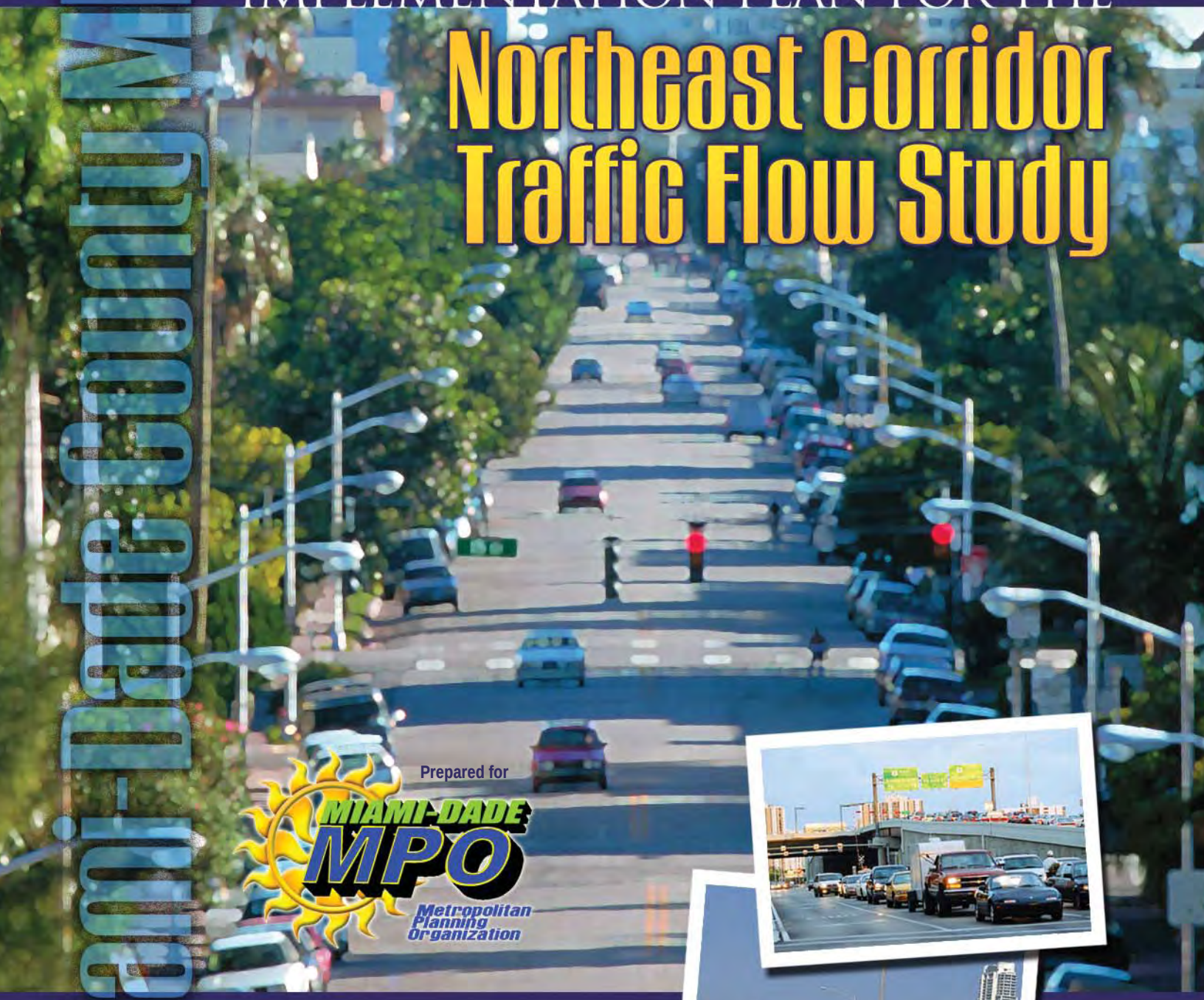
Miami-Dade County MPO

Work Order #GPC 111-36:

IMPLEMENTATION PLAN FOR THE

Northeast Corridor Traffic Flow Study



Prepared for

MIAMI-DADE MPO Metropolitan Planning Organization

Prepared by

Kimley-Horn and Associates, Inc.

Implementation Plan for the Northeast Corridor Traffic Flow Study

Prepared for:

Miami-Dade County Metropolitan Planning Organization (Miami-Dade MPO)

Prepared by:

Kimley-Horn and Associates, Inc.
Fort Lauderdale, Florida

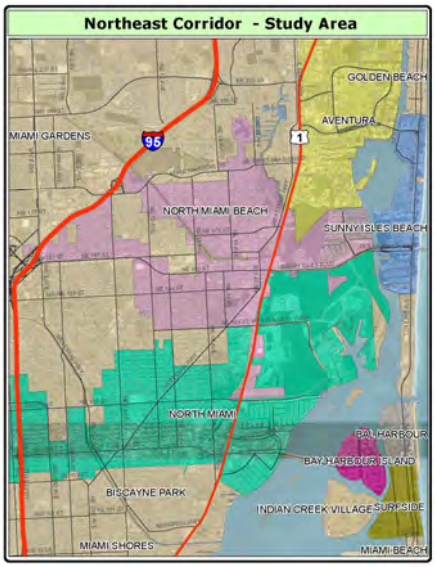
Work Order # GPC III-36
January 2010

"The preparation of this report has been financed in part from the U.S. Department of Transportation (USDOT) through the Federal Highway Administration (FHWA) and/or the Federal Transit Administration (FTA), the State Planning and Research Program (Section 505 of Title 23, U.S. Code) and Miami-Dade County, Florida. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation."

EXECUTIVE SUMMARY

Introduction

The Northeast Miami-Dade Traffic Flow Study, which was completed in August of 2007, identified a series of projects to improve traffic flow and reduce congestion along several corridors in the northeast area of Miami-Dade County. The study area consisted of the municipalities of Aventura, Bal Harbour, Bay Harbor Islands, Golden Beach, North Miami, North Miami Beach, Sunny Isles Beach and Surfside. According to the prior study, the roadway grid lacks continuity with few roadways traversing the entire study area. The majority of north-south traffic is concentrated in three corridors: I-95, Biscayne Boulevard, and Collins Avenue. Five major east-west corridors serve as connections between I-95 and Biscayne Boulevard: Ives Dairy Road, Miami Gardens Drive, 167/163rd Street, 135th Street and 125th Street. As travel demand grows in the study area, these corridors are expected to become increasingly congested; therefore, prompting the prior effort to develop a series of transportation infrastructure improvements and policies to enhance mobility.



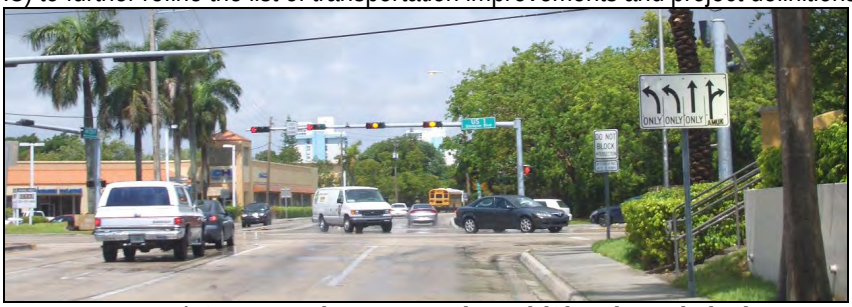
The purpose of this study is to develop an implementation plan that includes defining projects to the level required to determine costs, subsequently determining potential funding sources, and finally laying out a blueprint toward implementation.

Study Area

The boundaries of the *Implementation Plan for the NE Corridor Traffic Flow Study* are defined as the Broward County Line to the north, NE 116th Street to the south, Interstate 95 to the west, and the Atlantic Ocean to the east. The core study area is defined as NE 203rd Street to the north, NE 123rd Street to the south, NE 6th Avenue to the west, and Biscayne Boulevard to the east.

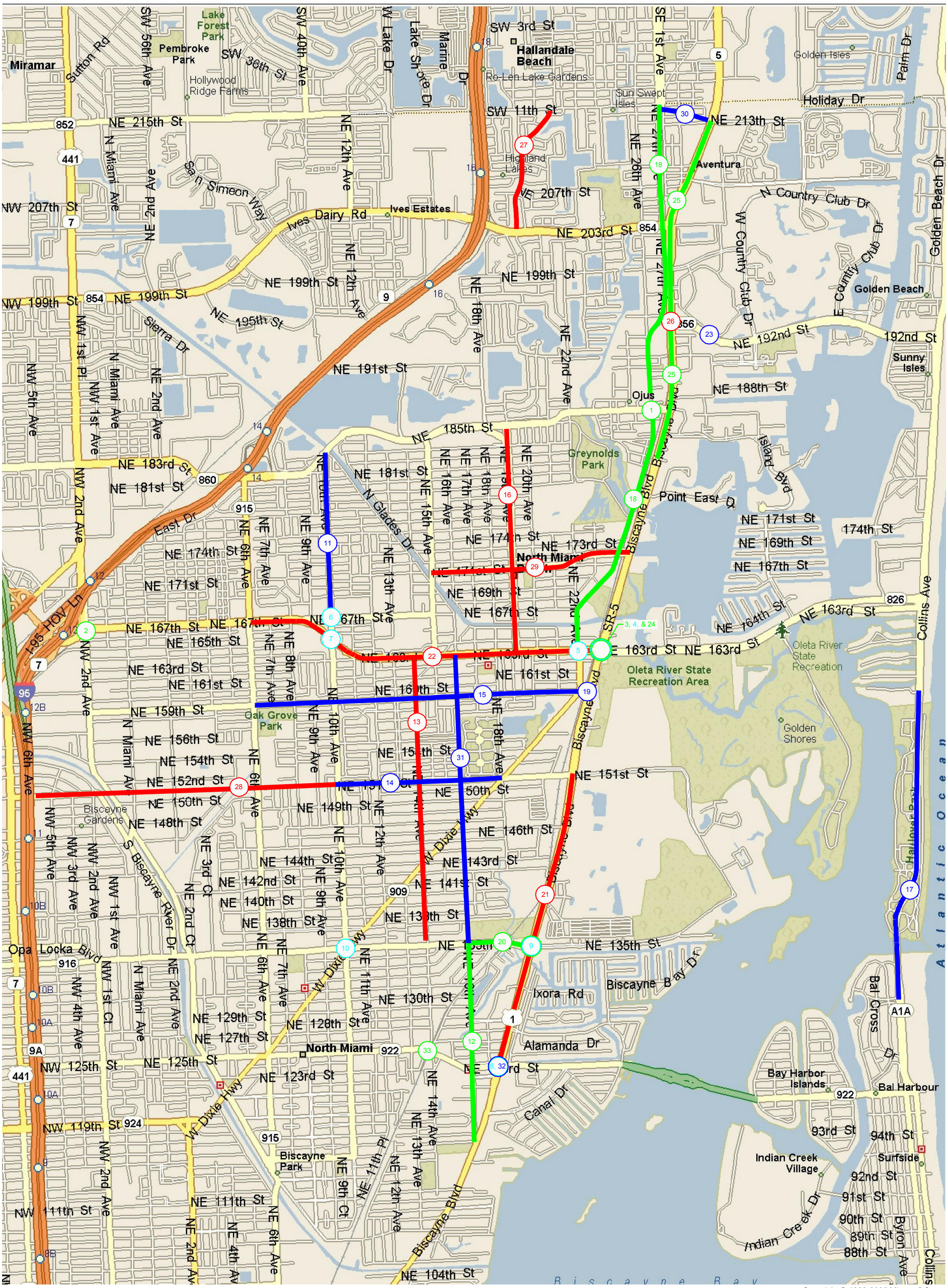
Project Definition

Individual project definition sheets were developed for each project. These sheets include a description of the project, political jurisdiction, need identified in the *NE Corridor Traffic Flow Study*, notes about the project, project specific issues/challenges, tasks involved for implementation, lead agencies to champion the project, project cost, funding, and implementation timeframe. Input was obtained from the study advisory committee (SAC) to further refine the list of transportation improvements and project definitions.



NE 135th Street at Biscayne Boulevard (Signal Re-Timing)

NE CORRIDOR IMPLEMENTATION PLAN PROJECTS



LEGEND

XX ELIMINATED PROJECTS

Project 13: NE 14th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)
Project 16: NE 19th Avenue between NE 163rd Street and Miami Gardens Drive (Roadway Widening)
Project 21: Biscayne Boulevard Reversible Lane Study
Project 22:163rd/167th Street Reversible Lane Study
Project 26: Biscayne Boulevard and William Lehman Causeway (Intersection Capacity)
Project 27: Highland Lakes Boulevard between Ives Dairy Road and NE 215th Street (Roadway Widening)
Project 28: NE 151st Street (New Corridor Connections)
Project 29: NE 171st Street between NE 15th Avenue and US 1 (Roadway Widening)

XX SIGNAL RE-TIMING PROJECTS

Project 4: Biscayne Boulevard and NE 163rd Street (Signal Re-Timing)
Project 5: West Dixie Highway and NE 163rd Street (Signal Re-Timing)
Project 6: NE 10th Avenue and NE 167th Street (Signal Re-Timing)
Project 7: NE 10th Avenue and NE 163rd Street (Signal Re-Timing)
Project 8: Biscayne Boulevard and NE 123rd Street (Signal Re-Timing)
Project 9: Biscayne Boulevard and NE 135th Street (Signal Re-Timing)
Project 10: Dixie Highway and NE 135th Street (Signal Re-Timing)

XX POTENTIALLY FEASIBLE PROJECTS

Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)
Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)
Project 3: Biscayne Boulevard and NE 163rd Street (Grade Separation)
Project 9: Biscayne Boulevard and NE 135th Street (Intersection Capacity)
Project 12: NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)
Project 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)
Project 20: NE 135th Street Reversible Lane Study
Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
Project 25: Intersection Improvements along Biscayne Boulevard in Aventura
Project 33: Intermodal Center at NE 125th Street

XX POTENTIALLY CONSTRAINED PROJECTS

Project 11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)
Project 14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)
Project 15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)
Project 17: Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)
Project 19: NE 159th Street (New Corridor Connections)
Project 23: Direct Connection between William Lehman Causeway and Aventura Mall
Project 30: NE 213th Street Extension between Biscayne Boulevard and Dixie Highway
Project 31: NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)
Project 32: Biscayne Boulevard Bus Bays

NORTH

NOT TO SCALE

Drawing name: K:\FTL_TPTO\040829020-WO# III-36 Implementation Plan NE Corridor\CADD\Projects.dwg 11 x 17 Jan 11, 2010 3:47pm by: adrian.dabkowski

Funding/Cost Estimates

Preliminary order of magnitude cost estimates were developed for the projects and are presented on individual project sheets. The purpose of these cost estimates is to provide planning level estimates for projects and costs were also considered as a prioritization/implementation parameter. Cost estimates were based FDOT generic cost per mile models.

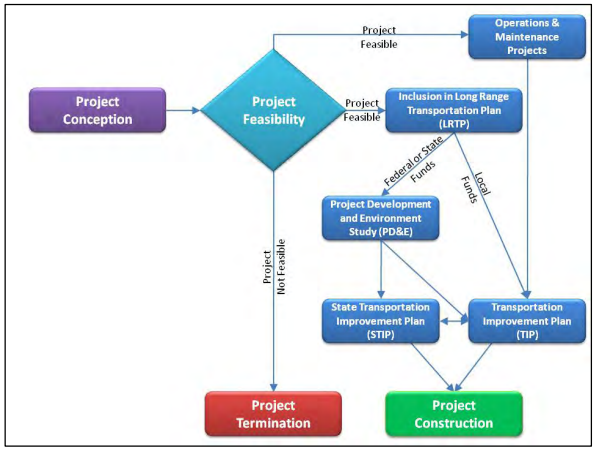
Funding/revenue source forecasts for FDOT (state and federal), Miami-Dade Transit (MDT), and Miami-Dade County gas taxes and road impact fees for public works projects were reviewed. Individual projects were assigned to appropriate state and local funding sources.

Miami-Dade Transit Revenue Forecast FY 2014-2035
(Millions of Year-of-Expenditure Dollars)

Capital Funding Sources	FY 2014-2015 Subtotal	FY 2016-2020 Subtotal	FY 2021-2025 Subtotal	FY 2026-2030 Subtotal	FY 2031-2035 Subtotal	22 Year Total
Federal 5309 Grants - Rail Capital (NS)	$71	$214	$279	$365	$477	$1,406
Federal 5309 Grants - Rail Mod	$27	$71	$118	$181	$262	$659
Federal 5309 Grants - Bus Capital	$13	$36	$42	$50	$58	$199
State Grants - Rail	$35	$107	$140	$183	$239	$703
State Grants - Bus	$18	$26	$5	$49	$43	$140
MDT Local option gas tax (LOGT)	$37	$97	$104	$112	$121	$473
Total Capacity Revenue	**$200**	**$551**	**$689**	**$940**	**$1,201**	**$3,580**
Operating Funding Sources						
System Fares & Other Operating Revenue	$332	$953	$1,128	$1,344	$1,522	$5,279
Federal 5307 Formula Funds	$106	$313	$387	$479	$566	$1,851
State Block Grants/Operating Assist./TD&CE	$58	$155	$172	$190	$209	$784
MDT General Fund Subsidy - Original MOE (3.5 percent)	$342	$964	$1,145	$1,360	$1,615	$5,425
Interest Income	$14	$40	$48	$58	$73	$233
Operating Funding Sources	**$852**	**$2,425**	**$2,879**	**$3,431**	**$3,985**	**$13,572**
PTP Sales Tax Revenues (Net of 20 Percent to Municipalities)	**$354**	**$1,069**	**$1,397**	**$1,825**	**$2,386**	**$7,030**
Additional County General Fund Revenue	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
TOTAL YEAR-OF-EXPENDITURE	**$1,406**	**$4,044**	**$4,964**	**$6,196**	**$7,572**	**$24,182**

Source: Miami-Dade County 2035 LRTP Financial Resources Review, May 2009

Miami-Dade Transit Funding



Implementation Flow Chart

Implementation Plan

Projects were grouped together based on project type, project viability criteria, and input from the SAC, Miami-Dade County, FDOT, and municipalities. Four (4) classification groups were established: (1) eliminated projects, (2) signal re-timing projects, (3) potentially feasible projects, and (4) potentially constrained projects. An implementation plan was developed based on project time horizons. Time horizons defined for this study were short-term (1-3 years), mid-term (3-5 years), and long-term (5+ years). The following figure illustrates project locations and groups projects by classification category.

Summary and Next Steps

The result of this study is a program of transportation improvements to address traffic congestion and to some extent provide alternatives to the single occupant automobile as a method of transportation. The improvements should be adopted into the appropriate plans and programs of the specified agencies. Finally, the study should be examined annually to assess the status of the implementation of the identified improvements.

