Rd to CR 512	Construct a 2-lane undivided road	\$2,763,784.58	\$3,250,916.37	\$3,823,907.74	\$4,497,891.89
Airport Perimeter Rd from US 1 to Roseland Rd	Construct a 2-lane undivided road	\$9,666,787.23	\$11,370,610.09	\$13,374,740.82	\$15,732,110.30
Fellsmere E-W Road from CR 512 to Fellsmere N-S Rd 2	Construct a 2-lane undivided road	\$10,847,634.87	\$12,759,588.43	\$15,008,534.01	\$17,653,868.25
69th St from 66th Ave to Fellsmere N-S Rd 1	Construct a 2-lane undivided road	\$17,609,502.12	\$20,713,270.88	\$24,364,095.45	\$28,658,397.35
53rd Street from 58th Ave to 66th Ave	Construct a 2-lane undivided road	\$3,005,402.67	\$3,535,120.93	\$4,158,204.87	\$4,891,110.68
53rd Street from 66th Ave to 82nd Ave	Construct a 2-lane undivided road	\$6,010,805.34	\$7,070,241.87	\$8,316,409.74	\$9,782,221.36
33rd St from 66th Ave to 74th Ave	Construct a 2-lane undivided road	\$2,629,519.29	\$3,092,986.11	\$3,638,141.42	\$4,279,383.27
33rd St from 74th Ave to 82nd Ave	Construct a 2-lane undivided road	\$2,629,091.45	\$3,092,482.86	\$3,637,549.47	\$4,278,686.98
98th Ave from south of SR 60 to 4th St	Construct a 2-lane undivided road	\$5,741,843.81	\$6,753,874.43	\$7,944,280.86	\$9,344,502.77
74th Avenue from 8th St to Oslo Rd	Construct a 2-lane undivided road	\$3,979,193.28	\$4,680,547.34	\$5,505,518.79	\$6,475,895.87
58th Ave from Oslo Rd to 25th St SW	Construct a 2-lane undivided road	\$3,362,819.76	\$3,955,534.70	\$4,652,718.80	\$5,472,785.33
12th St from 58th Ave to 66th Ave	Construct a 2-lane undivided road	\$3,146,016.55	\$3,700,518.76	\$4,352,754.95	\$5,119,951.25
12th St from 66th Ave to 74th Ave	Construct a 2-lane undivided road	\$4,842,172.51	\$5,695,631.27	\$6,699,516.68	\$7,880,342.27
4th St from 66th Ave to 98th Ave	Construct a 2-lane undivided road	\$9,675,024.48	\$11,380,299.20	\$13,386,137.69	\$15,745,515.93
1st St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road	\$6,468,339.49	\$7,608,418.86	\$8,949,443.30	\$10,526,830.46
5th St SW from Old Dixie Hwy to 20th Ave	Construct a 2-lane undivided road	\$5,155,704.70	\$6,064,425.17	\$7,133,312.49	\$8,390,596.90
5th St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road	\$7,495,267.23	\$8,816,348.10	\$10,370,276.52	\$12,198,093.12
13th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road	\$6,060,506.31	\$7,128,702.90	\$8,385,174.85	\$9,863,106.68
17th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road	\$6,511,972.14	\$7,659,742.00	\$9,009,812.42	\$10,597,839.96
66th Ave from CR 510 to Barber Street	Widen from 2 lanes to 4 lanes	\$6,566,401.00	\$7,723,764.00	\$9,085,119.00	\$10,686,420.00
82nd Avenue from CR 510 to Laconia St	Construct a 2-lane undivided road	\$5,362,898.23	\$6,308,137.67	\$7,419,980.61	\$8,727,791.81
Sub-Total		\$354,369,925.51	\$414,854,177.78	\$485,831,103.27	\$568,976,712.10
Total Cost		\$609,699,233.04	\$714,400,777.88	\$838,118,533.85	\$983,291,929.52