The *Implementation Plan for the Northeast Corridor Traffic Flow Study* provides the framework in programming of transportation improvements in the northeast section of Miami-Dade County. Agencies have been identified for implementing the improvements based on jurisdictional responsibility. The improvements should be adopted into the appropriate plans and programs of the specified agencies.

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ACKNOWLEDGEMENTS

The Miami-Dade Metropolitan Planning Organization (MPO) initiated the *Implementation Plan for the NE Corridor Traffic Flow Study* to develop an implementation plan that includes defining projects to the level required to determine costs, subsequently determining potential funding sources, and finally laying out a plan toward implementation. At the outset of the study, Kimley-Horn worked with the Miami-Dade County Metropolitan Planning Organization (MPO) to identify a study advisory committee (SAC), whose members would serve as a steering group to review study documents and assist in developing recommendations. The SAC met regularly throughout the course of the study, providing data and input for this study. The members of the *Implementation Plan for the NE Corridor Traffic Flow* SAC are listed below.

Implementation Plan for the NE Corridor Traffic Flow SAC Members

Á Larry Foutz	Miami Dade MPO (Project Manager)
Á Vivian Suarez	Miami Dade County Board of County Commissioners
Á Joanne Carr	City of Aventura
Á Eric Soroka	City of Aventura
Á John O'Brien	City of North Miami
Á Wisler Pierre-Louis	City of North Miami
Á Donald Cramarossa	City of North Miami
Á Chris Heid	City of North Miami Beach
Á Robert Nix	City of North Miami Beach
Á Rick Conner	City of Sunny Isles Beach
Á Michael Miller	Michael Miller Planning Associates representing Bal Harbour, Bay Harbor Island, and Golden Beach
Á Rolando Jimenez	Miami Dade County Public Works
Á Phil Steinmiller	Florida Department of Transportation District 6
Á Carlton Card	Florida Department of Transportation District 6

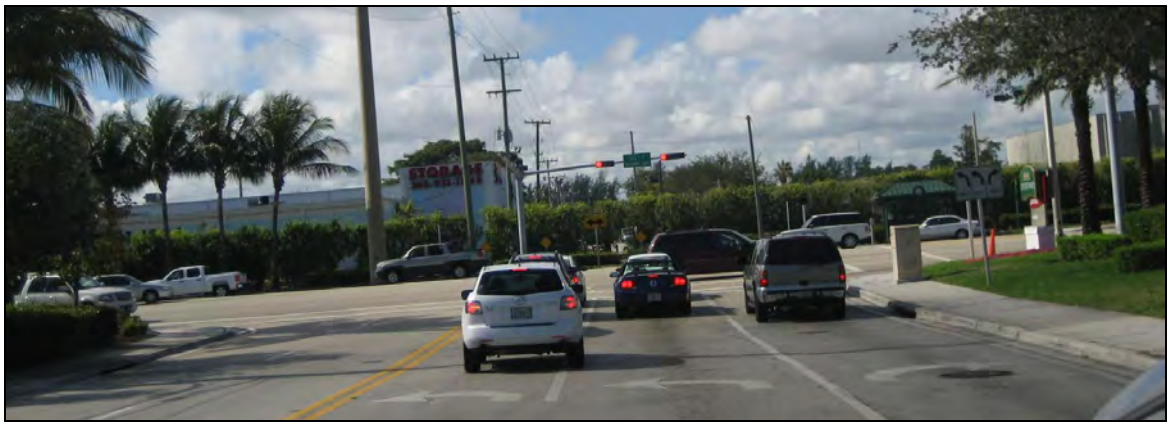
INTRODUCTION

The Northeast Miami-Dade Traffic Flow Study, which was completed in August of 2007, identified a series of projects to improve traffic flow and reduce congestion in the northeast area of Miami-Dade County. The study area consisted of the municipalities of Aventura, Bal Harbour, Bay Harbor Islands, Golden Beach, North Miami, North Miami Beach, and Sunny Isles Beach. According to the prior study, the roadway grid lacks continuity with few roadways traversing the entire study area. The majority of north-south traffic is concentrated in three corridors: I-95, Biscayne Boulevard, and Collins Avenue. Five major east-west corridors serve as connections between I-95 and Biscayne Boulevard: Ives Dairy Road, Miami Gardens Drive, 167/163rd Street, 135th Street and 125th Street. However, only three causeways provide access between Biscayne Boulevard and Collins Avenue on the barrier island: Broad Causeway, Sunny Isles Causeway, and Lehman Causeway. As travel demand grows in the study area, these corridors are expected to become increasingly congested, which prompted the prior effort to develop a series of transportation infrastructure improvements and policies to enhance mobility.

The purpose of this study is to develop an implementation plan that includes defining projects to the level required to determine costs, subsequently determining potential funding sources, and finally laying out a blueprint toward implementation.

This report is divided into the following chapters, which approximates the steps performed in conducting the study:

- Project Definition
- Project Evaluation
- Coordination/Public Involvement
- Funding/Cost Estimates
- Implementation
- Summary and Next Steps



NE 191st Street at Biscayne Boulevard

PROJECT DEFINITION

As shown in Figure 1, the boundaries of the Implementation Plan for the NE Corridor Traffic Flow Study are defined as the Broward County Line to the north, roughly NE 116th Street to the south, Interstate 95 to the west, and the Atlantic Ocean to the east. The core study area is defined as NE 203rd Street to the north, NE 123rd Street to the south, NE 6th Avenue to the west, and Biscayne Boulevard to the east. Most of the projects are concentrated within this core study area, although several projects encompass the overall study area.

Major surface roadways within the study area include:

- Biscayne Boulevard
- Dixie Highway
- Collins Avenue
- NE 10th Avenue
- NE 14th Avenue
- NE 16th Avenue
- NE 19th Avenue
- NE 123rd Street
- NE 125th Street
- NE 135th Street
- NE 151st Street
- NE 159th Street
- NE 167th Street/NE 163rd Street/Sunny Isles Causeway
- NE 171st Street
- NE 183rd Street (Miami Gardens Drive)
- NE 192nd Street (William Lehman Causeway)
- NE 203rd Street (Ives Diary Road)
- NE 213th Street

NW 6th Avenue at NW 151st Street

Individual project definition sheets were developed and are contained on the following pages. These sheets include a description of the project, political jurisdiction, need identified in the *NE Corridor Traffic Flow Study*, notes about the project, project specific issues/challenges, tasks involved for implementation, lead agencies to champion the project, project cost, funding, and implementation timeframe. The following list provides a summary of all projects included within the individual project definition sheets.

- Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)
- Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)
- Project 3: Biscayne Boulevard and NE 163rd Street (Grade Separation)

- Project 4: Biscayne Boulevard and NE 163rd Street (Signal Re-Timing)
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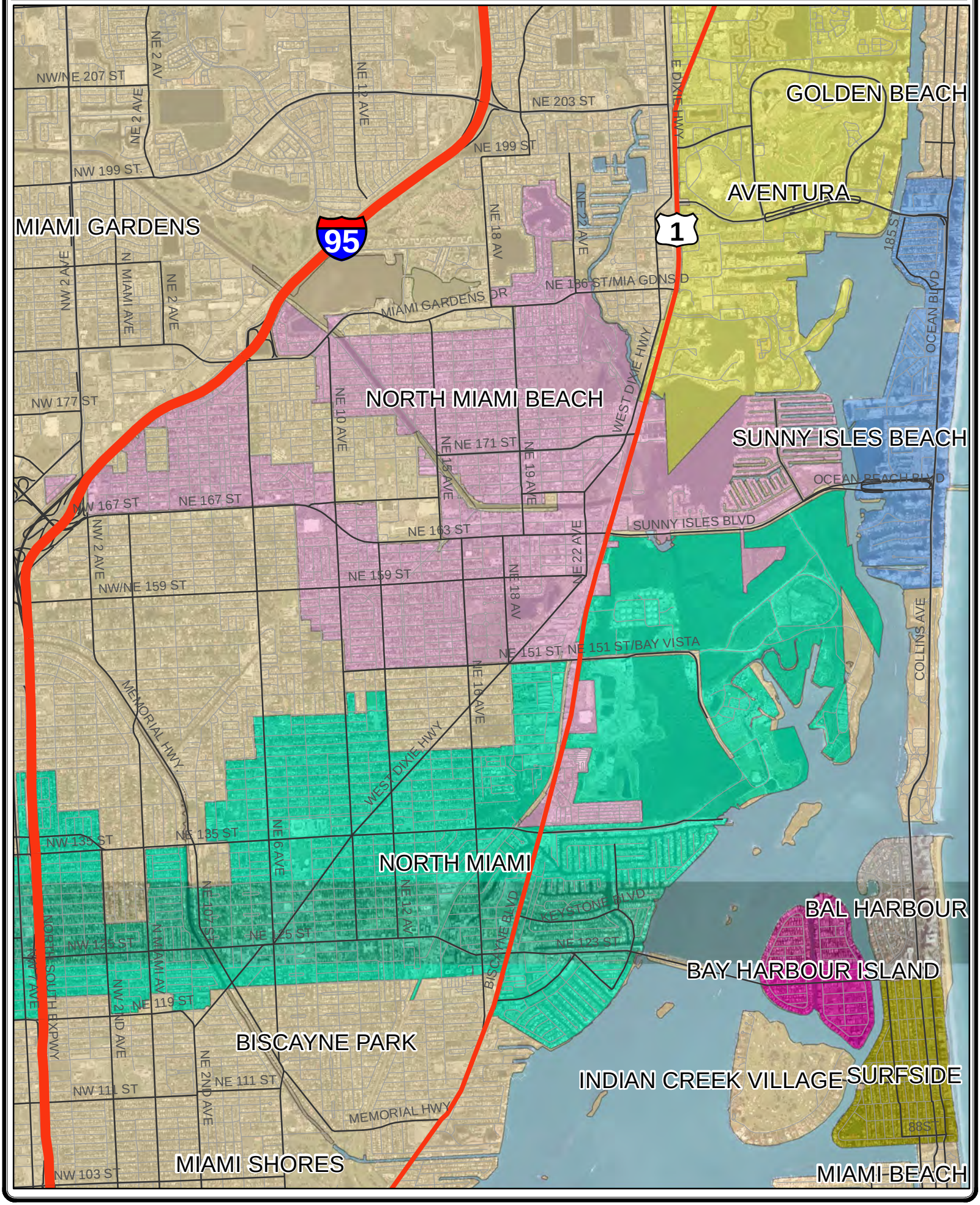
- Project 33: Intermodal Center at NE 125th Street

Northeast Corridor - Study Area



PROJECT 1: WEST DIXIE HIGHWAY AND MIAMI GARDENS DRIVE (INTERSECTION CAPACITY)

Project	Restripe northbound right-turn lane to a shared through/right.
Political Jurisdiction	Unincorporated Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	Miami Gardens Drive is a six-lane FDOT roadway and West Dixie Highway is a two-lane Miami-Dade County roadway. This intersection currently operates at LOS D during the AM peak period and LOS F during the PM peak period. Based on existing turning movement volumes, the provision of a northbound shared through/right-turn lane by restriping the existing exclusive northbound right-turn lane would improve intersection operation and level of service.
Notes	Miami-Dade County Public Works has identified additional short-term and long-term improvements at this intersection. The short-term improvement would consist of restriping the westbound exclusive right-turn lane to a shared through/right lane. The long-term improvement would consist of dual continuous flow southbound right-turn lanes at Biscayne Boulevard/Miami Gardens Drive and four (4) westbound lanes on Miami Gardens Drive between Biscayne Boulevard and West Dixie Highway.
Issues/Challenges	Right-of-way acquisition is required for the long-term improvements.
Tasks Involved	Coordinate with Miami-Dade County Public Works Department and FDOT to include the proposed improvements in the Transportation Improvement Program (TIP).
Lead Agencies	Miami-Dade County Public Works Department and FDOT
Cost	Short-term: $6,000 Long-term: $825,000 (excluding right-of-way)
Funding	Miami-Dade County and FDOT: Other arterial construction/ROW and/or TMA funds
Implementation Timeframe	Short-term (1-3 years) for restriping, long-term (6-10 years) for additional lanes

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

PROJECT 2: NW 2nd AVENUE AND NW 167th STREET (INTERSECTION CAPACITY)

Project	Convert southbound approach on NW 2nd Avenue to stop controlled right-turn only operation and restripe the northbound approach on NW 2nd Avenue to allow left turns from the center lane. Provide directional signage on the northbound approach on NW 2nd Avenue to direct left-turning traffic into appropriate lanes to access SR 826 (Palmetto Expressway) and I-95.
Political Jurisdiction	Unincorporated Miami-Dade County and City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection is located adjacent to the Golden Glades Interchange and is a major access point to and from the Palmetto Expressway and I-95. The northbound and eastbound approaches operate poorly during peak periods. The proposed improvements are shown to achieve LOS E or better operations during peak periods in the year 2030.
Issues/Challenges	Provide advance signage on northbound approach to guide motorists to the correct left-turn lane to access Palmetto Expressway or I-95.
Notes	Miami-Dade County evaluated this intersection in 2005 and recommended converting (1) southbound approach to right turns only, (2) restripe northbound approach to dual left-turn, and shared through/right-turn lanes and (3) additional left and right-turn lanes on the eastbound approach (ROW acquisition may be needed).
Tasks Involved	Coordinate with Miami-Dade County Public Works Department and FDOT to include in proposed improvements in Transportation Improvement Program (TIP).
Lead Agencies	Miami-Dade County Public Works Department and FDOT
Cost	Short-term: $100,000 Long-term: $525,000 (excluding right-of-way)
Funding	Miami-Dade County and FDOT: Other arterial construction/ROW and/or TMA funds
Implementation Timeframe	Short-term (1-3 years) for restriping/signage, southbound approach reconfiguration, and retiming; long-term (6-10 years) for additional lanes

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

PROJECT 3: BISCAYNE BOULEVARD AND NE 163rd STREET (GRADE SEPARATION)

Project	Grade separate north-south through movements on US 1
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection is junction of major east-west (NE 163rd Street) and north-south (Biscayne Boulevard) roadways which provide linkages to I-95, SR 826 (Palmetto Expressway), and the barrier island (Collins Avenue) via the Sunny Isles Causeway. To ensure this intersection operates acceptably, it should be grade separated.
Issues/Challenges	High costs, maintaining access to adjacent businesses, Florida East Coast (FEC) rail corridor is adjacent to intersection running parallel to Biscayne Boulevard.
Notes	The impacts of grade separation on the community should be assessed in a Project Development and Environment (PD&E) study.
Tasks Involved	Discuss feasibility with FDOT; include in LRTP; perform PD&E study
Lead Agencies	Miami-Dade MPO and FDOT
Cost	To be determined (TBD) in PD&E Study
Funding	FDOT: Other arterial construction/ROW and/or TMA funds
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, mid-term (3-5 years) for PD&E study, long-term (10+ years) for construction of improvements

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

PROJECT 4: BISCAYNE BOULEVARD AND NE 163rd STREET (SIGNAL RE-TIMING)

Project	Optimize signal timing to maintain LOS D or better in the future
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection is junction of major east-west (NE 163rd Street) and north-south (Biscayne Boulevard) roadways which provide linkages to I-95, SR 826 (Palmetto Expressway), and the barrier island (Collins Avenue) via the Sunny Isles Causeway. This intersection currently operates at LOS D. Periodic signal timing improvements are recommended to maintain acceptable level of service.
Notes	According to Miami-Dade Public Works staff, signal timings are periodically optimized because of seasonal population variations.
Tasks Involved	Relay specific issues/concerns/recommendations to Miami-Dade County Public Works for signal timing adjustments.
Lead Agencies	Miami-Dade County Public Works Department
Cost	N/A
Funding	Miami-Dade County operating budget
Implementation Timeframe	Ongoing and continuous

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

PROJECT 5: WEST DIXIE HIGHWAY AND NE 163rd STREET (SIGNAL RE-TIMING)

Project	Optimize signal timing to maintain LOS D or better in the future.
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection has commercial use on four corners, and US 1 is located approximately 700 feet to the east. This intersection currently operates at LOS D or better, and signal timing improvements are shown to maintain acceptable level of service in the year 2030.
Notes	According to Miami-Dade Public Works staff, signal timings are periodically optimized because of seasonal population variations.
Tasks Involved	Relay specific issues/concerns/recommendations to Miami-Dade County Public Works for signal timing adjustments.
Lead Agencies	Miami-Dade County Public Works Department
Cost	N/A
Funding	Miami-Dade County operating budget
Implementation Timeframe	Ongoing and continuous

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PROJECT 6: NE 10th AVENUE AND NE 167th STREET (SIGNAL RE-TIMING)

Project	Optimize signal timing to maintain acceptable level of service.
Political Jurisdiction	City of North Miami Beach and Unincorporated Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection currently operates at LOS C but will deteriorate to LOS E or worse by the year 2030 unless improvements are implemented.
Notes	According to Miami-Dade Public Works staff, signal timings are periodically optimized because of seasonal population variations.
Tasks Involved	Relay specific issues/concerns/recommendations to Miami-Dade County Public Works for signal timing adjustments.
Lead Agencies	Miami-Dade County Public Works Department
Cost	N/A
Funding	Miami-Dade County operating budget
Implementation Timeframe	Ongoing and continuous

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

PROJECT 7: NE 10th AVENUE AND NE 163rd STREET (SIGNAL RE-TIMING)

Project	Optimize signal timing to maintain acceptable level of service.
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	Traffic progression is poor as vehicles sometimes block the intersection. The intersection currently operates at LOS D or better but will deteriorate to LOS F by the year 2030 unless improvements are implemented.
Notes	According to Miami-Dade Public Works staff, signal timings are periodically optimized because of seasonal population variations.
Tasks Involved	Relay specific issues/concerns/recommendations to Miami-Dade County Public Works for signal timing adjustments.
Lead Agencies	Miami-Dade County Public Works Department
Cost	N/A
Funding	Miami-Dade County operating budget
Implementation Timeframe	Ongoing and continuous

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PROJECT 8: BISCAYNE BOULEVARD AND NE 123rd STREET (SIGNAL RE-TIMING)

Project	Optimize signal timing to maintain acceptable level of service.
Political Jurisdiction	City of North Miami
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection currently operates at LOS D but will deteriorate to LOS F by the year 2030 unless improvements are implemented.
Notes	According to Miami-Dade Public Works staff, signal timings are periodically optimized because of seasonal population variations.
Tasks Involved	Relay specific issues/concerns/recommendations to Miami-Dade County Public Works for signal timing adjustments.
Lead Agencies	Miami-Dade County Public Works Department
Cost	N/A
Funding	Miami-Dade County operating budget
Implementation Timeframe	Ongoing and continuous

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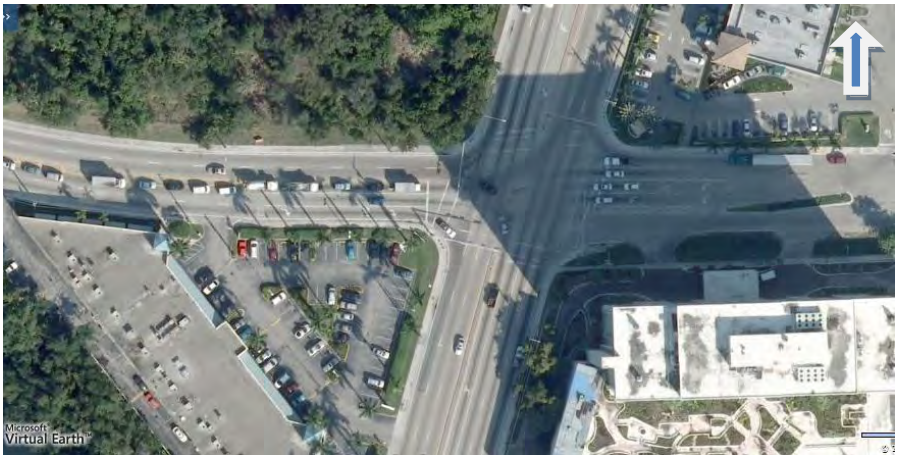
PROJECT 9: BISCAYNE BOULEVARD AND NE 135th STREET (SIGNAL RE-TIMING)

Project	Optimize signal timing to maintain acceptable level of service.
Political Jurisdiction	City of North Miami
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection currently operates at LOS D but will deteriorate to LOS E or worse by the year 2030 unless improvements are implemented.
Notes	According to Miami-Dade Public Works staff, signal timings are periodically optimized because of seasonal population variations. However, Miami-Dade Public Works staff has identified additional short-term and long-term improvements to the eastbound approach. The short-term improvement consists of restriping the eastbound approach to provide an exclusive left-turn lane, shared left-through lane, and an exclusive right-turn lane. The short-term improvements would require split-phase signal operations for the eastbound and westbound approaches. The long-term improvement would consist of constructing an additional eastbound left-turn lane.
Tasks Involved	Relay specific issues/concerns/recommendations to Miami-Dade County Public Works for signal timing adjustments. Coordinate short-term improvements with FDOT and Miami-Dade Public Works. Perform study to evaluate feasibility of long-term improvements (see Project 20).
Lead Agencies	FDOT and Miami-Dade County Public Works Department
Cost	Short-term: $300,000 Long-term: $400,000 (excluding right-of-way)
Funding	Miami-Dade County and FDOT: Other arterial construction/ROW and/or TMA funds
Implementation Timeframe	Signal re-timing is ongoing and continuous; short-term (1-3 years) for restriping; medium-term (3-5 years) for feasibility study for long-term improvements.