Table A-2: Prioritization of Needs Plan Projects

Project	Description	2035 Volume to Capacity Ratio	Project Benefit	Connectivity	Project Location	Emergency Evacuation Routes	Truck Routes	Intermodal Connectivity	Regionalism	Environmental Impacts	Public Input	Total (out of 10)	Rank (total of 50 projects)
SIS Projects													
Oslo Road Interchange	New interchange at I-95	0	0.5	1	1	1	1	1	1	0	1	7.5	1
I-95 widening from St. Lucie County Line to Brevard County Line	Widening from 4 to 6 lanes	1	0.5	0	0.5	1	1	1	1	0	0	6	7
Non-SIS State Highways and County Roads Expected to be Federalized													
US 1 from 53rd St to CR 510	Widening from 4 to 6 lanes	1	0.5	0	1	1	1	1	1	0	0	6.5	2
US 1 from Highland Dr to St. Lucie County Line	Widening from 4 to 6 lanes	1	0.5	0	1	1	1	1	1	0	0	6.5	2
US 1 from Schumann Dr to CR 512	Widening from 4 to 6 lanes	1	0.5	0	1	1	1	1	1	0	-1	5.5	11
US 1 from CR 510 Schumann Dr	Widening from 4 to 6 lanes	1	0.5	0	1	1	1	1	1	0	-1	5.5	11
82nd Avenue from 26th St to 69th St	Construct a 2-lane undivided road	1	0.5	1	0	0	0	0	1	0	1	4.5	15
Oslo Road from I-95 to 58th Ave	Widen from 2 to 4 lanes	1	0.5	0	0.5	0	1	0	1	0	0	4	20
82nd Avenue from 69th St to CR 510	Construct a 2-lane undivided road	0	0.5	1	0	0	0	0	1	0	1	3.5	22
Indian River Blvd from 20th St to Merrill Barber Bridge	Widening from 4 to 6 lanes	1	0.5	0	1	1	0	1	0	0	-1	3.5	22
CR 510 from SR A1A to Intracoastal WWY	Widen from 2 to 4 lanes	1	0.5	0	1	1	1	0	0	-1	0	3.5	22
26th Street from 58th Ave to 66th Ave	Widen from 2 to 4 lanes	0	0.5	0	1	0	0	1	0	0	1	3.5	22
26th Street from 43rd Ave to 58th Ave	Widen from 2 to 4 lanes	0	0.5	0	1	0	0	1	0	0	1	3.5	22
County and Municipal Roadways													
CR 510 from CR 512 to 66th Avenue	Widen from 2 to 4 lanes	1	0.5	0	1	1	1	1	1	0	0	6.5	2
CR 510 from 66th Avenue to US 1	Widen from 2 to 4 lanes	1	0.5	0	1	1	1	1	1	0	0	6.5	2
CR 512 from I-95 to Willow Street	Widen from 2 to 4 lanes	1	0.5	0	1	1	1	1	1	0	0	6.5	2
CR 512 from I-95 to CR 510	Widen from 4 lanes to 6 lanes	0.5	0.5	0	1	1	1	1	1	0	0	6	7
66th Ave from 41 Street to 69th Street	Widen from 2 to 4 lanes	1	1	0	1	1	0	0	1	0	1	6	7
66th Ave from 69th Street to CR 510	Widen from 2 to 4 lanes	1	1	0	1	1	0	0	1	0	1	6	7
CR 510 from US 1 to ICWW	Widen from 2 to 4 lanes	1	0.5	0	1	1	1	1	0	0	0	5.5	11
66th Ave from CR 510 to Barber Street	Widen from 2 to 4 lanes	0	1	0	1	1	0	0	1	0	1	5	14
43rd Ave from St Lucie County line to Oslo Rd	Widen from 2 to 4 lanes	0.5	1	0	1	1	1	0	1	0	-1	4.5	15
43rd Ave from Oslo Rd to 16th St	Widen from 2 to 4 lanes	0.5	1	0	1	1	1	0	1	0	-1	4.5	15
Airport Perimeter Rd from US 1 to Roseland Rd	Construct a 2-lane undivided road	0	0.5	1	1	0	1	1	0	0	0	4.5	15