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PROJECT 10: DIXIE HIGHWAY AND NE 135th STREET (SIGNAL RE-TIMING)

Project	Optimize signal timing to maintain acceptable level of service.
Political Jurisdiction	City of North Miami
Need Identified in NE Miami-Dade Traffic Flow Study	This intersection currently operates at LOS C but will deteriorate to LOS E or worse by the year 2030 unless improvements are implemented.
Notes	Improvements have been implemented recently at this intersection and NE 10th Avenue no longer runs through the intersection.
Tasks Involved	Relay specific issues/concerns/recommendations to Miami-Dade County Public Works for signal timing adjustments.
Lead Agencies	Miami-Dade County Public Works Department
Cost	N/A
Funding	Miami-Dade County operating budget
Implementation Timeframe	Ongoing and continuous

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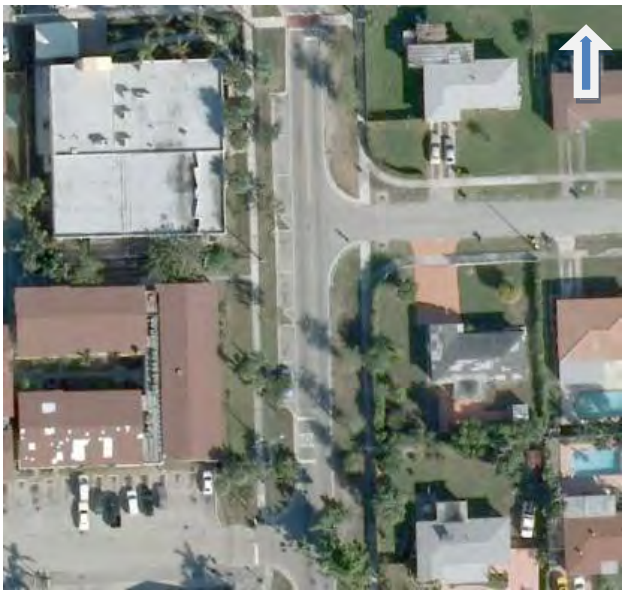
PROJECT 11: NE 10th AVENUE BETWEEN NE 151st STREET AND MIAMI GARDENS DRIVE (ROADWAY WIDENING)

Project	Widen NE 10th Avenue from two lanes to four lanes between NE 151st Street and Miami Gardens Drive (NE 183rd Street). Approximate length is two miles.
Political Jurisdiction	City of North Miami Beach and Unincorporated Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	This corridor is projected to operate at LOS E in the year 2030 with no currently planned improvements. This project will increase capacity and maintain acceptable level of service within the corridor.
Issues/Challenges	This project may be controversial, as traffic calming devices were previously installed between North Miami Beach Boulevard and Miami Gardens Drive in response to citizen concerns, as this is a heavy pedestrian corridor. The City of North Miami Beach needs to determine if this project should be carried forward and advanced, based on the past history in this corridor.
Notes	The existing ROW is approximately 70 feet. ROW acquisition may be needed. Further analysis is needed to determine acceptable typical section.
Tasks Involved	Include project in LRTP
Lead Agencies	City of North Miami Beach and Miami-Dade MPO
Cost	$12,000,000 (excludes right-of-way acquisition)
Funding	Miami-Dade County and North Miami Beach
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, long-term (5-15 years)



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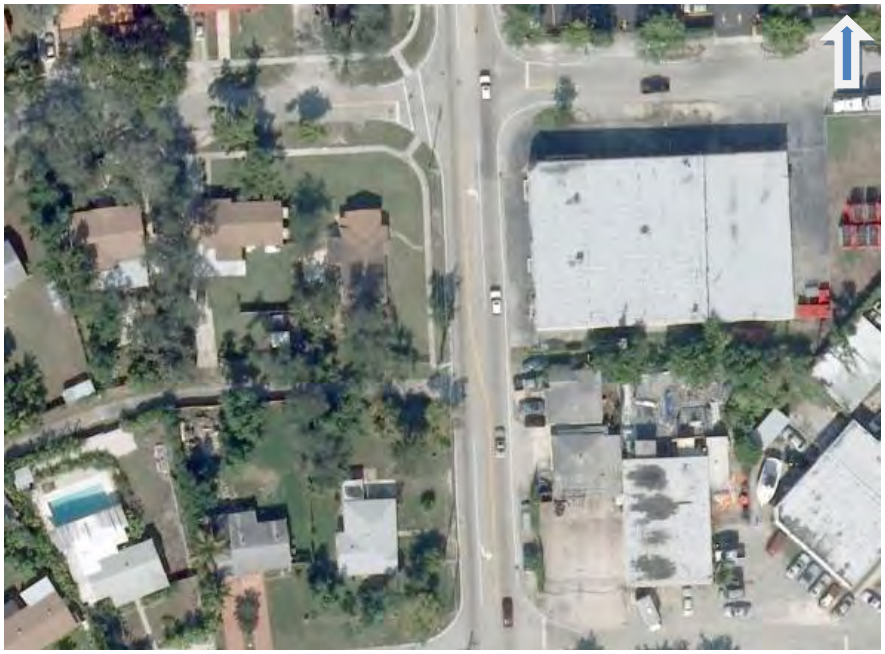
PROJECT 12: NE 16th AVENUE BETWEEN US 1 AND NE 135th STREET (ROADWAY WIDENING)

Project	Widen NE 16th Avenue from three lanes to five lanes between US 1 and NE 135th Street. Approximate length is 1.2 miles.
Political Jurisdiction	City of North Miami and Unincorporated Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	The corridor is projected to operate at LOS F in the year 2030 with no currently planned improvements. This project will increase capacity and maintain acceptable level of service within the corridor.
Issues/Challenges	Northern terminus will need to be examined in detail in order to transition back to a two-lane facility north of NE 135th Street.
Notes	The existing ROW is approximately 70 feet. ROW acquisition may be needed. Further analysis is needed to determine acceptable typical section. A railroad crossing (FEC corridor) is located within the segment.
Tasks Involved	Include in the LRTP
Lead Agencies	City of North Miami and Miami-Dade MPO
Cost	$7,000,000 (excludes right-of-way acquisition)
Funding	Miami-Dade County and North Miami
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, long-term (5-15 years)



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PROJECT 13: NE 14TH AVENUE BETWEEN NE 135TH STREET AND NE 163RD STREET (ROADWAY WIDENING)

Project	Widen NE 14th Avenue from two lanes to four lanes between NE 135th Street and NE 163rd Street. Approximate length is 1.75 miles.
Political Jurisdiction	City of North Miami, City of North Miami Beach, and Unincorporated Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	This corridor currently operates at LOS E and is projected to operate at LOS F in the year 2030, with no currently planned improvements. The proposed project will increase capacity and maintain acceptable level of service within the corridor.
Project Elimination Reasons	The northern terminus of the proposed project at NE 163rd Street provides restricted access (right-in/right-out). For the proposed project to be effective, the existing right-in/right-out intersection at NE 163rd Street needs to be converted to a full access intersection with a traffic signal. However, due to its proximity to NE 15th Avenue, a full access signalized intersection at NE 14th Avenue and NE 163rd Street is not viable. Therefore, this project is removed from further consideration. Please note that Project 31: NE 16th Avenue between NE 135th Street and NE 163rd Street is provided as an alternative.

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PROJECT 14: NE 151st STREET BETWEEN NE 10th AVENUE AND WEST DIXIE HIGHWAY (ROADWAY WIDENING)

Project	Widen NE 151st Street from two lanes to four lanes between NE 10th Avenue and West Dixie Highway. Approximate length is one mile.
Political Jurisdiction	Unincorporated Miami-Dade County, City of North Miami, and North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This corridor currently operates at LOS F and there are no planned improvements. The proposed project will increase capacity and could potentially help relieve NE 163rd Street.
Issues/Challenges	Potential opposition to widening within residential area to the west of Dixie Highway.
Notes	Land use to the west of Dixie Highway is residential, while land use is commercial/industrial to the east of Dixie Highway. The existing ROW is approximately 70 feet. ROW acquisition may be needed. Further analysis is needed to determine acceptable typical section. Alignment of NE 151st Street is offset at NE 16th Avenue. The railroad crossing (FEC corridor) should be improved to correct the existing "hump."
Tasks Involved	Include in the LRTP
Lead Agencies	Miami-Dade MPO and North Miami Beach
Cost	$6,000,000 (excludes right-of-way acquisition)
Funding	Miami-Dade County and North Miami Beach
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, long-term (5-15 years)

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PROJECT 15: NE 159th STREET BETWEEN NE 6th AVENUE AND WEST DIXIE HIGHWAY (ROADWAY WIDENING)

Project	Widen NE 159th Street from three lanes to five lanes between NE 6th Avenue and West Dixie Highway. Approximate length is two miles.
Political Jurisdiction	City of North Miami Beach and Unincorporated Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	The segment between NE 6th Avenue and NE 10th Avenue currently operates at LOS D or worse, and the entire study corridor is projected to operate LOS E or F in the year 2030. There are no planned improvements for the corridor. The proposed project will increase capacity and maintain acceptable level of service within the corridor.
Issues/Challenges	Potential opposition to widening within the residential community.
Notes	This corridor is located within a predominantly residential area. The existing ROW is approximately 70 feet. ROW acquisition may be needed. Further analysis is needed to determine acceptable typical section. Project should be completed in conjunction with Project 19: NE 159th Street (New Corridor Connections). Also examine connection improvements to the west to Miami Avenue.
Tasks Involved	Include in the LRTP
Lead Agencies	Miami-Dade MPO and North Miami Beach
Cost	$12,500,000 (excludes right-of-way acquisition)
Funding	Miami-Dade County and North Miami Beach
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, long-term (5-15 years)

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PROJECT 16: NE 19TH AVENUE BETWEEN NE 163RD STREET AND MIAMI GARDENS DRIVE (ROADWAY WIDENING)

Project	Widen NE 19th Avenue from four lanes to six lanes between NE 163rd Street and Miami Gardens Drive. Approximate length is 1.4 miles.
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This corridor currently operates at LOS E and there are no planned improvements. The proposed project will increase capacity and maintain acceptable level of service within the corridor.
Project Elimination Reasons	This corridor is bordered primarily by residential and institutional land uses, with commercial areas at either end of the limits of this proposed project. The existing ROW is approximately 125 feet, which is adequate to accommodate six lanes. However, there is a wide median with large trees. Widening the roadway would negatively impact the median and detract from the area's aesthetics. Due to these adverse impacts, this project is removed from further consideration.

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PROJECT 17: COLLINS AVENUE BETWEEN HARBOUR WAY AND BAYVIEW DRIVE (ROADWAY WIDENING)

Project	Widen Collins Avenue from four lanes to six lanes between Harbour Way and Bayview Drive. Approximate length is 1.9 miles.
Political Jurisdiction	Bal Harbour Village, Unincorporated Miami-Dade County, and City of Sunny Isles Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This corridor currently operates at LOS E and there are no planned improvements. Currently, pedestrian tunnels are used for beach access from the parking lots on the west side of the corridor to Haulover Beach. This project will increase capacity and maintain acceptable level of service within the corridor.
Issues/Challenges	Haulover Bridge will have to be widened. The project will require a PD&E study to evaluate impacts of the widening the Haulover Bridge on the waterway (Haulover Cut), as well as potential Section 4(f) impacts to Haulover Park.
Notes	The existing ROW is approximately 100 feet, which may not be adequate to accommodate six lanes. Traffic presently flows well, as this section of Collins Avenue is uninterrupted.
Tasks Involved	Include in the LRTP, complete PD&E Study
Lead Agencies	Miami-Dade MPO and FDOT
Cost	To be determined (TBD) in PD&E Study
Funding	FDOT: Other arterial construction/ROW and/or TMA funds
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, mid-term (3-5 years) for PD&E study, long-term (10+ years) for construction of improvements.

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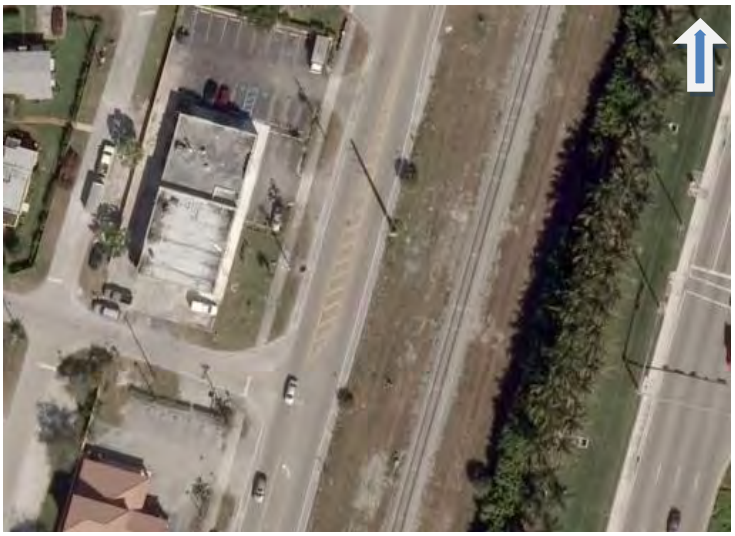
PROJECT 18: WEST DIXIE HIGHWAY BETWEEN NE 163rd STREET AND COUNTY LINE ROAD (ROADWAY WIDENING)

Project	Widen West Dixie Highway from two lanes to four lanes between NE 163rd Street and County Line Road. Approximate length is 3.45 miles.
Political Jurisdiction	City of North Miami Beach and Unincorporated Miami Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	West Dixie Highway is one of the few continuous roadways in northeast Miami-Dade County. This corridor currently operates at LOS D or worse, and is projected to operate at LOS F in the year 2030. There are no planned capacity improvements. The proposed project will increase capacity and maintain acceptable level of service within the corridor.
Issues/Challenges	Address drainage issues in the vicinity of NE 170th Street, identified by City of North Miami Beach.
Notes	The existing ROW is approximately 70 feet. ROW acquisition may be needed. Further analysis is needed to determine acceptable typical section. The elimination of on-street parking may be needed in sections.
Tasks Involved	Include in the LRTP
Lead Agencies	Miami-Dade MPO
Cost	$21,300,000 (excludes right-of-way acquisition and bridge replacement)
Funding	Miami-Dade County
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, long-term (10+ years) for construction of improvements



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PROJECT 19: NE 159th STREET (NEW CORRIDOR CONNECTIONS)

Project	Examine a direct connection along NE 159th Street from West Dixie Highway to US 1.
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	The need for additional east-west connections to US 1 and I-95 has been identified to better serve the mobility needs of the area. NE 163rd Street is the nearest parallel road that provides direct access to I-95 and US 1. To relieve NE 163rd Street and to improve mobility options, the feasibility of connecting NE 159th Street from West Dixie Highway to US 1 should be examined.
Issues/Challenges	Obtaining a new grade crossing of the FEC railroad; FEC may require closing multiple existing grade crossings. Potential grade crossings for removal include: NE 141st Street, NE 146th Street, and NE 179th Street.
Notes	An existing business will be impacted by the proposed connection to US 1.
Tasks Involved	Include in the LRTP
Lead Agencies	Miami-Dade MPO
Cost	$1,000,000 (excludes right-of-way acquisition, railroad crossing equipment, and cost of closing existing grade crossing)
Funding	Miami-Dade County and FDOT: Other arterial construction/ROW and/or TMA funds
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, long-term (5-15 years) for construction of improvements

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PROJECT 20: NE 135th STREET REVERSIBLE LANE STUDY

Project	Conduct a study to assess the potential for operating a reversible lane on NE 135th Street. Based on further evaluation, the limits of the reversible lane are recommended to be limited between NE 16th Avenue and US 1. Approximate length is 0.6 miles.
Political Jurisdiction	City of North Miami
Need Identified in NE Miami-Dade Traffic Flow Study	NE 135th Street is a four-lane roadway with a two-way center left-turn lane. Traffic flow on NE 135th Street shows a high directionality (69 percent eastbound) during the PM peak period. As a result, the roadway is more heavily congested in the peak direction. Reversible lanes could address traffic congestion by more efficiently utilizing the existing infrastructure. The presence of a continuous center left-turn lane in the corridor is advantageous for reversible lanes operation.
Issues/Challenges	Transition at termini of reversible lane operations.
Notes	Work in conjunction with long-term improvement for Project #9.
Tasks Involved	Discuss feasibility with FDOT; perform feasibility study
Lead Agencies	Miami-Dade Public Works Department and FDOT
Cost	$100,000 for study
Funding	Miami-Dade MPO and FDOT: Other arterial construction/ROW and/or TMA funds
Implementation Timeframe	Short-term (1-3 years) for feasibility study; mid-term (3-5 years) for implementation

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PROJECT 21: BISCAYNE BOULEVARD REVERSIBLE LANE STUDY

Project	Conduct a study to assess the potential for operating a reversible lane on Biscayne Boulevard between NE 125th Street and NE 151st Street. Approximate length is 1.8 miles.
Political Jurisdiction	City of North Miami and City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	During the PM peak period, approximately 60 percent of traffic flow is in the northbound direction. As a result, the roadway is more heavily congested in one direction. Reversible lanes could address traffic congestion by more efficiently utilizing the existing infrastructure.
Project Elimination Reasons	The proposed project could exacerbate an existing bottleneck at its southern terminus at NE 125th Street, where Biscayne Boulevard narrows from 6 lanes (3 lanes in each direction) to 4 lanes (2 lanes in each direction). In addition, the directional split is not pronounced enough to justify the project and recently installed raised medians would have to be removed. Therefore, this project is removed from further consideration. However, Miami-Dade County recommends installing a bus bay along the southbound side of Biscayne Boulevard to the south of NE 125th Street, so that buses do not impede traffic flow while passengers board and alight at the stop.