Roseland Rd from CR 512 to US1	Widen from 2 to 4 lanes	1	0.5	0	1	1	0	1	1	0	-1	4.5	15
58th Ave from Oslo Rd to 25th St SW	Construct a 2-lane undivided road	0	0.5	1	0.5	0	1	0	1	0	0	4	20
25th Street SW from 27th Ave to 58th Ave	Construct/upgrade 2-lane undivided road	0	0.5	1	1	0	0	0	1	0	0	3.5	22
27th Ave from Oslo Rd to St. Lucie County Line	Widen from 2 to 4 lanes	1	1	0	1	0	0	0	1	0	-1	3	28
98th Ave from south of SR 60 to 4th St	Construct a 2-lane undivided road	0.5	0.5	1	1	0	0	0	0	0	0	3	28
69th St from 66th Ave to Fellsmere N-S Rd 1	Construct a 2-lane undivided road	0	0.5	1	0.5	0	0	0	0	0	1	3	28
53rd Street from 58th Ave to 66th Ave	Construct a 2-lane undivided road	0	0.5	1	0.5	0	0	0	0	0	1	3	28
Fellsmere E-W Road from CR 512 to Fellsmere N-S Rd 2	Construct a 2-lane undivided road	0	1	1	1	0	0	0	0	0	0	3	28
Fellsmere N-S Rd 1 from CR 512 to 77th St	Construct a 2-lane undivided road	0	0.5	1	1	0	0	0	0	0	0	2.5	33
Fellsmere N-S Rd 2 from CR 512 to 77th St	Construct a 2-lane undivided road	0	0.5	1	1	0	0	0	0	0	0	2.5	33
82nd Avenue from CR 510 to Laconia St	Construct a 2-lane undivided road	0	0.5	1	1	0	0	0	1	-1	0	2.5	33
74th Avenue from 26th St to 33rd St	Construct a 2-lane undivided road	0	0.5	1	1	0	0	0	0	0	0	2.5	33
Fleming St from Airport Perimeter Rd to CR 512	Construct a 2-lane undivided road	0	0.5	1	1	0	0	1	0	-1	0	2.5	33
5th St SW from Old Dixie Hwy to 20th Ave	Construct a 2-lane undivided road	0	0.5	1	1	0	0	0	0	0	0	2.5	33
13th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road	0	0.5	1	1	0	0	0	0	0	0	2.5	33
53rd Street from 66th Ave to 82nd Ave	Construct a 2-lane undivided road	0	0.5	1	0	0	0	0	0	0	1	2.5	33
Indian River Blvd from Merrill Barber Bridge to 45th St	Widen from 4 lanes to 6 lanes	0.5	0.5	0	1	0	0	1	0	0	-1	2	41
74th Avenue from 8th St to Oslo Rd	Construct a 2-lane undivided road	0	0.5	1	0.5	0	0	0	0	0	0	2	41
4th St from 66th Ave to 98th Ave	Construct a 2-lane undivided road	0	0.5	1	0.5	0	0	0	0	0	0	2	41
5th St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road	0	0.5	1	0.5	0	0	0	0	0	0	2	41
17th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road	0	0.5	1	0.5	0	0	0	0	0	0	2	41
33rd St from 66th Ave to 74th Ave	Construct a 2-lane undivided road	0	0.5	1	1	0	0	0	0	0	-1	1.5	46
12th St from 58th Ave to 66th Ave	Construct a 2-lane undivided road	0	0.5	1	0	0	0	0	0	0	0	1.5	46
12th St from 66th Ave to 74th Ave	Construct a 2-lane undivided road	0	0.5	1	0	0	0	0	0	0	0	1.5	46
1st St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road	0	0.5	1	0	0	0	0	0	0	0	1.5	46
33rd St from 74th Ave to 82nd Ave	Construct a 2-lane undivided road	0	0.5	1	0	0	0	0	0	0	-1	0.5	50

Table A-3:Cost Feasible Alternative A - Implementation Plan

SIS Corridors					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
I-95 widening from St. Lucie County Line to Brevard County Line	Widening from 4 lanes to 6 lanes		\$141,329,902.07		
Oslo Road Interchange	New interchange at Oslo Road and I-95				
	Sub-Total	\$0.00	\$141,329,902.07	\$0.00	\$0.00
Non-SIS State Highways and County Roads Expected to be Federalized					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
US 1 from 53rd St to CR 510	Widening from 4 lanes to 6 lanes	\$16,538,220.63			
US 1 from CR 510 Schumann Dr	Widening from 4 lanes to 6 lanes		\$12,768,294.73		
US 1 from Shumann Dr to CR 512	Widening from 4 lanes to 6 lanes				\$10,530,920.64
US 1 from Highland Dr to St. Lucie County Line	Widen from 4 lanes to 6 lanes	\$2,071,886.90			
Indian River Blvd from 20th St to Merrill Barber Bridge	Widen from 4 lanes to 6 lanes				\$6,339,257.73
CR 510 from SR A1A to Intracoastal WWY	Widen from 2 lanes to 4 lanes				\$4,420,585.12
Oslo Road from I-95 to 58th Ave	Widen from 2 lanes to 4 lanes		\$12,342,945.19		
82nd Avenue from 26th St to 69th St	Construct a 2-lane undivided road			\$21,045,045.04	
82nd Avenue from 69th St to CR 510	Construct a 2-lane undivided road			\$8,832,202.41	
82nd Avenue from CR 510 to Laconia St	Construct a 2-lane undivided road				\$2,778,280.39
	Sub-Total	\$18,610,107.53	\$25,111,239.93	\$29,877,247.46	\$24,069,043.87
County and Municipal Roadways					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
Roseland Rd from CR 512 to US1	Widen from 2 lanes to 4 lanes				\$30,317,365.15
CR 510 from CR 512 to 66th Avenue	Widen from 2 lanes to 4 lanes	\$32,553,015.82			
CR 510 from 66th Avenue to US 1	Widen from 2 lanes to 4 lanes		\$14,271,570.14		
CR 510 from US 1 to ICWW	Widen from 2 lanes to 4 lanes			\$5,100,725.61	
CR 512 from I-95 to Willow Street	Widen from 2 lanes to 4 lanes		\$9,063,965.46		
CR 512 from I-95 to CR 510	Widen from 4 lanes to 6 lanes				
Indian River Blvd from Merrill Barber Bridge to 45th St	Widen from 4 lanes to 6 lanes				\$12,678,515.45
66th Ave from 41 St to 69th Street	Widen from 2 lanes to 4 lanes	\$31,825,626.98			
66th Ave from 69th Street to CR 510	Widen from 2 lanes to 4 lanes		\$21,082,642.43		
25th Street SW from 27th Ave to 58th Ave	Widen from 2 lanes to 4 lanes			\$4,167,005.54	
27th Ave from Oslo Rd to St. Lucie County Line	Widen from 2 lanes to 4 lanes				\$13,492,164.75
43rd Ave from St Lucie County line to Oslo Rd	Widen from 2 lanes to 4 lanes			\$17,657,897.78	
43rd Ave from Oslo Rd to 16th St	Widen from 2 lanes to 4 lanes			\$26,486,846.66	
Fellsmere N-S Rd 1 from CR 512 to 77th St	Construct a 2-lane undivided road				
Fellsmere N-S Rd 2 from CR 512 to 77th St	Construct a 2-lane undivided road				
74th Avenue from 26th St to 37th St	Construct a 2-lane undivided road				\$3,628,883.37
Fleming St from Airport Perimeter Rd to CR 512	Construct a 2-lane undivided road				
Airport Perimeter Rd from US 1 to Roseland Rd	Construct a 2-lane undivided road				
Fellsmere E-W Road from CR 512 to Fellsmere N-S Rd 2	Construct a 2-lane undivided road				
69th St from 66th Ave to Fellsmere N-S Rd 1	Construct a 2-lane undivided road				\$27,276,455.18
53rd Street from 58th Ave to 66th Ave	Construct a 2-lane undivided road		\$3,499,769.72		
53rd Street from 66th Ave to 82nd Ave	Construct a 2-lane undivided road			\$8,357,991.79	
33rd St from 66th Ave to 74th Ave	Construct a 2-lane undivided road		\$3,092,482.86		
33rd St from 74th Ave to 82nd Ave	Construct a 2-lane undivided road				
98th Ave from south of SR 60 to 4th St	Construct a 2-lane undivided road	\$5,741,843.81			
74th Avenue from 8th St to Oslo Rd	Construct a 2-lane undivided road			\$5,505,518.79	
58th Ave from Oslo Rd to 25th St SW	Construct a 4-lane undivided road			\$6,059,224.96	
12th St from 58th Ave to 66th Ave	Construct a 2-lane undivided road		\$3,391,368.07		
12th St from 66th Ave to 74th Ave	Construct a 2-lane undivided road				
4th St from 66th Ave to 98th Ave	Construct a 2-lane undivided road		\$11,380,299.20		
1st St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				
5th St SW from Old Dixie Hwy to 20th Ave	Construct a 2-lane undivided road		\$3,412,698.69		
5th St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				
13th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road				
17th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road				
66th Ave from CR 510 to Barber Street	Widen from 2 lanes to 4 lanes		\$9,325,630.15		
	Sub-Total	\$70,120,486.61	\$78,520,426.72	\$73,335,211.13	\$87,393,383.90
	Total Cost	\$88,730,594.14	\$244,961,568.72	\$103,212,458.59	\$111,462,427.77

Illustrative Project from Adopted Needs Plan for which funding has not been identified. This project will be added to this Cost Feasible Plan if additional funding resources are identified.

Unfunded project from Adopted Needs Plan. This project will be added to this Cost Feasible Plan if additional funding resources are identified.