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PROJECT 22: NE 163rd/167th STREET REVERSIBLE LANE STUDY

Project	Conduct a study to assess the potential for operating a reversible lane on North Miami Beach Boulevard (NE 163rd Street/NE 167th Street) between NE 6th Avenue and US 1. Approximate length is 2.1 miles.
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	NE 163rd /167th Street is a major east-west arterial in the area connecting to I-95, Palmetto Expressway, US 1, and the barrier island. During the PM peak period, approximately 60 percent of traffic flows in the westbound direction. As a result, the roadway is more heavily congested in one direction.
Project Elimination Reasons	The directional split is not pronounced enough to justify the proposed project. In addition, almost the entire corridor is bound by commercial uses which would be negatively impacted by access (left-turn) restrictions resulting from the implementation of reversible lane operations. Furthermore, truncating the reversible lane operations at NE 6th Avenue would likely create a bottleneck. Therefore, this project is removed from further consideration.

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PROJECT 23: DIRECT CONNECTION BETWEEN WILLIAM LEHMAN CAUSEWAY AND AVENTURA MALL

Project	Determine the feasibility of providing an exit ramp on the William Lehman Causeway to provide direct access to Aventura Mall.
Political Jurisdiction	City of Aventura
Need Identified in NE Miami-Dade Traffic Flow Study	Addressing traffic congestion along Biscayne Boulevard and West Country Club Drive in the vicinity of the Aventura Mall. This regional mall attracts a significant volume of traffic. Traffic congestion is expected to worsen due to many residential and commercial developments in the area. A direction connection from the William Lehman Causeway to Aventura Mall could help relieve congestion in the area.
Issues/Challenges	FDOT concerns with connection to private property from a controlled access facility. Geometric constraints may preclude this connection from being viable.
Notes	The West Country Club Drive off-ramp from the William Lehman Causeway provides access to the Aventura Mall via the Mall Service Road. Signage directs westbound causeway traffic destined for the Aventura Mall to utilize the West County Club Drive off-ramp. In addition, traffic destined for the barrier island from the Aventura Mall could access the William Lehman Causeway via West Country Club Drive, bypassing Biscayne Boulevard.
Tasks Involved	Conduct a feasibility study to verify constructability.
Lead Agencies	City of Aventura
Cost	TBD
Funding	City of Aventura, private sector, FDOT
Implementation Timeframe	Short-term (1-3 years) for feasibility study

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PROJECT 24: INTERMODAL CENTER AT BISCAYNE BLVD AND NE 163rd STREET

Project	Explore potential locations for an intermodal center in the NE 163rd Street/Biscayne Boulevard area.
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	An intermodal center in the vicinity of 163rd Street/Biscayne Blvd could serve both mainland and beach communities as a transit transfer station and help reduce automobile dependency. This intermodal center could also provide access to future passenger service along the FEC Corridor.
Issues/Challenges	Identifying and acquiring a highly accessible site.
Notes	The land use in the vicinity is primarily automobile-oriented commercial uses. Pedestrian access and safety concerns need to be assessed. Therefore, an intermodal center at the above area might primarily serve as a transfer station to and from beach communities. Provide bus shelters as a short-term improvements.
Tasks Involved	Identify and evaluate potential locations. Coordinate with the South Florida East Coast Corridor Study.
Lead Agencies	North Miami Beach
Cost	Short-term: $20,000 Long-term: TBD
Funding	Miami-Dade Transit and FDOT: Transit
Implementation Timeframe	Short-term/mid-term (1-5 years) for coordination with South Florida East Coast Corridor Study; long-term (6+ years) for implementation

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PROJECT 25: INTERSECTION IMPROVEMENTS ALONG BISCAYNE BLVD IN AVENTURA

Project	Several intersection improvements along Biscayne Boulevard between NE 178th Street and NE 213th Street (listed below)
Political Jurisdiction	City of Aventura
Need Identified in NE Miami-Dade Traffic Flow Study	There is dense development along Biscayne Boulevard within Aventura. Significant traffic congestion is experienced in this area. The Biscayne Boulevard Intersection Study (2006) evaluated intersections along Biscayne Boulevard within the City of Aventura to identify intersection, access management, and safety improvements. These relatively low-cost improvements could help improve traffic flow in the area.
Tasks Involved	Discuss signal modifications with Miami-Dade County; discuss intersection laneage modifications with FDOT; coordinate with affected property owners
Lead Agencies	City of Aventura, Miami-Dade County Public Works Department, FDOT
Cost	TBD
Funding	FDOT: Work plan, Aventura
Implementation Timeframe	Short-term (1-3 years)

- NE 182nd Street – signal timing. **STATUS: This is a continuous and ongoing project for the County.**
- NE 183rd Street – provide a second westbound left-turn lane by partly removing the median barrier, restriping, signal timing. **STATUS: Dual turn-lanes will not be provided. Signal timing modifications are proposed, as well as restricted median access along NE 183rd Street to the east of Biscayne Boulevard.**
- NE 187th Street – signal timing; eliminate parallel parking on north side of NE 187th Street; eliminate northbound left-turn from the alley between NE 187th Street and Miami Gardens Drive. **STATUS: This project has been completed.**
- NE 191st Street – provide triple westbound left-turn lanes and one exclusive right-turn lane (remove existing island and acquire right-of-way from the north side); signal timing. **STATUS: Phase 1: the existing left-turn storage bays will be extended. Phase 2: (if needed) dual left-turn lanes, dual right-turn lanes, and a shared left/right lane will be constructed.**
- NE 192nd Street – construct a raised curb to eliminate the first parallel parking space in the southeast corner of the intersection to provide safe right turns from Biscayne Boulevard. **STATUS: This project has not yet been implemented.**
- NE 203rd Street – add second eastbound right-turn lane. **STATUS: FDOT is currently developing alternatives for this intersection.**
- NE 208th Street – restrict the eastbound approach to right-turn only. Provide another westbound left-turn lane. To accommodate the left-turn lane, reduce the number of receiving lanes from two to one (from the Biscayne Boulevard Intersection Study; not identified in the NE Corridor Study). **STATUS: This project has not yet been implemented.**
- NE 209th Street – add new westbound approach lane to provide an exclusive right-turn lane and shared through plus left-turn lane. **STATUS: ROW acquisition is ongoing.**
- NE 213th Street – signal timing. **STATUS: This is a continuous and ongoing project for the County.**

PROJECT 26: BISCAYNE BOULEVARD AND WILLIAM LEHMAN CAUSEWAY (INTERSECTION CAPACITY)

Project	Restripe the shared left-turn/right-turn lane on the westbound approach to either an exclusive right-turn lane or an exclusive left-turn lane.
Political Jurisdiction	City of Aventura
Need Identified in NE Miami-Dade Traffic Flow Study	The William Lehman Causeway connects the barrier island with the mainland in Northeast Miami-Dade County. In addition, the Aventura Mall is located on the northeast corner of this intersection. This intersection currently operates at LOS E during the AM and PM peak periods. During the PM peak period, northbound traffic sometimes blocks intersection.
Project Elimination Reasons	A Miami-Dade County Public Works study evaluated this intersection in 2005 when the westbound approach had two left-turn lanes and two right-turn lanes, and recommended modification to the existing lane configuration in order to improve traffic flow. The existing lane configuration was evaluated in the Biscayne Boulevard Intersection Study (September 2006) conducted by Tinter Associates. The Tinter Associates study did not recommend any improvements to the existing lane configuration. Therefore, the existing lane configuration should be maintained and this proposed project is removed from further consideration.

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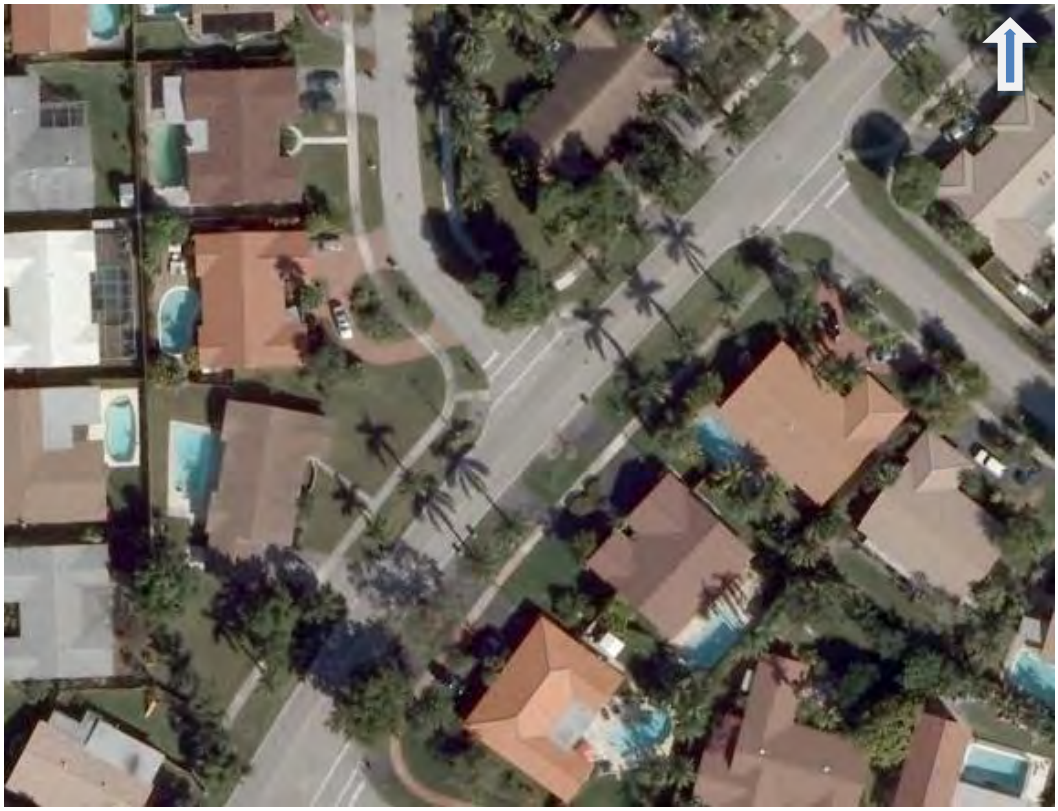
PROJECT 27: HIGHLAND LAKES BOULEVARD BETWEEN IVES DAIRY ROAD AND NE 215TH STREET (ROADWAY WIDENING)

Project	Widen Highland Lakes Boulevard from two lanes to four lanes between Ives Dairy Road and NE 215th Street. Approximate length is 0.9 miles.
Political Jurisdiction	Unincorporated Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	This corridor currently operates at LOS D but is projected to operate at LOS F in the year 2030. There are no planned capacity improvements. The proposed project will increase capacity and maintain acceptable level of service within the corridor.
Project Elimination Reasons	This corridor is located within a built-out single-family residential neighborhood. Most importantly, NE 215th Street (northern study limit) dead-ends within the residential community, so the benefits of roadway widening are negligible, as traffic volumes are not likely to increase significantly in the future. Therefore, this project is removed from further consideration.



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PROJECT 28: NE 151ST STREET (NEW CORRIDOR CONNECTIONS)

Project	Complete missing links along NE 151st Street to provide unobstructed connection between US 1 and I-95.
Political Jurisdiction	City of North Miami Beach and Miami Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	The need for additional east-west connections between US 1 and I-95 was identified to better serve the area's mobility needs and reduce congestion of major roadways. NE 151st Street provides a direct connection to US 1 and has a partial interchange at I-95. However, there are several discontinuities along NE 151st Street to the west of NE 10th Avenue. To relieve NE 163rd Street and NE 135th Street and to provide additional mobility options, the feasibility of completing missing links along NE 151st Street should be examined.
Project Elimination Reasons	This corridor is primarily located within an established single-family residential area. To complete missing links, bridges are required to cross the Biscayne Canal and Spur Canal No 4. In addition, several single-family homes along with an apartment complex would require acquisition and demolition to construct the proposed project. Due to the community impacts, this project is removed from further consideration.

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

PROJECT 29: NE 171ST STREET BETWEEN NE 15TH AVENUE AND US 1 (ROADWAY WIDENING)

Project	Widen NE 171st Street from two lanes to four lanes between NE 15th Avenue and US 1. Approximate length is 1.2 miles.
Political Jurisdiction	City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This corridor currently operates at LOS E and there are no planned improvements. The proposed project will increase capacity and maintain acceptable level of service within the corridor.
Project Elimination Reasons	The corridor passes through a residential community and its west terminus (NE 15th Avenue) is only a 2-lane roadway. The existing ROW is approximately 120 feet, which is adequate to accommodate four lanes. However, there is a wide median with large trees along with on-street parking at several locations. Widening the roadway would negatively impact the median and detract for the neighborhood's aesthetics. Due to these adverse impacts, this project is removed from further consideration.

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

PROJECT 30: NE 213th STREET EXTENSION BETWEEN BISCAYNE BOULEVARD AND EAST DIXIE HIGHWAY (NEW CORRIDOR CONNECTION)

Project	Extend NE 213th Street from Biscayne Boulevard to East Dixie Highway. Approximate length 0.3 miles.
Political Jurisdiction	City of Aventura and Miami-Dade County
Need Identified in NE Miami-Dade Traffic Flow Study	This improvement was recommended by the City of Aventura as an additional project for the implementation plan.
Issues/Challenges	Several single-family homes along with a multi-family residential complex would require acquisition and demolition to construct the proposed project.
Notes	The City plans to obtain the parcels required for the road extension from the private sector as these parcels are redeveloped.
Tasks Involved	Right-of-way acquisition
Lead Agencies	City of Aventura
Cost	$3,300,000 (excluding right-of-way)
Funding	City of Aventura and private sector
Implementation Timeframe	Long-term (6-10 years)

Source: City of Aventura

PROJECT 31: NE 16th AVENUE BETWEEN NE 135th STREET AND NE 163rd STREET (ROADWAY WIDENING)

Project	Widen NE 16th Avenue from two lanes to four lanes between NE 135th Street and 163rd Street. Approximate length is 1.75 miles.
Political Jurisdiction	City of North Miami and City of North Miami Beach
Need Identified in NE Miami-Dade Traffic Flow Study	This improvement was recommended by the City of North Miami as an additional project for the implementation plan.
Issues/Challenges	Treatment of NE 16th Avenue and NE 163rd Street intersection.
Notes	The existing ROW is approximately 70 feet in sections. Further analysis is needed to determine the appropriate typical section. The elimination of on-street parking and ROW acquisition may be needed.
Tasks Involved	Include in the LRTP
Lead Agencies	Miami-Dade MPO, City of North Miami, and North Miami Beach
Cost	$10,800,000 (excluding right-of-way)
Funding	Miami-Dade County
Implementation Timeframe	Short-term (1-3 years) for inclusion in LRTP, long-term (6-10 years) for implementation

Source: Microsoft Visual Earth™, © 2009 Microsoft Corporation

PROJECT 32: BISCAYNE BOULEVARD BUS BAYS AT NE 123rd STREET

Project	Provide bus bays in both the northbound and southbound directions along Biscayne Boulevard at NE 123rd Street.
Political Jurisdiction	City of North Miami
Need Identified in NE Miami-Dade Traffic Flow Study	This improvement was recommended by the Miami-Dade County Public Works Department as an additional project for the implementation plan.
Issues/Challenges	Acquiring right-of-way or easement
Notes	This project is proposed to help alleviate the existing bottleneck along Biscayne Boulevard at NE 123rd Street, where Biscayne Boulevard transitions from a six-lane to a four-lane section traveling southbound. Currently bus boarding and alighting occurs in the outer travel lane contributing to bottleneck.
Tasks Involved	Coordinate with Miami-Dade Transit and FDOT to include the proposed improvements in the Transportation Improvement Program (TIP).
Lead Agencies	Miami-Dade MPO, City of North Miami, and North Miami Beach
Cost	$180,000 (excluding right-of-way)
Funding	Miami-Dade Transit and FDOT
Implementation Timeframe	Short-term (1-3 years)

Source: Microsoft Visual Earth™, © 2009 Microsoft Corporation

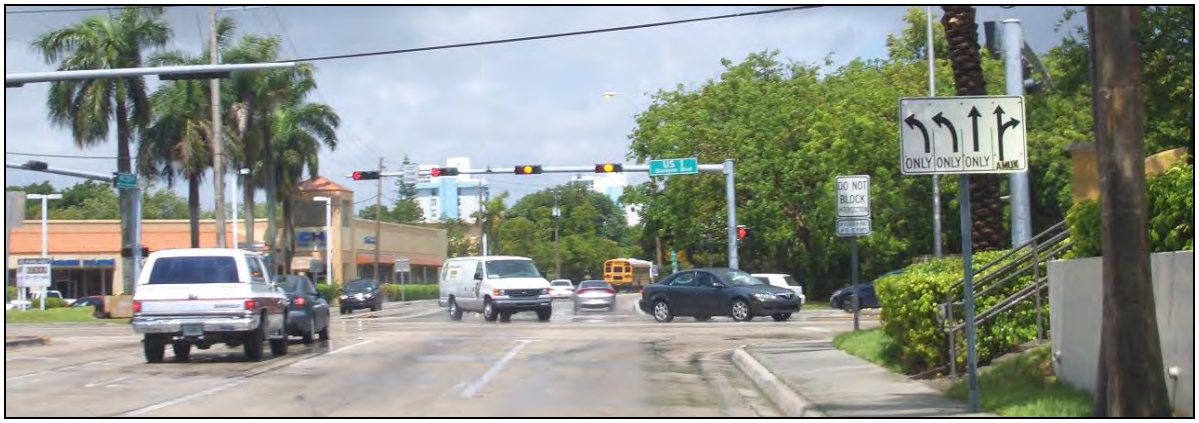
PROJECT 33: INTERMODAL CENTER AT NE 125th STREET

Project	Explore potential locations for an intermodal center in the NE 125th Street.
Political Jurisdiction	City of North Miami
Need Identified in NE Miami-Dade Traffic Flow Study	An intermodal center in the vicinity of NE 125th Street could serve both mainland and beach communities as a transit transfer station and help reduce automobile dependency. This intermodal center could also provide access to future passenger service along the FEC Corridor.
Issues/Challenges	Identifying and acquiring a highly accessible site.
Notes	The land use in the vicinity is a mix of automobile-oriented commercial uses and residential. Pedestrian access and safety concerns need to be assessed.
Tasks Involved	Identify and evaluate potential locations. Coordinate with the South Florida East Coast Corridor Study.
Lead Agencies	North Miami
Cost	TBD
Funding	Miami-Dade Transit and FDOT: Transit
Implementation Timeframe	Short-term/mid-term (1-5 years) for coordination with South Florida East Coast Corridor Study; long-term (6+ years) for implementation

Source: Microsoft Visual Earth™, © 2009 Microsoft Corporation

PROJECT EVALUATION

Projects were grouped together based on project type, project viability criteria, and input from the SAC, Miami-Dade County, FDOT, and municipalities. Four (4) classification groups were established: (1) eliminated projects, (2) signal re-timing projects, (3) potentially feasible projects, and (4) potentially constrained projects. Projects determined to be not viable or desirable were eliminated and are contained in Table 1. Table 2 contains signal re-timing projects. Table 3 contains potentially feasible projects, while Table 4 contains potentially constrained projects. Figure 2 graphically illustrates project locations.