Table A-4: Cost Feasible Alternative B - Implementation Plan

SIS Corridors					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
I-95 widening from St. Lucie County Line to Brevard County Line	Widening from 4 lanes to 6 lanes		\$141,329,902.07		
Oslo Road Interchange	New interchange at Oslo Road and I-95				
	Sub-Total	\$0.00	\$141,329,902.07	\$0.00	\$0.00
Non-SIS State Highways and County Roads Expected to be Federalized					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
US 1 from 53rd St to CR 510	Widening from 4 lanes to 6 lanes	\$16,538,220.63			
US 1 from CR 510 Schumann Dr	Widening from 4 lanes to 6 lanes		\$12,768,294.73		
US 1 from Shumann Dr to CR 512	Widening from 4 lanes to 6 lanes				\$10,530,920.64
US 1 from Highland Dr to St. Lucie County Line	Widen from 4 lanes to 6 lanes	\$2,071,886.90			
Indian River Blvd from 20th St to Merrill Barber Bridge	Widen from 4 lanes to 6 lanes				\$6,339,257.73
CR 510 from SR A1A to Intracoastal WWY	Widen from 2 lanes to 4 lanes				\$4,420,585.12
Oslo Road from I-95 to 58th Ave	Widen from 2 lanes to 4 lanes		\$12,342,945.19		
82nd Avenue from 26th St to 69th St	Construct a 2-lane undivided road			\$21,045,045.04	
82nd Avenue from 69th St to CR 510	Construct a 2-lane undivided road			\$8,832,202.41	
82nd Avenue from CR 510 to Laconia St	Construct a 2-lane undivided road				\$2,778,280.39
	Sub-Total	\$18,610,107.53	\$25,111,239.93	\$29,877,247.46	\$24,069,043.87
County and Municipal Roadways					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
Roseland Rd from CR 512 to US1	Widen from 2 lanes to 4 lanes				
CR 510 from CR 512 to 66th Avenue	Widen from 2 lanes to 4 lanes	\$32,553,015.82			
CR 510 from 66th Avenue to US 1	Widen from 2 lanes to 4 lanes		\$14,271,570.14		
CR 510 from US 1 to ICWW	Widen from 2 lanes to 4 lanes			\$5,100,725.61	
CR 512 from I-95 to Willow Street	Widen from 2 lanes to 4 lanes		\$9,063,965.46		
CR 512 from I-95 to CR 510	Widen from 4 lanes to 6 lanes				
Indian River Blvd from Merrill Barber Bridge to 45th St	Widen from 4 lanes to 6 lanes				\$12,678,515.45
66th Ave from 41 St to 69th Street	Widen from 2 lanes to 4 lanes	\$31,825,626.98			
66th Ave from 69th Street to CR 510	Widen from 2 lanes to 4 lanes		\$21,082,642.43		
25th Street SW from 27th Ave to 58th Ave	Widen from 2 lanes to 4 lanes				
27th Ave from Oslo Rd to St. Lucie County Line	Widen from 2 lanes to 4 lanes				
43rd Ave from St Lucie County line to Oslo Rd	Widen from 2 lanes to 4 lanes			\$17,657,897.78	
43rd Ave from Oslo Rd to 16th St	Widen from 2 lanes to 4 lanes			\$26,486,846.66	
Fellsmere N-S Rd 1 from CR 512 to 77th St	Construct a 2-lane undivided road				
Fellsmere N-S Rd 2 from CR 512 to 77th St	Construct a 2-lane undivided road				
74th Avenue from 26th St to 37th St	Construct a 2-lane undivided road				\$3,628,883.37
Fleming St from Airport Perimeter Rd to CR 512	Construct a 2-lane undivided road				\$4,497,891.89
Airport Perimeter Rd from US 1 to Roseland Rd	Construct a 2-lane undivided road				\$15,732,110.30
Fellsmere E-W Road from CR 512 to Fellsmere N-S Rd 2	Construct a 2-lane undivided road				
69th St from 66th Ave to Fellsmere N-S Rd 1	Construct a 2-lane undivided road				\$27,276,455.18
53rd Street from 58th Ave to 66th Ave	Construct a 2-lane undivided road		\$3,499,769.72		
53rd Street from 66th Ave to 82nd Ave	Construct a 2-lane undivided road				
33rd St from 66th Ave to 74th Ave	Construct a 2-lane undivided road		\$3,092,482.86		
33rd St from 74th Ave to 82nd Ave	Construct a 2-lane undivided road				
98th Ave from south of SR 60 to 4th St	Construct a 2-lane undivided road	\$5,741,843.81			
74th Avenue from 8th St to Oslo Rd	Construct a 2-lane undivided road			\$5,505,518.79	
58th Ave from Oslo Rd to 25th St SW	Construct a 2-lane undivided road			\$4,652,718.80	
12th St from 58th Ave to 66th Ave	Construct a 2-lane undivided road		\$3,391,368.07		
12th St from 66th Ave to 74th Ave	Construct a 2-lane undivided road			\$3,989,114.79	
4th St from 66th Ave to 98th Ave	Construct a 2-lane undivided road		\$11,380,299.20		
1st St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				\$9,960,106.26
5th St SW from Old Dixie Hwy to 20th Ave	Construct a 2-lane undivided road		\$3,412,698.69		
5th St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				\$12,198,093.12
13th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road				
17th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road			\$9,009,812.42	
66th Ave from CR 510 to Barber Street	Widen from 2 lanes to 4 lanes		\$9,325,630.15		
	Sub-Total	\$70,120,486.61	\$78,520,426.72	\$72,402,634.85	\$85,972,055.57
	Total Cost	\$88,730,594.14	\$244,961,568.72	\$102,279,882.31	\$110,041,099.44