NE 135th Street at Biscayne Boulevard (Signal Re-Timing)

Projects were evaluated against specific criteria that were established for each classification group. Reversible lane projects were evaluated against criteria including land-uses along the corridor, directional split of traffic, and ease of transitions at termini points. Corridors with heavy commercial land-uses are not conducive to reversible lanes and would likely encounter opposition from businesses, since access to the commercial uses may be restricted. Furthermore, in order for reversible lanes to be effective the directional traffic split should be approximately 70/30 based on discussions with Miami-Dade Public Works Department. The termini of a reversible lane also need to be considered, including the ease of transitioning to balanced lanes, so existing congestion is not exacerbated or simply moved from one location to another.

West Dixie Highway (Roadway Widening)

Roadway widening projects and new corridor connections were evaluated against criteria including compatibility with adjacent land-uses, need for right-of-way acquisition, impact on neighborhood aesthetics, and corridor termini connections. Corridors or proposed corridor connections within established residential communities have a high likelihood to encounter neighborhood opposition, as would corridors that require right-of-way/acquisition including the taking of residences or businesses. Additionally, impacting neighborhood aesthetics by removing/reducing landscaped medians may also lead to neighborhood opposition which could inhibit a project from moving forward. Project termini were assessed with respect to type of connection (full access vs. restricted access) and connectivity between the proposed improvement and existing roadway network.

NE 151st (New Corridor Connections)

Table 1: Eliminated Projects

Eliminated Projects		Reason
Project 13	NE 14th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)	Restricted access at NE 163rd Street (right-in/right-out) would need to be converted to full access with a signal control. Due to proximity to NE 15th Avenue (does not meet FDOT access management standards) a traffic signal is not viable.
Project 16	NE 19th Avenue between NE 163rd Street and Miami Gardens Drive (Roadway Widening)	Corridor bordered by residential and institutional land uses. Wide median with canopy trees would have to be removed thus degrading neighorhood aesthetics.
Project 21	Biscayne Boulevard Reversible Lane Study	Lack of directional split to justify project. Existing bottleneck at termini (NE 125th Street) would be exacerbated by transition to balanced lanes.
Project 22	163rd/167th Street Reversible Lane Study	Access to businesses would be degraded in this heavy commercial corridor. Lack of directional split to justify project.
Project 26	Biscayne Boulevard and William Lehman Causeway (Intersection Capacity)	Intersection approach was modified to existing lane configuration by Miami-Dade County Public Works based on results of detailed operational analysis.
Project 27	Highland Lakes Boulevard between Ives Dairy Road and NE 215th Street (Roadway Widening)	NE 215th Street dead-ends within a residential community (lack of network connectivity). Corridor located in built out single-family residential neighborhood (traffic volumes not likely to increase).
Project 28	NE 151st Street (New Corridor Connections)	Corridor primarily located in established single-family residential neighborhood. Several single-family homes and a multi-family residential complex would require acquisition and demolition to construct project.
Project 29	NE 171st Street between NE 15th Avenue and US 1 (Roadway Widening)	Corridor passes through residential community and west terminus (NE 15th Avenue) is only 2-lane roadway which will limit network benefits. Existing landscape median with canopy trees would have to be removed to widen roadway detracting from neighborhood's aesthetics.

Biscayne Boulevard and William Lehman Causeway Intersection Capacity (Eliminated Project)
Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

Table 2: Signal Re-Timing Projects

Signal Re-Timing Projects		Status
Project 4	Biscayne Boulevard and NE 163rd Street (Signal Re-Timing)	Performed periodically on an ongoing basis. Contact Miami-Dade Public Works with specific concerns.
Project 5	West Dixie Highway and NE 163rd Street (Signal Re-Timing)	Performed periodically on an ongoing basis. Contact Miami-Dade Public Works with specific concerns.
Project 6	NE 10th Avenue and NE 167th Street (Signal Re-Timing)	Performed periodically on an ongoing basis. Contact Miami-Dade Public Works with specific concerns.
Project 7	NE 10th Avenue and NE 163rd Street (Signal Re-Timing)	Performed periodically on an ongoing basis. Contact Miami-Dade Public Works with specific concerns.
Project 8	Biscayne Boulevard and NE 123rd Street (Signal Re-Timing)	Performed periodically on an ongoing basis. Contact Miami-Dade Public Works with specific concerns.
Project 9	Biscayne Boulevard and NE 135th Street (Signal Re-Timing)	Performed periodically on an ongoing basis. Contact Miami-Dade Public Works with specific concerns.
Project 10	Dixie Highway and NE 135th Street (Signal Re-Timing)	Performed periodically on an ongoing basis. Contact Miami-Dade Public Works with specific concerns.

West Dixie Highway and NE 163rd Street (Signal Re-Timing)
Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

Table 3: Potentially Feasible Projects

Potentially Feasible Projects		Key Issues/Challenges
Project 1	West Dixie Highway and Miami Gardens Drive (Intersection Capacity)	Right-of-way acquisition for long-term improvements.
Project 2	NW 2nd Avenue and NW 167th Street (Intersection Capacity)	Provide advance signage on northbound approach to guide motorists to the correct left-turn lane.
Project 3	Biscayne Boulevard and NE 163rd Street (Grade Separation)	May be cost prohibitive for short-term or mid-term implementation.
Project 9	Biscayne Boulevard and NE 135th Street (Signal Re-Timing)	Signal Design and potential right-of-way acquisition for long-term improvements.
Project 12	NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)	Northern terminus will need to be examined for transition back to a two-lane facility north of NE 135th Street. Alternatively, project limits may be extended north to NE 163rd Street (Project 31).
Project 18	West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)	Right-of-way acquisition and elimination of on-street parking may be required.
Project 20	NE 135th Street Reversible Lane Study	Transition at termini of reversible lane operations.
Project 24	Intermodal Center at Biscayne Boulevard and NE 163rd Street	Locating a highly accessible site for the facility.
Project 25	Intersection Improvements along Biscayne Boulevard in Aventura	No significant impediments.
Project 33	Intermodal Center at NE 125th Street	Locating a highly accessible site for the facility.

NW 2nd Avenue and NW 167th Street (Intersection Capacity)
Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

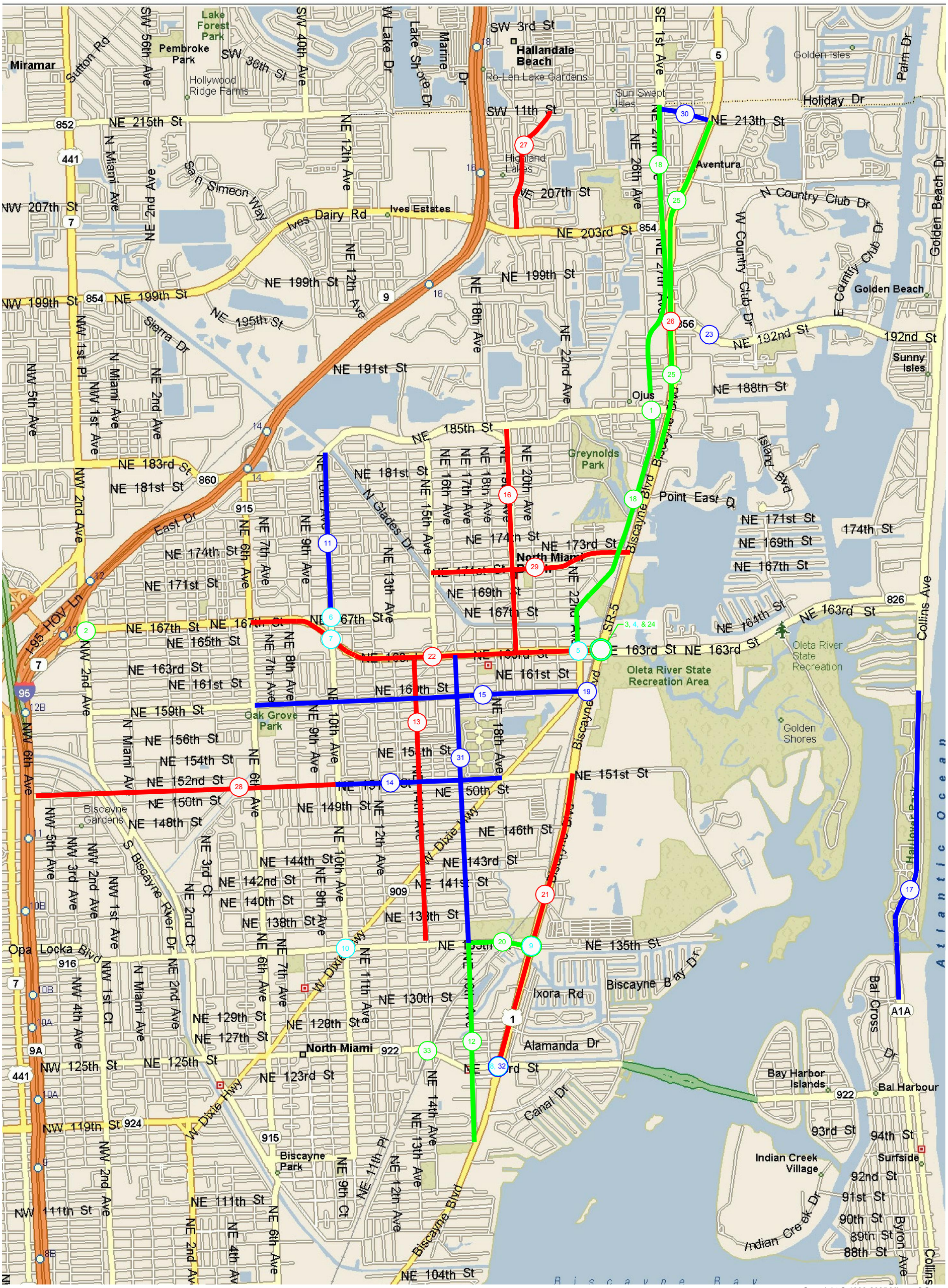
Table 4: Potentially Constrained Projects

Potentially Constrained Projects		Key Issues/Challenges
Project 11	NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)	Corridor passes through residential neighborhood. Traffic calming devices previously installed in response to citizen concerns.
Project 14	NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)	Corridor passes through residential neighborhood.
Project 15	NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)	Corridor passes through residential neighborhood.
Project 17	Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)	Potential environmental impacts.
Project 19	NE 159th Street (New Corridor Connections)	Obtaining a new grade crossing of FEC railroad.
Project 23	Direct Connection between William Lehman Causeway and Aventura Mall	FDOT concerns with private property connection from controlled access facility. Geometric constraints may preclude this connection from being viable.
Project 30	NE 213th Street Extension between Biscayne Boulevard and E. Dixie Highway	Residences would need to be acquired.
Project 31	NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)	Corridor passes through residential neighborhood.
Project 32	Biscayne Boulevard Bus Bays at NE 123rd Street	Right-of-way acquisition.

NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)

Source: Microsoft Visual Earth™, © 2008 Microsoft Corporation

NE CORRIDOR IMPLEMENTATION PLAN PROJECTS



LEGEND

XX ELIMINATED PROJECTS

Project 13: NE 14th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)
Project 16: NE 19th Avenue between NE 163rd Street and Miami Gardens Drive (Roadway Widening)
Project 21: Biscayne Boulevard Reversible Lane Study
Project 22:163rd/167th Street Reversible Lane Study
Project 26: Biscayne Boulevard and William Lehman Causeway (Intersection Capacity)
Project 27: Highland Lakes Boulevard between Ives Dairy Road and NE 215th Street (Roadway Widening)
Project 28: NE 151st Street (New Corridor Connections)
Project 29: NE 171st Street between NE 15th Avenue and US 1 (Roadway Widening)

XX SIGNAL RE-TIMING PROJECTS

Project 4: Biscayne Boulevard and NE 163rd Street (Signal Re-Timing)
Project 5: West Dixie Highway and NE 163rd Street (Signal Re-Timing)
Project 6: NE 10th Avenue and NE 167th Street (Signal Re-Timing)
Project 7: NE 10th Avenue and NE 163rd Street (Signal Re-Timing)
Project 8: Biscayne Boulevard and NE 123rd Street (Signal Re-Timing)
Project 9: Biscayne Boulevard and NE 135th Street (Signal Re-Timing)
Project 10: Dixie Highway and NE 135th Street (Signal Re-Timing)

XX POTENTIALLY FEASIBLE PROJECTS

Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)
Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)
Project 3: Biscayne Boulevard and NE 163rd Street (Grade Separation)
Project 9: Biscayne Boulevard and NE 135th Street (Intersection Capacity)
Project 12: NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)
Project 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)
Project 20: NE 135th Street Reversible Lane Study
Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
Project 25: Intersection Improvements along Biscayne Boulevard in Aventura
Project 33: Intermodal Center at NE 125th Street

XX POTENTIALLY CONSTRAINED PROJECTS

Project 11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)
Project 14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)
Project 15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)
Project 17: Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)
Project 19: NE 159th Street (New Corridor Connections)
Project 23: Direct Connection between William Lehman Causeway and Aventura Mall
Project 30: NE 213th Street Extension between Biscayne Boulevard and Dixie Highway
Project 31: NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)
Project 32: Biscayne Boulevard Bus Bays

NORTH

NOT TO SCALE

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COORDINATION/ PUBLIC INVOLVEMENT

In order to facilitate coordination among the many stakeholders that will be integral in advancing the projects through implementation, a Study Advisory Committee (SAC) was formed to provide guidance for the study and to review the study deliverables for quality and content. In addition to representatives from the seven (7) municipalities within the study area, the SAC also included representatives from key agencies with respect to transportation. The following municipalities and agencies participated in the project by serving on the SAC.

- Miami-Dade MPO
- Miami-Dade Public Works Department
- Florida Department of Transportation
- Aventura
- Bal Harbour
- Bay Harbor Islands
- Golden Beach
- North Miami
- North Miami Beach
- Sunny Isles Beach

Additional individual meetings were held with municipalities, Florida Department of Transportation, and Miami-Dade Public Works to review specific projects, begin prioritizing the projects for implementation, and to eliminate projects that appeared not be viable.

The following list summarizes coordination activities in chronological order.

- January 28, 2009: Study Advisory Committee kick-off meeting
- April 14, 2009: Florida Department of Transportation meeting
- April 15, 2009: Miami-Dade County Public Works meeting
- May 21, 2009: Miami-Dade County Public Works follow-up meeting
- June 16, 2009: Study Advisory Committee meeting #2
- August 11, 2009: City of North Miami Beach
- August 20, 2009: City of Aventura
- August 20, 2009: City of North Miami

Meeting minutes for each specific meeting are included in Appendix A.

FUNDING/COST ESTIMATES

Preliminary order of magnitude cost estimates were developed for the projects and are presented on the individual project sheets. The purpose of these cost estimates is to provide planning level estimates for projects, and the cost estimates were used as a prioritization/implementation parameter. Cost estimates were based on FDOT typical cost per mile information. Cost estimates and cost per mile calculations are contained in Appendix B. As specific projects are developed and detailed construction needs are identified, more precise engineering cost estimates should be prepared to identify required funds that will need to be programmed for implementation of the projects.

Funding/revenue source forecasts for FDOT (state and federal), Miami-Dade Transit (MDT), and Miami-Dade County gas taxes and road impact fees for public works projects were reviewed. A summary of FDOT funding is provided as Table 5, Miami-Dade Transit funding is provided as Table 6, and Miami-Dade County gas taxes and road impact fees are provided as Table 7. Individual project sheets contain information related to relevant state and local funding sources for each project.

Table 5: FDOT (State and Federal) Funding

	FDOT Capacity Program Revenue Forecast FY 2014-2035 Estimates for Miami-Dade County *(Millions of Year-of-Expenditure Dollars)*					
Capacity Programs	**FY 2014-2015 Subtotal**	**FY 2016-2020 Subtotal**	**FY 2021-2025 Subtotal**	**FY 2026-2030 Subtotal**	**FY 2031-2035 Subtotal**	**22 Year Total**
SIS/FIHS Construction/ROW	$233	$259	$277	$317	$287	$1,374
Other Arterial Construction/ROW	$116	$355	$398	$427	$465	$1,760
Transit	$23	$58	$58	$56	$47	$242
Total Capacity Program	$372	$671	$733	$800	$798	$3,376
Transportation Management Areas (TMA) Funds	$92	$243	$257	$265	$266	$1,123
Districtwide TRIP Funds[1]	$35	$77	$74	$74	$74	$335
Port of Miami Tunnel & SR 836/I-95[2]						$2,713
TOTAL YEAR-OF-EXPENDITURE	**$500**	**$992**	**$1,065**	**$1,139**	**$1,139**	**$7,547**

Source: Miami-Dade County 2035 LRTP Financial Resources Review, May 2009

[1] Transportation Regional Incentive Program

[2] Included separately in SIS Cost Feasible Plan as "State Mega Project Phased over Time"

SIS/FIHS Construction/Right-of-Way

Funding in this capacity program is appropriated for projects that include construction, improvements, and associated right-of-way on Strategic Intermodal System (SIS) highways and the Florida Intrastate Highway System (FIHS) including interstate, Florida's Turnpike, other toll roads, and roadway facilities designed to serve interstate and regional commerce including SIS connectors.

Northeast Corridor Study projects potentially funded by this program:

- None

Other Arterial Construction/Right-of-Way

This capacity program allocates funds for construction, improvements, and associated right-of-way on State Highway System roadways not designated as part of the SIS or FIHS. This program also includes funds for the Economic Development Program, County Incentive Grant Program, and the Small County Outreach Program.