Illustrative Project from Adopted Needs Plan for which funding has not been identified. This project will be added to this Cost Feasible Plan if additional funding resources are identified.

Unfunded project from Adopted Needs Plan. This project will be added to this Cost Feasible Plan if additional funding resources are identified.

Table A-5:Cost Feasible Alternative A - Implementation Plan

SIS Corridors					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
I-95 widening from St. Lucie County Line to Brevard County Line	Widening from 4 lanes to 6 lanes		\$141,329,902.07		
Oslo Road Interchange	New interchange at Oslo Road and I-95				
	Sub-Total	\$0.00	\$141,329,902.07	\$0.00	\$0.00

Non-SIS State Highways and County Roads Expected to be Federalized					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
US 1 from 53rd St to CR 510	Widening from 4 lanes to 6 lanes	\$18,082,121.59			
US 1 from CR 510 Schumann Dr	Widening from 4 lanes to 6 lanes				
US 1 from Shumann Dr to CR 512	Widening from 4 lanes to 6 lanes				
US 1 from Highland Dr to St. Lucie County Line	Widen from 4 lanes to 6 lanes	\$2,918,723.85			
Indian River Blvd from 20th St to Merrill Barber Bridge	Widen from 4 lanes to 6 lanes			\$7,094,571.58	
CR 510 from SR A1A to Intracostal WWY	Widen from 2 lanes to 4 lanes				
Oslo Road from I-95 to 58th Ave	Widen from 2 lanes to 4 lanes		\$12,271,357.46		
82nd Avenue from 26th St to 69th St	Construct a 2-lane undivided road			\$27,922,017.83	
82nd Avenue from 69th St to CR 510	Construct a 2-lane undivided road				\$13,538,314.44
26th Street from 43rd Ave to 58th Ave	Widen from 2 lanes to 4-lanes				\$14,784,913.59
26th Street from 58th Ave to 66th Ave	Widen from 2 lanes to 4-lanes				
	Sub-Total	\$21,000,845.44	\$12,271,357.46	\$35,016,589.41	\$28,323,228.03