Northeast Corridor Study projects potentially funded by this program:

- Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)
- Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)
- Project 3: Biscayne Boulevard and NE 163rd Street (Grade Separation)
- Project 17: Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)
- Project 19: NE 159th Street (New Corridor Connections)
- Project 20: NE 135th Street Reversible Lane Study
- Project 23: Direct Connection between William Lehman Causeway and Aventura Mall
- Project 25: Intersection Improvements along Biscayne Boulevard in Aventura

Transit

The transit program includes funding for technical and operating/capital assistance to transit, paratransit, and ridesharing systems.

Northeast Corridor Study projects potentially funded by this program:

- Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
- Project 32: Biscayne Boulevard Bus Bays at NE 123rd Street
- Project 33: Intermodal Center at NE 125th Street

Transportation Management Areas (TMA) Funds

In order for an MPO to receive TMA funds, the following conditions must be satisfied.

1. Recent use of TMA funds (previous 5 – 10 years) among the various categories in the FDOT revenue forecast. These categories include Other Arterials Construction & ROW, Product Support (e.g., Planning, PD&E studies, Engineering Design, Construction Inspection, etc.), Transit, Resurfacing, etc.
2. Planned use of TMA funds – based on policies regarding the planned use of TMA funds through the long range transportation plan horizon year.
3. Clear articulation in the long range transportation plan documentation of the policies regarding the use of TMA funds, and estimates of TMA funds planned for each major program and time period.

Northeast Corridor Study projects potentially funded by this program:

- Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)
- Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)
- Project 3: Biscayne Boulevard and NE 163rd Street (Grade Separation)

- Project 17: Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)
- Project 20: NE 135th Street Reversible Lane Study
- Project 25: Intersection Improvements Along Biscayne Boulevard in Aventura

Districtwide Transportation Regional Incentive Program (TRIP) Funds
Projects are required to meet the following criteria in order to qualify for TRIP funds.

1. The project needs to support transportation facilities that serve national, statewide, or regional functions and serve as an integrated regional transportation system.
2. The project must be identified in the capital improvements element of the appropriate local government comprehensive plan(s).
3. The project must be consistent with the Strategic Intermodal System Plan.
4. The project must have a commitment for local, regional, or private financial matching funds as a percentage of the overall project cost.

Northeast Corridor Study projects potentially funded by this program:

- None

Port of Miami Tunnel & SR 836/I-95 Districtwide Transportation Regional Incentive Program (TRIP) Funds
Funds appropriated specifically for the proposed Port of Miami Tunnel.

Northeast Corridor Study projects potentially funded by this program:

- None

Table 6: Miami-Dade Transit Funding

	Miami-Dade Transit Revenue Forecast FY 2014-2035 (Millions of Year-of-Expenditure Dollars)					
Capital Funding Sources	**FY 2014-2015 Subtotal**	**FY 2016-2020 Subtotal**	**FY 2021-2025 Subtotal**	**FY 2026-2030 Subtotal**	**FY 2031-2035 Subtotal**	**22 Year Total**
Federal 5309 Grants - Rail Capital (NS)	$71	$214	$279	$365	$477	$1,406
Federal 5309 Grants - Rail Mod	$27	$71	$118	$181	$262	$659
Federal 5309 Grants - Bus Capital	$13	$36	$42	$50	$58	$199
State Grants - Rail	$35	$107	$140	$183	$239	$703
State Grants - Bus	$18	$26	$5	$49	$43	$140
MDT Local option gas tax (LOGT)	$37	$97	$104	$112	$121	$472
Total Capacity Revenue	**$200**	**$551**	**$689**	**$940**	**$1,201**	**$3,580**
Operating Funding Sources						
System Fares & Other Operating Revenue	$332	$953	$1,128	$1,344	$1,522	$5,279
Federal 5307 Formula Funds	$106	$313	$387	$479	$566	$1,851
State Block Grants/Operating Assist./TD&CE	$58	$155	$172	$190	$209	$784
MDT General Fund Subsidy - Original MOE (3.5 percent)	$342	$964	$1,145	$1,360	$1,615	$5,425
Interest Income	$14	$40	$48	$58	$73	$233
Operating Funding Sources	**$852**	**$2,425**	**$2,879**	**$3,431**	**$3,985**	**$13,572**
PTP Sales Tax Revenues	**$354**	**$1,069**	**$1,397**	**$1,825**	**$2,386**	**$7,030**
(Net of 20 Percent to Municipalities)						
Additional County General Fund Revenue	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
TOTAL YEAR-OF-EXPENDITURE	**$1,406**	**$4,044**	**$4,964**	**$6,196**	**$7,572**	**$24,182**

Source: Miami-Dade County 2035 LRTP Financial Resources Review, May 2009

Table 7: Miami-Dade County Gas Taxes and Road Impact Fees Funding

	Miami-Dade County Gas Taxes and Road Impact Fees Revenue Forecast FY 2014-2035 (Millions of Year-of-Expenditure Dollars)					
Gas Taxes	**FY 2014-2015 Subtotal**	**FY 2016-2020 Subtotal**	**FY 2021-2025 Subtotal**	**FY 2026-2030 Subtotal**	**FY 2031-2035 Subtotal**	**22 Year Total**
Secondary Gas Tax	$39	$103	$111	$119	$128	$500
County Fuel Tax	$18	$47	$50	$54	$59	$228
6-cent Local option gas tax (LOGT)	$87	$230	$248	$267	$288	$1,121
5-cent Local option gas tax (LOGT)	$40	$104	$112	$121	$130	$508
Ninth-cent Gas Tax	$22	$58	$62	$67	$72	$282
Total Gas Taxes	**$206**	**$542**	**$584**	**$629**	**$678**	**$2,638**
Road Impact Fees	**$26**	**$64**	**$64**	**$64**	**$64**	**$283**

Source: Miami-Dade County 2035 LRTP Financial Resources Review, May 2009

Miami-Dade Transit Funding

Federal 5309 Grants – Rail Capital (NS)

This grant provides funds for construction of new fixed guideway systems or extensions to existing fixed guideway systems. Eligible projects are light rail, rapid rail (heavy rail), commuter rail, monorail, automated fixed guideway system (such as a "people mover"), a busway/high occupancy vehicle (HOV) facility, or an extension of any of these systems. Projects become candidates for funding under this program by successfully completing the appropriate steps in the major capital investment planning and project development process.

Northeast Corridor Study projects potentially funded by this program:

- Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
- Project 33: Intermodal Center at NE 125th Street

Federal 5309 Grants – Rail Mod

This grant provides capital assistance for modernization of existing rail systems. Eligible projects include capital projects to modernize or improve existing fixed guideway systems, including purchase and rehabilitation of rolling stock, track, line equipment, structures, signals and communications, power equipment and substations, passenger stations and terminals, security equipment and systems, maintenance facilities and equipment, operational support equipment including computer hardware and software, system extensions, and preventive maintenance. Funds are allocated by a statutory formula to urbanized areas with rail systems that have been in operation for at least seven (7) years.

Northeast Corridor Study projects potentially funded by this program:

- None

Federal 5309 Grants – Bus Capital

This grant provides capital assistance for new and replacement buses, related equipment, and facilities. Eligible capital projects include the purchasing of buses for fleet and service expansion; bus maintenance and administrative facilities; transfer facilities; bus malls; transportation centers; intermodal terminals; park-and-ride stations; acquisition of replacement vehicles; bus rebuilds; bus preventive maintenance; passenger amenities such as passenger shelters and bus stop signs; accessory and miscellaneous equipment such as mobile radio units, supervisory vehicles, fare boxes, computers, and shop and garage equipment.

Northeast Corridor Study projects potentially funded by this program:

- Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
- Project 32: Biscayne Boulevard Bus Bays at NE 123rd Street
- Project 33: Intermodal Center at NE 125th Street

State Grants – Rail

The State of Florida provides funding for acquisition of rail corridors and assistance in developing intercity passenger and commuter rail service, fixed guideway system development, rehabilitation of rail facilities, and high speed transportation. Projects and programs eligible for funding include: acquisition of rail corridors; development of fixed guideway systems; assistance with rail passenger services including all aspects of intercity, and commuter rail development; capacity and operational improvements to SIS facilities; track upgrades to allow handling of industry-standard railcar loadings on SIS facilities; rail bridge

improvements and rehabilitation on SIS facilities; rehabilitation of rail branch lines where economically justified; and improvement of warning devices at public rail-highway grade crossings.

Northeast Corridor Study projects potentially funded by this program:

- Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
- Project 33: Intermodal Center at NE 125th Street

State Grants – Bus

The State of Florida provides technical and operating/capital assistance to transit, paratransit, and ridesharing systems. Projects and programs eligible for funding include: capital and operating assistance to public transit systems and Community Transportation Coordinators, through the Public Transit Block Grant Program; service development projects, which are special projects can receive initial funding from the state; transit corridor projects that are shown to be the most cost effective method of relieving congesting and improving congestion in the corridor; commuter assistance programs that encourage transportation demand management strategies, ridesharing and public/private partnerships to provide services and systems designed to increase vehicle occupancy; and assistance with acquisition, construction, promotion, and monitoring of park-and-ride lots.

Northeast Corridor Study projects potentially funded by this program:

- Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
- Project 33: Intermodal Center at NE 125th Street

MDT Local Option Gas Tax

Currently, three (3) cents per gallon of fuel sales are allocated for programs to assist transportation of disadvantaged people through Miami-Dade Transit.

Northeast Corridor Study projects potentially funded by this program:

- Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
- Project 32: Biscayne Boulevard Bus Bays at NE 123rd Street
- Project 33: Intermodal Center at NE 125th Street

System Fares & Other Operating Revenue

This source is revenue that is collected from transit riders. When compared to direct operating expense, the recovery ratio is approximately 23 percent (23%) for Fiscal Year 2010 based on the Miami-Dade Transit Draft Transit Development Program (TDP).

Northeast Corridor Study projects potentially funded by this program:

- None

Federal 5307 Formula Funds

These funds provide transit capital and operating assistance for incorporated urbanized areas with a population of 50,000 or more for the purpose of transit capital and operating assistance. Eligible programs include planning, engineering design, and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment, and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including

rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some Americans with Disabilities Act complementary paratransit service costs are also considered capital costs. For urbanized areas with populations of 200,000 or more, operating assistance is not an eligible expense. In these areas, at least one (1) percent of the funding apportioned to each area must be used for transit enhancement activities such as historic preservation, landscaping, public art, pedestrian access, bicycle access, and enhanced access for persons with disabilities.

Northeast Corridor Study projects potentially funded by this program:

- Project 32: Biscayne Boulevard Bus Bays at NE 123rd Street

MDT General Fund Subsidy – Original Maintenance of Effort (MOE)

Miami-Dade County funds are applied to lower the system's deficit. Additionally, State Block Grants and interest income are used for operating costs.

Northeast Corridor Study projects potentially funded by this program:

- None

PTP Sales Tax Revenue

The proceeds from this surtax are collected by the State and distributed to Miami-Dade County. The proceeds specified to transit are designated for the purposes of development, construction, equipment, maintenance, operation, supportive services (including a countywide bus system), and related costs of a fixed guideway rapid transit system. These proceeds can also be used for payment of principal and interest on bonds issued for the construction of fixed guideway rapid transit systems, bus systems, roads, or bridges, and such proceeds may be pledged by the Board of County Commissioners for bonds issued to refinance existing bonds or new bonds issued for the construction of such fixed guideway rapid transit systems, bus systems, roads, or bridges.

Northeast Corridor Study projects potentially funded by this program:

- Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street
- Project 32: Biscayne Boulevard Bus Bays at NE 123rd Street
- Project 33: Intermodal Center at NE 125th Street

Miami-Dade County Gas Taxes and Roadway Impact Fees Funding

Secondary Gas Tax

The secondary gas tax is also referred to as the Constitutional Gas Tax and is a two (2) cent tax on most motor fuel sold in the state. The proceeds from this tax are first applied to debt service requirements on local bond issues backed by the tax proceeds. The remainder is credited towards the counties' transportation trust funds.

Northeast Corridor Study projects potentially funded by this program:

- None

County Fuel Tax

The County fuel tax is a one (1) cent tax that can be used for any legitimate transportation purpose.

Northeast Corridor Study projects potentially funded by this program:

- Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)
- Project 11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)
- Project 12: NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)
- Project 14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)
- Project 15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)
- Project 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)
- Project 19: NE 159th Street (New Corridor Connections)
- Project 20: NE 135th Street Reversible Lane Study
- Project 31: NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)

Local Option Gas Tax (LOGT)

Miami-Dade County can levy a maximum twelve (12) cent local option fuel tax allocated as three (3) types of taxes. The first tax is a six (6) cent maximum on every gallon of motor and diesel fuel. The proceeds from this levy may be used for any legitimate county or municipal transportation purpose such as public transportation operations and maintenance, road construction or reconstruction. The second tax is a five (5) cent maximum on every gallon of motor fuel. These funds may be used for transportation purposes to meet the requirements of the capital improvement element of an adopted comprehensive plan. Eligibility includes roadway construction, reconstruction, or resurfacing, but excludes routine maintenance. The third tax, a tax of one (1) cent also known as the Ninth-Cent fuel tax, is imposed on every gallon of motor and diesel fuel sold. These funds may be used for any legitimate county or municipal transportation purpose such as public transportation operations and maintenance, construction, or reconstruction of roads.

Northeast Corridor Study projects potentially funded by this program:

- Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)
- Project 11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)

- Project 12: NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)
- Project 14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)
- Project 15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)
- Project 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)
- Project 19: NE 159th Street (New Corridor Connections)
- Project 20: NE 135th Street Reversible Lane Study
- Project 31: NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)

Road Impact Fees

Road impact fees are collected from developers and are intended primarily for roadway capacity improvements identified in the Miami-Dade MPO's Long Range Transportation Plan or short range Transportation Improvement Program. The highest priority projects intended for expenditure of these funds are projects that serve new development. In addition to roadway capacity improvements, select transit capital improvements can be funded by road impact fees. Transit capital improvements are specific transit capital projects located inside the Urban Infill Area that have been determined by the Board of County Commissioners to be of strategic value in providing roadway capacity inside the Urban Infill Area.

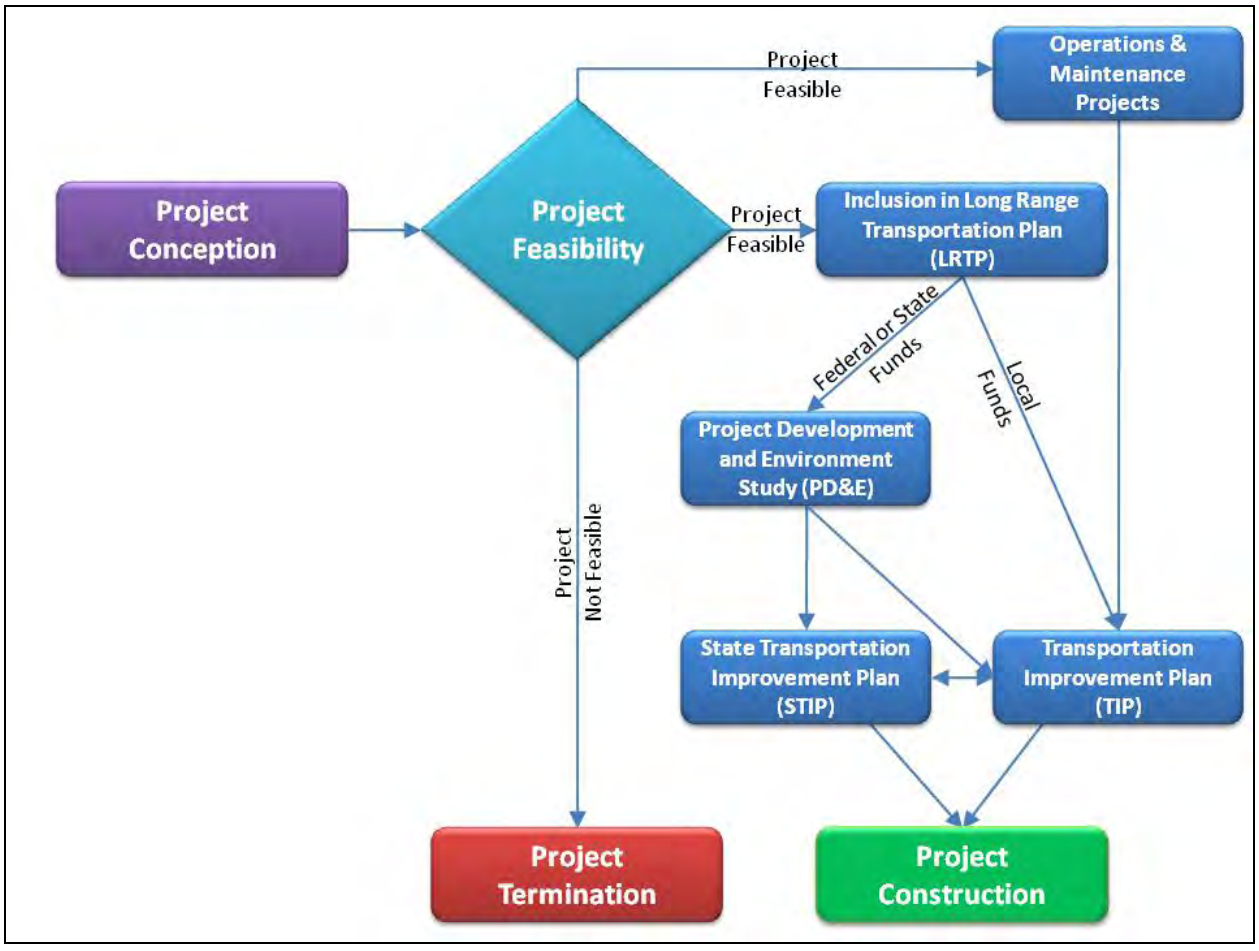
Northeast Corridor Study projects potentially funded by this program:

- Project 19: NE 159th Street (New Corridor Connections)

PROJECT IMPLEMENTATION

An implementation plan was developed based on project time horizons. Figure 3 provides a simplified summary of the implementation tasks involved from project conception through the construction of a project. Please note that these implementation tasks do not apply to signal retiming projects, which are funded from the Miami-Dade County operating budget and are performed continuously. Time horizons defined for this study were short-term (1-3 years), mid-term (3-5 years), and long-term (5+ years). Table 8 provides a summary of short-term projects and necessary implementation tasks, Table 9 provides a summary of mid-term projects and necessary implementation tasks, and Table 10 provides a summary of long-term projects and implementation tasks.

Figure 3: Implementation Flow Chart



Project Conception

During the project conception stage the purpose and needs or goals of a project/objective are developed and stated. Duration: Year 1.

Project Feasibility

Once project conception is established, the next stage is assessing a project's feasibility. This step includes assessing fatal flaws of a project, preliminary alternatives screening, and elimination of unreasonable projects/alternatives. Basic description of the environmental setting and preliminary identification of environmental impacts can be completed at this stage. Duration: Years 1-3.