County and Municipal Roadways					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
Roseland Rd from CR 512 to US1	Widen from 2 lanes to 4 lanes				\$30,317,365.15
CR 510 from CR 512 to 66th Avenue	Widen from 2 lanes to 4 lanes	\$37,469,670.12			
CR 510 from 66th Avenue to US 1	Widen from 2 lanes to 4 lanes		\$16,577,711.36		
CR 510 from US 1 to ICWW	Widen from 2 lanes to 4 lanes			\$6,091,995.62	
CR 512 from I-95 to Willow Street	Widen from 2 lanes to 4 lanes		\$9,063,965.46		
CR 512 from I-95 to CR 510	Widen from 4 lanes to 6 lanes				
Indian River Blvd from Merrill Barber Bridge to 45th St	Widen from 4 lanes to 6 lanes				\$12,401,177.88
66th Ave from 41 St to 69th Street	Widen from 2 lanes to 4 lanes	\$27,038,123.85			
66th Ave from 69th Street to CR 510	Widen from 2 lanes to 4 lanes		\$18,173,564.30		
25th Street SW from 27th Ave to 58th Ave	Construct/upgrade a 2-lane undivided road			\$8,356,393.91	
27th Ave from Oslo Rd to St. Lucie County Line	Widen from 2 lanes to 4 lanes				\$13,413,911.00
43rd Ave from St Lucie County Line to Oslo Rd	Widen from 2 lanes to 4 lanes			\$16,108,699.00	
43rd Ave from Oslo Rd to 16th St	Widen from 2 lanes to 4 lanes			\$23,563,951.00	
Fellsmere N-S Rd 1 from CR 512 to 69th St	Construct a 2-lane undivided road				
Fellsmere N-S Rd 2 from CR 512 to 69th St	Construct a 2-lane undivided road				
74th Avenue from 26th St to 33rd St	Construct a 2-lane undivided road				
Fleming St from Airport Perimeter Rd to CR 512	Construct a 2-lane undivided road				
Airport Perimeter Rd from US 1 to Roseland Rd	Construct a 2-lane undivided road				
Fellsmere E-W Road from CR 512 to Fellsmere N-S Rd 2	Construct a 2-lane undivided road				
69th St from 66th Ave to Fellsmere N-S Rd 1	Construct a 2-lane undivided road				\$28,658,397.35
53rd Street from 58th Ave to 66th Ave	Construct a 2-lane undivided road		\$3,535,120.93		
53rd Street from 66th Ave to 82nd Ave	Construct a 2-lane undivided road			\$8,316,409.74	
33rd St from 66th Ave to 74th Ave	Construct a 2-lane undivided road				
33rd St from 74th Ave to 82nd Ave	Construct a 2-lane undivided road				
98th Ave from south of SR 60 to 4th St	Construct a 2-lane undivided road	\$5,741,843.81			
74th Avenue from 8th St to Oslo Rd	Construct a 2-lane undivided road		\$4,680,547.34		
58th Ave from Oslo Rd to 25th St SW	Construct a 2-lane undivided road			\$4,652,718.80	
12th St from 58th Ave to 66th Ave	Construct a 2-lane undivided road		\$3,700,518.76		
12th St from 66th Ave to 74th Ave	Construct a 2-lane undivided road				
4th St from 66th Ave to 98th Ave	Construct a 2-lane undivided road		\$11,380,299.20		
1st St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				
5th St SW from Old Dixie Hwy to 20th Ave	Construct a 2-lane undivided road			\$7,133,312.49	
5th St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				
13th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road				
17th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road				
66th Ave from CR 510 to Barber Street	Widen from 2 lanes to 4 lanes		\$7,723,764.00		
82nd Avenue from CR 510 to Laconia St	Construct a 2-lane undivided road			\$7,419,980.61	
	Sub-Total	\$70,249,637.78	\$74,835,491.35	\$81,643,461.17	\$84,790,851.38
	Total Cost	\$91,250,483.21	\$228,436,750.88	\$116,660,050.58	\$113,114,079.41

Illustrative Project from Adopted Needs Plan for which funding has not been identified. This project will be added to this Cost Feasible Plan if additional funding resources are identified.

Unfunded project from Adopted Needs Plan. This project will be added to this Cost Feasible Plan if additional funding resources are identified.

Table A-6:Cost Feasible Alternative C - Implementation Plan

SIS Corridors					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
I-95 widening from St. Lucie County Line to Brevard County Line	Widening from 4 lanes to 6 lanes		\$141,329,902.07		
Oslo Road Interchange	New interchange at Oslo Road and I-95				
	Sub-Total	\$0.00	\$141,329,902.07	\$0.00	\$0.00

Non-SIS State Highways and County Roads Expected to be Federalized					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
US 1 from 53rd St to CR 510	Widening from 4 lanes to 6 lanes	\$18,082,121.59			
US 1 from CR 510 Schumann Dr	Widening from 4 lanes to 6 lanes				
US 1 from Shumann Dr to CR 512	Widening from 4 lanes to 6 lanes				
US 1 from Highland Dr to St. Lucie County Line	Widen from 4 lanes to 6 lanes	\$2,918,723.85			
Indian River Blvd from 20th St to Merrill Barber Bridge	Widen from 4 lanes to 6 lanes			\$7,094,571.58	
CR 510 from SR A1A to Intracostal WWY	Widen from 2 lanes to 4 lanes				
Oslo Road from I-95 to 58th Ave	Widen from 2 lanes to 4 lanes		\$12,271,357.46		
82nd Avenue from 26th St to 69th St	Construct a 2-lane undivided road			\$27,922,017.83	
82nd Avenue from 69th St to CR 510	Construct a 2-lane undivided road				\$13,538,314.44
26th Street from 43rd Ave to 58th Ave	Widen from 2 lanes to 4-lanes				\$14,784,913.59
26th Street from 58th Ave to 66th Ave	Widen from 2 lanes to 4-lanes				
	Sub-Total	\$21,000,845.44	\$12,271,357.46	\$35,016,589.41	\$28,323,228.03