Inclusion in Long Range Transportation Plan

Once project feasibility has been established, the following activities are undertaken during the preparation of the long range transportation plan.

(1) A systems-level, planning study is prepared to develop a program of cost feasible transportation improvements for the planning horizon year.

(2) Public review through public meetings and outreach is held.

During the planning phase, Efficient Transportation Decision Making (ETDM) screening can be used and is intended to improve the effectiveness of transportation planning by integrating the consideration of natural, cultural, and community resources. This effectiveness is facilitated by improved coordination and communication between planning, regulatory and resource agencies, and with the public. In the planning phase of the ETDM process, the Environmental Screening Tool (EST) provides the Environmental Technical Advisory team (ETAT) and the public with information about environmental, social, and land use considerations that could influence how transportation projects are developed and implemented. The EST allows the ETAT to analyze the potential effects of proposed transportation projects on natural, cultural and community resources and communicate the evaluation results. These analyses are conducted during a planning screening that allows for the early identification of environmental and community issues that could influence the priority, alignment and/or design features of potential transportation projects. The planning screen is only applied to major transportation improvement projects, including roadway and bridge widening (including the addition of auxiliary lanes), new roadways and bridges, and rail transit systems. The planning screen includes an evaluation of potential direct and indirect effects for proposed transportation projects. The results of the planning screen analyses are documented in a planning summary report. Duration: Years 4-5.

Project Development and Environment (PD&E) Study/Inclusion in State Transportation Improvement Plan (STIP)

For projects on state roadways seeking Federal funds, a Project Development and Environment (PD&E) Study is usually required, as well as a review period for Federal Highway Administration (FHWA) and/or Federal Transit Authority (FTA), for the project to be included in the State Transportation Improvement Plan (STIP). Documentation of project decisions in a form that is identifiable and available for review during the National Environmental Policy Act (NEPA) scoping process is required; the PD&E Study accomplishes these requirements. Once the PD&E Study is complete, a project may be programmed in the STIP/TIP and becomes eligible to be designed, permitted, and constructed.

During the programming phase, the ETAT, District ETDM Coordinator, District Community Liaison Coordinator, and MPO update the ETDM planning screen evaluations based on newly available data and public involvement. Additionally, the programming phase has different objectives than the planning phase, and is focused on project-specific technical studies and analyses that are needed to satisfy NEPA and other applicable environmental laws and regulations, which are addressed during the Project Feasibility Phase. Priority projects may not have been evaluated during the Planning Phase. These projects will be evaluated by ETAT for the first time during the programming phase. Information about the priority projects, both new projects and projects from the planning phase, are loaded into the EST by FDOT. The notice to the ETAT that the project is available for review begins the NEPA process, resulting in the Class of Action Determination and scoping for the future Project Development Phase. This determination establishes the environmental documentation needed during Project Development to satisfy the requirements of NEPA. ETAT representatives review project and resource information available through the EST to determine the project effects. These reviews are conducted to determine effects on natural resources as well as cultural and community resources. The ETAT representatives also identify and document the need for technical studies to be performed during the next phase, Project Development, to address project technical concerns. Duration: Year 6+.

Operations and Maintenance Projects

These projects typically consist of intersection improvements, pavement and marking modifications, turn lane improvements, and other projects that are not corridor wide or include major infrastructure improvements. Duration: Years 2-3.

Transportation Improvement Plan (TIP)

Once a local project is included in the LRTP and funding sources have been identified and programmed, the project is programmed in the Transportation Improvement Plan (TIP) where it becomes eligible to be designed, permitted, and constructed. Duration: Years 2-5+.

Table 8: Short-Term (1-3 Years) Implementation Plan

Project		Classification Group	Implementation Tasks
Project 1:	West Dixie Highway and Miami Gardens Drive (Intersection Capacity)	Potentially Feasible	- Restripe northbound approach. - Program long-term improvements in TIP.
Project 2:	NW 2nd Avenue and NW 167th Street (Intersection Capacity)	Potentially Feasible	- Program long-term improvements in TIP.
Project 3:	Biscayne Boulevard and NE 163rd Street (Grade Separation)	Potentially Feasible	- Include project in LRTP.
Project 9:	Biscayne Boulevard and NE 135th Street (Signal Re-Timing)	Signal Re-Timing/Potentially Feasible	- Restripe eastbound approach.
Project 11:	NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)	Potentially Constrained	- City of North Miami Beach must determine if project should be advanced.
Project 12:	NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)	Potentially Feasible	- Include project in LRTP.
Project 14:	NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)	Potentially Constrained	- City of North Miami Beach must determine if project should be advanced.
Project 15:	NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)	Potentially Constrained	- City of North Miami Beach must determine if project should be advanced.
Project 17:	Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)	Potentially Constrained	- Town of Bal Harbour and City of Sunny Isles Beach must determine if project should be advanced.
Project 18:	West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)	Potentially Feasible	- Include project in LRTP.
Project 19:	NE 159th Street (New Corridor Connections)	Potentially Constrained	- Coordination with FEC Railway to determine feasibility.
Project 20:	NE 135th Street Reversible Lane Study	Potentially Feasible	- Feasibility study.
Project 23:	Direct Connection between William Lehman Causeway and Aventura Mall	Potentially Constrained	- Feasibility Study.
Project 24:	Intermodal Center at Biscayne Boulevard and NE 163rd Street	Potentially Feasible	- Coordinate with South Florida East Coast Corridor Study.

Project		Classification Group	Implementation Tasks
Project 25:	Intersection Improvements along Biscayne Boulevard in Aventura	Potentially Feasible	- Complete Projects.
Project 30:	NE 213th Street Extension between Biscayne Boulevard and East Dixie Highway (New Corridor Connection)	Potentially Constrained	- Program in LRTP if City of Aventura chooses to advance project.
Project 31:	NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)	Potentially Constrained	- Cities of North Miami and North Miami Beach must determine if project should be advanced.
Project 32:	Biscayne Boulevard Bus Bays at 123rd Street	Potentially Constrained	- Acquisition of right-of-way or easement.
Project 33:	Intermodal Center at NE 125th Street	Potentially Feasible	- Coordinate with South Florida East Coast Corridor Study.

Table 9: Mid-Term (3-5 Years) Implementation Plan

Project		Classification Group	Implementation Tasks
Project 1:	West Dixie Highway and Miami Gardens Drive (Intersection Capacity)	Potentially Constrained	- Design and right-of-way acquisition for long-term improvements.
Project 2:	NW 2nd Avenue and NW 167th Street (Intersection Capacity)	Potentially Feasible	- Implementation of short-term improvements (NB and SB approaches). - Program in TIP. - Design and right-of-way acquisition for long-term improvements (EB approach).
Project 3:	Biscayne Boulevard and NE 163rd Street (Grade Separation)	Potentially Constrained	- Perform PD&E study.
Project 9:	Biscayne Boulevard and NE 135th Street (Signal Re-Timing)	Signal Re-Timing/Potentially Feasible	- Program in TIP - Design and right-of-way acquisition for long-term improvements.
Project 11:	NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)	Potentially Constrained	- Program in LRTP if City of North Miami Beach chooses to advance project.
Project 12:	NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)	Potentially Feasible	- Perform required studies to satisfy NEPA requirements depending on funding source.
Project 14:	NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)	Potentially Constrained	- Program in LRTP if City of North Miami Beach chooses to advance project.
Project 15:	NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)	Potentially Constrained	- Program in LRTP if City of North Miami Beach chooses to advance project.
Project 17:	Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)	Potentially Constrained	- Program in LRTP if municipalities choose to advance project. - Perform PD&E study.
Project 18:	West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)	Potentially Feasible	- Perform the required studies to satisfy NEPA requirements depending on funding source.
Project 19:	NE 159th Street (New Corridor Connections)	Potentially Constrained	- Program in LRTP if grade crossing of FEC is determined feasible. - Perform required studies to satisfy NEPA requirements depending on funding source.
Project 20:	NE 135th Street Reversible Lane Study	Potentially Feasible	- Program in TIP - Design and construction if feasibility study determines project is desirable.
Project 23:	Direct Connection between William Lehman Causeway and Aventura Mall	Potentially Constrained	- Perform required studies to satisfy NEPA requirements depending on funding source. - If project is determined to be feasible, perform required studies for FDOT permits.

Project		Classification Group	Implementation Tasks
Project 24:	Intermodal Center at Biscayne Boulevard and NE 163rd Street	Potentially Feasible	- Coordinate with South Florida East Coast Corridor Study.
Project 30:	NE 213th Street Extension between Biscayne Boulevard and East Dixie Highway (New Corridor Connection)	Potentially Constrained	- Include in TIP/ROW acquisition, design, and construction.
Project 31:	NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)	Potentially Constrained	- Program in LRTP if Cities of North Miami and North Miami Beach choose to advance project.
Project 32:	Biscayne Boulevard Bus Bays at 123rd Street	Potentially Constrained	- Include in TIP/STIP, design and construction.
Project 33:	Intermodal Center at NE 125th Street	Potentially Feasible	- Coordinate with South Florida East Coast Corridor Study.

Table 10: Long-Term (5+ Years) Implementation Plan

Project		Classification Group	Implementation Tasks
Project 1:	West Dixie Highway and Miami Gardens Drive (Intersection Capacity)	Potentially Feasible	-Construction of long-term improvements.
Project 2:	NW 2nd Avenue and NW 167th Street (Intersection Capacity)	Potentially Feasible	- Construction of long-term improvements (EB approach).
Project 3:	Biscayne Boulevard and NE 163rd Street (Grade Separation)	Potentially Feasible	- Program in STIP. - Construction of improvement.
Project 9:	Biscayne Boulevard and NE 135th Street (Signal Re-Timing)	Signal Re-Timing/Potentially Feasible	- Construction of long-term improvements.
Project 11:	NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)	Potentially Constrained	- Depending on funding sources, NEPA requirements may need to be satisfied. - Construction of improvement.
Project 12:	NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)	Potentially Feasible	- Program in TIP. - Construction of improvement.
Project 14:	NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)	Potentially Constrained	- Depending on funding sources, NEPA requirements may need to be satisfied. - Program in TIP. - Construction of improvement.
Project 15:	NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)	Potentially Constrained	- Depending on funding sources, NEPA requirements may need to be satisfied. - Program in TIP. - Construction of improvement.
Project 17:	Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)	Potentially Constrained	- Program in STIP. - Construction of improvement.
Project 18:	West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)	Potentially Feasible	- Construction of improvement.
Project 19:	NE 159th Street (New Corridor Connections)	Potentially Constrained	- Program in STIP/TIP. - Construction of improvement.
Project 23:	Direct Connection between William Lehman Causeway and Aventura Mall	Potentially Constrained	- Program in TIP. - Construction of improvement.

Project		Classification Group	Implementation Tasks
Project 24:	Intermodal Center at Biscayne Boulevard and NE 163rd Street	Potentially Feasible	- Coordinate with South Florida East Coast Corridor Study.
Project 31:	NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)	Potentially Constrained	- Depending on funding source, NEPA requirements may need to be satisfied. - Program in TIP. - Construction of improvement.
Project 33:	Intermodal Center at NE 125th Street	Potentially Feasible	- Coordinate with South Florida East Coast Corridor Study.

SUMMARY AND NEXT STEPS

This study developed an implementation plan for the *Northeast Corridor Traffic Flow Study* aimed at transportation improvements in the northeast section of Miami-Dade Dade County. Input was obtained from the study advisory committee, Miami-Dade County Public Works Department, Florida Department of Transportation, and affected municipalities to further develop the list of transportation improvements identified in the prior study. An implementation plan of necessary steps was developed and funding sources were identified to advance the projects.

The *Implementation Plan for the Northeast Corridor Traffic Flow Study* provides the framework for the programming of transportation improvements in the northeast section of Miami-Dade County. Agencies have been identified for implementing the improvements based on jurisdictional responsibility. The improvements should be adopted into the appropriate plans and programs of the specified agencies. Finally, the study should be examined annually to assess the status of the implementation of the identified improvements.

APPENDICES

APPENDIX A:
Meeting Minutes

Implementation Plan for the Northeast Corridor Traffic Flow Study
Study Advisory Committee Meeting Notes
January 28, 2009

The kick-off meeting for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held on Wednesday, January 28, 2009, in the Executive Conference Room of the Aventura City Hall. The attendees of the meeting were:

- Larry Foutz – Miami Dade MPO, Project Manager
- Vivian Suarez – Miami Dade County Board of County Commissioners
- Joanne Carr – City of Aventura
- Eric Soroka – City of Aventura
- John O'Brien – City of North Miami
- Wisler Pierre-Louis – City of North Miami
- Donald Cramarossa – City of North Miami
- Javier Acevedo – City of North Miami Beach
- Rick Conner – City of Sunny Isles Beach
- Michael Miller – Michael Miller Planning Associates representing Bal Harbour, Bay Harbor Island, and Golden Beach
- Rolando Jimenez – Miami Dade County Public Works
- Phil Steinmiller – Florida Department of Transportation District 6
- Greg Kyle – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.
- Ravi Wijesundera – Kimley-Horn and Associates, Inc.

At the outset, Kimley-Horn distributed several handouts, including agenda, scope of study, schedule, list of projects being evaluated, summary sheets for projects considered/removed, executive summary of previous study report, and information on upcoming long range transportation plan public workshops. After self introductions by the study advisory committee (SAC) team members, Larry Foutz discussed the purpose of the study and background information. The following list describes the pertinent discussion topics during the meeting.

Background

- Larry explained that this is the implementation phase of the previously completed Northeast Corridor Traffic Flow Study. This phase was initiated at the request of Mayor Burns.
- Larry mentioned that the immediate priority of the stakeholders and residents of Northeast Miami-Dade County is to be aware of the recommended projects to provide input during the upcoming Needs Alternative workshops for the 2035 Long Range Transportation Plan (LRTP) update. He stated that a number of the capacity improvement projects identified in the prior study have been included in the LRTP needs analysis. The MPO has organized several public workshops to allow citizens to provide input on the area's transportation needs. At these workshops, the participants will be able to vote on local projects. In response to a question, Larry stated that he will coordinate with the MPO's LRTP project manager to make prioritization results of the workshops available. The projects in the

northeast corridor area will be discussed at two workshops one of which will be held in North Miami on February 5, 2009 and the other in Miami Beach on January 29, 2009.

Implementation Strategies

- Greg mentioned that projects identified in the previous study will be prioritized to help local agencies develop implementation plans. He added that not all projects will be included in the LRTP. Roadway capacity and congestion management projects will have to be evaluated as part of the LRTP. Some projects will have to be implemented by local agencies and/or Miami-Dade County. This study will identify lead agencies.
- Phil Steinmiller said that NE 163rd Street & Biscayne Boulevard Grade Separation and Biscayne Boulevard Intersection Improvement projects should be included in the LRTP. He further stated that projects requiring right-of-way acquisition should be included in the LRTP.
- John O'Brien asked if new projects could be added to the study. Larry responded that it is possible; however, the consultant will not re-evaluate the study area to find new projects as it is not part of the scope.
- John also asked if it is possible to persuade the County to implement signal timing improvements. Greg mentioned that approximately two years ago the County evaluated signal timing plans of major corridors such as Biscayne Boulevard. The County is in the process of migrating its signal system to a more sophisticated controller system that would enhance its capabilities.
- John wanted to know how to get a project into the County's work program. Rolando Jimenez explained that the County also develops a five-year work program similar to the Transportation Improvement Program (TIP) and the projects are evaluated during the work program development.

Review of Projects

- Larry requested SAC members to review three projects that were identified in the phase one study, but are recommended for removal from the implementation phase. The three projects are (1) modification of westbound lane geometry at the intersection of Biscayne Boulevard and William Lehman Causeway, (2) widening of Highland Lakes Boulevard, and (3) completion of missing links along NE 151st Street. The recommendation for removal is made based on a field review of each project's feasibility, benefits, and impacts. After discussing these projects, SAC members unanimously agreed the three projects do not merit further consideration.
- In reference to Project # 18 (widen SR A1A between Harbor Way and Bay View Drive) Michael Miller stated that the SR A1A segment in question was evaluated by FDOT about six years ago and concluded that widening was not required. During discussion it was mentioned that approximately $4 billion worth new developments have been completed since then and the study conclusions may be outdated. Larry said that recent model runs could be checked to determine if widening is required. Phil mentioned that new projects are subjected to Efficient Transportation Decision Making (ETDM) screening during the LRTP process and it allows multiple agencies to provide input on these projects, including identifying potential fatal flaws.
- In reference to Project #1 (West Dixie Highway @ Miami Gardens Drive) Phil mentioned that school buses use the northwest corner of the intersection as a staging area and

restriping the existing westbound right-turn lane as a shared through plus right-turn lane would impact school buses. Greg clarified that based on a field review the project's scope was revised to limit restriping northbound right-turn lane.

- John mentioned that Project #8 should be called "Biscayne Boulevard @ NE 123rd Street," not "Biscayne Boulevard @ NE 125th Street." He further indicated that FDOT is currently implementing a 3R project on NE 125th Street and that the existing eastbound left-turn lane needs to be extended.
- In reference to Project #9 (signal re-timing of Biscayne Boulevard @ NE 135th Street) it was mentioned that the eastbound left-turn lane should be extended to increase storage capacity. Another suggestion was to restripe the eastbound through lane as through plus left-turn. Greg responded that restriping would require modification of signal phasing to a split pattern.
- Greg asked for SAC's assessment of the proposed widening of NE 171st Street (Project # 16). It has a wide landscaped median and adjacent land use is primarily residential. Javier Acevedo said that it is unlikely the City would support widening of the corridor.
- In reference to Project 24 (direct connection to Aventura Mall from William Lehman Causeway) Phil mentioned that such project would have impacts on right-of-way, Mall's internal access roads, and parking spaces. FDOT would review these projects with respect to access management standards to determine if a ramp could be provided. He further indicated that local funding sources need to be identified to implement the project.

Next Steps

- Greg explained that Kimley-Horn would further refine projects based on the SAC input. Kimley-Horn plans to work with FDOT to further assess the feasibility of projects and obtain input. Phil suggested that a representative from FDOT's Traffic Operations Division should be invited to the SAC.
- The next step is to conduct stakeholder meetings and public workshops. Greg requested SAC to assist identifying key persons for one-on-one interviews to obtain input for the project.
- When reviewing the schedule for key stakeholder meetings, it was mentioned that local elections are held between March and May. Kimley-Horn will examine the need to revise the schedule based on local election dates.

Implementation Plan for the Northeast Corridor Traffic Flow Study
Florida Department of Transportation District 6 Meeting Notes
April 14, 2009

A follow-up to the kick-off meeting for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held with Florida Department of Transportation (FDOT) District 6 on Tuesday, April 14, 2009, at the FDOT's District 6 office. The attendees of the meeting were:

- Larry Foutz – Miami Dade MPO
- Carlton Card – Florida Department of Transportation District 6
- Miguel Caldera – Florida Department of Transportation District 6
- Ravi Wijesundera – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.