County and Municipal Roadways					
Project	Description	2016-2020	2021-2025	2026-2030	2031-2035
Roseland Rd from CR 512 to US1	Widen from 2 lanes to 4 lanes				\$30,317,365.15
CR 510 from CR 512 to 66th Avenue	Widen from 2 lanes to 4 lanes	\$37,469,670.12			
CR 510 from 66th Avenue to US 1	Widen from 2 lanes to 4 lanes	\$14,300,079.44			
CR 510 from US 1 to ICWW	Widen from 2 lanes to 4 lanes			\$6,091,995.62	
CR 512 from I-95 to Willow Street	Widen from 2 lanes to 4 lanes		\$9,063,965.46		
CR 512 from I-95 to CR 510	Widen from 4 lanes to 6 lanes				
Indian River Blvd from Merrill Barber Bridge to 45th St	Widen from 4 lanes to 6 lanes				\$12,401,177.88
66th Ave from 41 St to 69th Street	Widen from 2 lanes to 4 lanes		\$31,803,737.53		
66th Ave from 69th Street to CR 510	Widen from 2 lanes to 4 lanes			\$21,376,752.03	
25th Street SW from 27th Ave to 58th Ave	Construct/upgrade a 2-lane undivided road		\$7,104,234.63		
27th Ave from Oslo Rd to St. Lucie County Line	Widen from 2 lanes to 4 lanes				
43rd Ave from St Lucie County Line to Oslo Rd	Widen from 2 lanes to 4 lanes			\$16,108,699.00	
43rd Ave from Oslo Rd to 16th St	Widen from 2 lanes to 4 lanes				\$27,717,224.00
Fellsmere N-S Rd 1 from CR 512 to 69th St	Construct a 2-lane undivided road				
Fellsmere N-S Rd 2 from CR 512 to 69th St	Construct a 2-lane undivided road				
74th Avenue from 26th St to 33rd St	Construct a 2-lane undivided road				
Fleming St from Airport Perimeter Rd to CR 512	Construct a 2-lane undivided road				
Airport Perimeter Rd from US 1 to Roseland Rd	Construct a 2-lane undivided road				
Fellsmere E-W Road from CR 512 to Fellsmere N-S Rd 2	Construct a 2-lane undivided road				
69th St from 66th Ave to Fellsmere N-S Rd 1	Construct a 2-lane undivided road				
53rd Street from 58th Ave to 66th Ave	Construct a 2-lane undivided road		\$3,535,120.93		
53rd Street from 66th Ave to 82nd Ave	Construct a 2-lane undivided road				
33rd St from 66th Ave to 74th Ave	Construct a 2-lane undivided road				
33rd St from 74th Ave to 82nd Ave	Construct a 2-lane undivided road				
98th Ave from south of SR 60 to 4th St	Construct a 2-lane undivided road	\$5,741,843.81			
74th Avenue from 8th St to Oslo Rd	Construct a 2-lane undivided road				
58th Ave from Oslo Rd to 25th St SW	Construct a 2-lane undivided road		\$3,955,534.70		
12th St from 58th Ave to 66th Ave	Construct a 2-lane undivided road				
12th St from 66th Ave to 74th Ave	Construct a 2-lane undivided road				
4th St from 66th Ave to 98th Ave	Construct a 2-lane undivided road		\$11,380,299.20		
1st St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				
5th St SW from Old Dixie Hwy to 20th Ave	Construct a 2-lane undivided road				
5th St SW from 58th Ave to 82nd Ave	Construct a 2-lane undivided road				
13th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road				
17th St SW from 20th Ave to 58th Ave	Construct a 2-lane undivided road				
66th Ave from CR 510 to Barber Street	Widen from 2 lanes to 4 lanes			\$9,085,119.00	
82nd Avenue from CR 510 to Laconia St	Construct a 2-lane undivided road			\$7,419,980.61	
	Sub-Total	\$57,511,593.37	\$66,842,892.45	\$60,082,546.27	\$70,435,767.03
	Total Cost	\$78,512,438.80	\$220,444,151.97	\$95,099,135.67	\$98,758,995.06

Illustrative Project from Adopted Needs Plan for which funding has not been identified. This project will be added to this Cost Feasible Plan if additional funding resources are identified.

Unfunded project from Adopted Needs Plan. This project will be added to this Cost Feasible Plan if additional funding resources are identified.