At the outset, Kimley-Horn distributed several handouts, including an agenda, summary sheets for projects considered on FDOT roadways, and a map of the northeast area of the County. Larry Foutz discussed the purpose of the study and background information including that this is a follow-up study to implement recommendations made in a prior MPO Study. The following list describes the pertinent discussion topics during the meeting.

Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)

- The Department did not state any concerns regarding this project.

Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)

- Carlton stated that FDOT is planning a ramp project that would connect SR 826 and I-95. Carlton would follow-up with further details, including the implementation timeframe.
- Miguel asked whether westbound u-turns were allowed, what the southbound through and left-turn volumes were, and what the alternative routes were proposed for these movements. Kimley-Horn was asked to follow-up and provide the turning movement count for this intersection.
    - *Westbound u-turns are allowed at this intersection. Southbound through and left-turn movements from NW 2nd Avenue would be rerouted to either (1) NW 1st Avenue, make a right-turn onto westbound NW 167th Street and then make a left-turn or u-turn at NW 2nd Avenue; or (2) Miami Avenue and then make a left-turn or proceed straight at NW 167th Street (signalized intersection). Attached is the requested turning movement count.*

Project 3: Biscayne Boulevard and NE 163rd Street (Grade Separation)

- Miguel asked which approaches were failing since the intersection operates at level of service D. FDOT requested for the level of service analysis.
    - *Attached is the level of service analysis for this intersection. Please note that detailed level of service calculations were not provided in the original report.*

Project 17: Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)

- Miguel asked whether right-of-way acquisition would be required and whether FDOT would have to shift right-of-way to align the roadway.
- Miguel also asked whether Collins Avenue was 6-lanes in Bal Harbour.
- Miguel raised questions regarding the pedestrian crossing from the parking lot on the west side of Collins Avenue and Haulover Park on the east side of Collins Avenue. He also asked if the parking lot driveway would be signalized to help facilitate pedestrian crossing or if a signal would be provided mid-block, and whether a median refuge island be provided to help with crossing.
    - *Pedestrian tunnels providing direct access from the parking lots of the Haulover Park to the beach already exist, thus eliminating the need to cross Collins Avenue. Please see attached aerial.*

Project 20: NE 135th Street Reversible Lane Study (between US 1 and NE 14th Avenue)

- Larry asked if a 0.6 mile project would be worth the cost and if the project would even be feasible at such a short distance. He also raised concerns regarding the residential nature of the area.
- Miguel stated that FDOT did not have specific guidelines for reversible lanes and that FDOT reviewed each project on a case-by-case basis.
- Larry asked if there is a longer length to consider on this facility and if transit improvements could be proposed as an alternative.

Project 21: Biscayne Boulevard Reversible Lane Study (between NE 125th Street and NE 151st Street)

- Larry asked specific questions regarding how many signals were on this segment, if the volumes warranted this improvement, how to handle major intersections, and whether the segment could be lengthened.
- Miguel stated that the raised median would have to be removed.

Project 22: 163rd/167th Street Reversible Lane Study (between US 1 and NE 6th Avenue)

- Larry stated that the landscaped median would have to be removed and that the commercial land uses along this corridor would be impacted. He also had concerns regarding left-turn lanes, level of existing congestion in the area, and signalization. He asked Kimley-Horn to review the MUTCD and provide guidelines in the meeting minutes.
    - *Attached please find excerpts from the MUTCD related to the control signage for reversible lanes, typical section, pavement markings, and lane-use control signals.*

Project 23: Direct Connection between William Lehman Causeway and Aventura Mall

- Miguel thought that the William Lehman Causeway is a limited access roadway; therefore, no direct access would be allowed to private properties. FDOT will confirm the functional classification and access restriction.

Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street

- Á Larry asked Kimley-Horn to check the number of transit routes in the area and number of buses per hour. Bob Pearsall at Miami-Dade Transit is the contact to get the volume of transfers at this location.
- Á Larry also asked if the South Florida East Coast Corridor (SFECC) study has identified a station for this location and stated that the short-term solution would be to provide transit rider amenities such as bus shelters and benches.
    - *According to the SFECC study website, specific station locations have not been identified yet. As of September 2008, 97 potential locations were identified along the corridor. NW 163rd Street is included in the list of potential station areas and was assigned a "medium" station suitability ranking.*
- Á Larry also asked Kimley-Horn to identify potential sites for an intermodal facility.

Project 25: Intersection Improvements along Biscayne Boulevard in Aventura

- Á Miguel stated that side street improvements are not within the jurisdiction of FDOT. If FDOT's right-of-way is not impacted, then FDOT would not get involved. FDOT would review the recommendations. Additionally, any signal modifications would have to be coordinated with Miami-Dade County.

Implementation Plan for the Northeast Corridor Traffic Flow Study
Miami-Dade County Public Works Meeting Notes
April 15, 2009

A follow-up to the kick-off meeting for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held with Miami-Dade Public Works on Wednesday, April 15, 2009, at the County's Traffic Control Center. The attendees of the meeting were:

- Larry Foutz – Miami-Dade MPO
- Bob Williams – Miami-Dade County Public Works
- Rolando Jimenez – Miami-Dade County Public Works
- Joan Shen – Miami-Dade County Public Works
- Greg Kyle – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.

At the outset, Kimley-Horn distributed several handouts, including an agenda, summary sheets for projects, and a map of the northeast area of the County. Larry Foutz discussed the purpose of the study and background information including that this is a follow-up study to implement recommendations made in a prior MPO Study. The following list describes the pertinent discussion topics during the meeting.

Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)

- Bob stated that the County is working with Ojus Elementary School, located in the northwest quadrant, to relocate the existing school pick-up/drop-off area on Miami Gardens Drive. This would allow for an additional westbound through lane and an exclusive right-turn to be added to the westbound approach.
- Bob asked whether the northbound right-turn lane has an overlap phase.
  - *Based on review of intersection signal plans, a northbound right-turn overlap phase is not provided at this location.*

Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)

- Bob stated support for moving forward with the project.

Project 4: Biscayne Boulevard and NE 163rd Street (Signal Re-Timing)

- Bob stated signal timings are constantly retimed and this is an on-going project. Additionally, he stated that proposed grade separation is a good idea but that the turning movements would have to be reviewed.

Project 5: West Dixie Highway and NE 163rd Street (Signal Re-Timing)

- Bob stated this is an on-going project and that if specific adjustments are recommended, to provide them to Frank Prats, Signal Timing Engineer, for review.

Project 6: NE 10th Avenue and NE 167th Street (Signal Re-Timing)

- Again Bob stated this is an on-going project and that if specific adjustments are recommended to provide them to Frank Prats, Signal Timing Engineer, for review.

Project 7: NE 10th Avenue and NE 163rd Street (Signal Re-Timing)

- Again Bob stated this is an on-going project and that if specific adjustments are recommended to provide them to Frank Prats, Signal Timing Engineer, for review.

Project 8: Biscayne Boulevard and NE 125th Street (Signal Re-Timing)

- Again Bob stated this is an on-going project and that if specific adjustments are recommended to provide them to Frank Prats, Signal Timing Engineer, for review.

Project 9: Biscayne Boulevard and NE 135th Street (Signal Re-Timing)

- Again Bob stated this is an on-going project and that if specific adjustments are recommended to provide them to Frank Prats, Signal Timing Engineer, for review.

Project 10: Dixie Highway and NE 135th Street (Signal Re-Timing)

- Again Bob stated this is an on-going project and that if specific adjustments are recommended to provide them to Frank Prats, Signal Timing Engineer, for review.

Project 11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)

- Joan recommended a capacity analysis be completed for this roadway segment.
- Bob stated that narrower lanes could be considered to fit the typical section within the narrow right-of-way.

Project 12: NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)

- Bob raised the issue of widening an existing rail crossing as part of this project. Greg believed a permit would be required for the improvement.
- Bob raised concerns regarding NE 16th Avenue connecting with NE 116th Street and US 1. Greg stated that Kimley-Horn would conduct field observations at the intersection to review traffic operations.
- Joan asked what the future level of service of the roadway was projected to be.
    - *Upon review of the original MPO Study no capacity analysis was performed for this improvement.*

Project 14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)

- Bob stated that NE 151st Street is a 4-lane section east of West Dixie Highway and that this improvement would create continuity between NE 10th Avenue and US 1. He also stated this was a primarily residential area and that residents may have concerns.

Project 15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening) and Project 19: NE 159th Street (New Corridor Connections)

- Greg stated that Project 15 was directly related to Project 19 and considering these projects together would provide a continuous corridor.
- Bob stated that this improvement is really a 3-lane to 5-lane improvement, accounting for the existing two-way-left-turn-lane (TWLTL).

Project 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)

- Bob stated that the actual length of the project is 3.45 miles, not 5.8 miles, and to consider the actual length when preparing the cost estimate for the improvement. He also stated this project is a current need.
- Joan supported this improvement.

Project 20: NE 135th Street Reversible Lane Study (between US 1 and NE 14th Avenue)

- Larry asked if a 0.6 mile project would be worth the cost and if the project would even be feasible at such a short distance.
- Bob stated he liked the concept of using reversible lanes to address a bottleneck but was not sure of the appropriateness at this location. He also stated the County is currently examining short reversible lanes on Bird Road. He also questioned whether the traffic problem was only a PM peak hour issue and he believes a thorough analysis would be needed.

Project 21: Biscayne Boulevard Reversible Lane Study (between NE 125th Street and NE 151st Street)

- Bob stated reversible lanes were typically used in locations were the directional split in traffic is at least 70/30. At this location the directional split is only 60/40; therefore, Bob questions the validity of this improvement.

Project 22: 163rd/167th Street Reversible Lane Study (between US 1 and NE 6th Avenue)

- Bob's initial thoughts were that this project would probably fail.
- Joan expressed concerns related to access to the businesses along the corridor.

Project 25: Intersection Improvements along Biscayne Boulevard in Aventura

- Bob stated the City of Aventura may be able to help with funding and that Frank Prats from his office would review the improvements. At first glance Bob thought these improvements were good concepts.

Implementation Plan for the Northeast Corridor Traffic Flow Study
Miami-Dade County Public Works Meeting Notes
May 21, 2009

A follow-up meeting with Miami-Dade Public Works for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held on Thursday, May 21, 2009, at the County's Traffic Control Center. The attendees of the meeting were:

- Larry Foutz – Miami-Dade MPO
- Frank Prats – Miami-Dade County Public Works
- Erick Zapata – Miami-Dade County Public Works
- Greg Kyle – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.

At the outset, Kimley-Horn distributed several handouts, including an agenda, summary sheets for projects, and a map of the northeast area of the County. Larry Foutz discussed the purpose of the study and background information including that this is a follow-up study to implement recommendations made in a prior MPO Study. The following list describes the pertinent discussion topics during the meeting.

Project 1: West Dixie Highway and Miami Gardens Drive (Intersection Capacity)

- Frank agreed with this improvement. He also stated that restriping the northbound approach to provide a shared through/right could result in some cut-through traffic in the adjacent parking lot. He reiterated that the County is working with Ojus Elementary School, located in the northwest quadrant, to relocate the existing school pick-up/drop-off area on Miami Gardens Drive. This would allow for a westbound shared through/right lane as a short-term improvement.
- Frank also stated that the long-term improvement should consist of additional right-of-way, to provide four (4) westbound through lanes and dual continuous flow southbound right-turn lanes at Biscayne Boulevard. Currently, only one (1) continuous flow southbound right-turn lane is provided on Biscayne Boulevard.

Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)

- Frank stated that he supported this project. However, advance signage would be needed on the northbound approach to guide motorists to the correct left-turn lane to access either SR 826, SR 7, or I-95 southbound.

Project 4: Biscayne Boulevard and NE 163rd Street (Signal Re-Timing)

- Frank stated that seasonal population variations require periodic signal timing optimization. He also supports grade-separating the north and south through movements as related to Project 3.

Project 5: West Dixie Highway and NE 163rd Street (Signal Re-Timing)

- Frank stated signal timings are adjusted periodically and, if specific adjustments are recommended, he would review them.

Project 6: NE 10th Avenue and NE 167th Street (Signal Re-Timing)

- Again, Frank stated signal timings are adjusted periodically and, if specific adjustments are recommended, he would review them.

Project 7: NE 10th Avenue and NE 163rd Street (Signal Re-Timing)

- Again, Frank stated signal timings are adjusted periodically and, if specific adjustments are recommended, he would review them.

Project 8: Biscayne Boulevard and NE 125th Street (Signal Re-Timing)

- Again, Frank stated signal timings are adjusted periodically and, if specific adjustments are recommended, he would review them.

Project 9: Biscayne Boulevard and NE 135th Street (Signal Re-Timing)

- Again, Frank stated signal timings are adjusted periodically and, if specific adjustments are recommended, he would review them.
- Frank proposed additional short-term and long-term improvements to the eastbound approach. The short-term improvement consists of restriping the eastbound approach for an exclusive left-turn lane, shared left-through lane, and exclusive right-turn lane. The short-term improvements would also provide split phase signal operations for the east and westbound approaches.
- The long-term improvement would consist of constructing an additional eastbound left-turn lane. (See Project 20 for additional discussion of improvements at this intersection.)

Project 10: Dixie Highway and NE 135th Street (Signal Re-Timing)

- Again, Frank stated signal timings are adjusted periodically and, if specific adjustments are recommended, he would review them.

Project 11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)

- Frank stated that this project may be controversial as traffic calming devices were previously installed between N. Miami Beach Boulevard and Miami Gardens Drive as a result of citizen requests.

Project 12: NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)

- Frank stated that this would be a good project. However, the north terminus will need to be examined in detail in order to develop the transition back to a two-lane facility north of NE 135th Street.

Project 14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)

- Frank agreed with this project and stated that the railroad crossing should be improved in order to mitigate the existing "hump."

Project 15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening) and Project 19: NE 159th Street (New Corridor Connections)

- Frank agreed with this project and said that the railroad crossing at NE 159th Street is a good idea.
- Frank also asked if the project could be extended to the west to I-95.

Project 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)

- Frank did not oppose the project.

Project 20: NE 135th Street Reversible Lane Study (between US 1 and NE 14th Avenue)

- Frank stated that this project could be constructed in conjunction with his proposed long-term improvement for the eastbound approach for Project 9: Biscayne Boulevard and NE 135th Street.

Project 21: Biscayne Boulevard Reversible Lane Study (between NE 125th Street and NE 151st Street)

- Frank stated that this project would exacerbate the existing bottleneck on Biscayne Boulevard at NE 125th Street. He also stated that a bus pull-out on Biscayne Boulevard south of NE 125th Street should be considered as the bus currently blocks a travel lane for boardings and alightings.

Project 22: 163rd/167th Street Reversible Lane Study (between US 1 and NE 6th Avenue)

- Frank stated that this was a heavy commercial corridor and expressed concerns regarding site access.

Project 25: Intersection Improvements along Biscayne Boulevard in Aventura

§ NE 182nd Street – signal timing
  - Frank stated signal timings are adjusted periodically and, if specific adjustments are recommended he would review them.

§ NE 183rd Street – provide a second westbound left-turn lane by partly removing the median barrier, striping, signal timing
  - Frank stated that the stop sign to the east needed to be removed to make this an effective project.

§ NE 187th Street – signal timing; eliminate parallel parking on north side of 187th Street; eliminate northbound left-turn from the alley between NE 187th Street and Miami Gardens Drive.
  - Frank stated that he had met with Sergeant Burns from the City of Aventura Police Department and that the signal timings were reset. He also stated that the southbound left-turn movement was too close to the NE 186th Street southbound left-turn movement.

§ NE 191st Street – provide triple westbound left turns and one exclusive right turn lane (remove existing island and acquire right-of-way from the north side); signal timing
  - Frank agreed with the improvement and stated that FDOT recently installed a pedestrian phase.

§ NE 192nd Street – construct a raised curb to eliminate the first parallel parking space in the southeast corner of the intersection to provide safe right turns from Biscayne Boulevard.
  - Frank suggested that the improvement could consist of widening Biscayne Boulevard northbound between NE 192nd Street and Lehman Causeway.

§ NE 203rd Street – add second eastbound right-turn lane.
  - Frank stated that this was an expensive improvement but a useful one. He also suggested a pedestal mounted right-turn signal in the island as a short-term improvement to help the free-flow eastbound right-turn movement.

§ NE 208th Street – restrict the eastbound approach to right-turn only. Provide another westbound left-turn lane. To accommodate the left-turn lane, reduce the number of receiving lanes from two to one (from the Biscayne Boulevard Intersection Study; not identified in the NE Corridor Study).
  - Frank did not state objections to this project.

§ NE 209th Street – add new westbound approach lane to provide an exclusive right turn lane and shared through plus left-turn lane.
  - Erick stated that John McWilliams of Kimley-Horn and Associates, Inc. was working on this project and that it may already be constructed.

§ NE 213th Street – signal timing
  - Frank stated that NE 213th Street provides a connection to Gulfstream Race Track.

Implementation Plan for the Northeast Corridor Traffic Flow Study
Study Advisory Committee Meeting #2 Notes
June 16, 2009

The second meeting for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held on Tuesday, June 16, 2009, in the Executive Conference Room of the Aventura City Hall. The attendees of the meeting were:

- Larry Foutz – Miami Dade MPO, Project Manager
- Joanne Carr – City of Aventura
- John O'Brien – City of North Miami
- Wisler Pierre-Louis – City of North Miami
- Rick Conner – City of Sunny Isles Beach
- Michael Miller – Michael Miller Planning Associates representing Bal Harbour, Bay Harbor Island, and Golden Beach
- Rolando Jimenez – Miami Dade County Public Works
- Carlton Card – Florida Department of Transportation District 6
- Greg Kyle – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.

At the start of the meeting Kimley-Horn distributed several handouts, including an agenda, minutes from meetings with agencies, an implementation plan map, summaries of eliminated projects, signal timing projects, potentially feasible projects, and potentially controversial/constrained projects. After self introductions by the study advisory committee (SAC) team members, Greg Kyle discussed implementation plan progress since the SAC had last met in January. The following list describes the pertinent discussion topics during the meeting.

Background

- Greg provided a brief overview of activities that have occurred since the last SAC meeting and explained how local elections had delayed scheduling the second SAC meeting.

Coordination Activities

- Adrian Dabkowski provided a brief overview of the meetings held with Florida Department of Transportation (FDOT) and Miami-Dade County Public Works. He explained that discussions with each agency were related to specific projects for roadways under the agency's jurisdiction and summaries of the discussions were contained in the meeting minutes.

Eliminated Projects

- Project #13: NE 14th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening) was the first project Greg discussed.

- John O'Brien asked if appropriate right-of-way was provided for Project #13. Greg stated that a reduced cross-section would be required.
- John also asked if it was possible to move the project from NE 14th Avenue to NE 16th Avenue. Greg stated that spacing between NE 15th Avenue and NE 16th Avenue would need to be examined.
- It was recommended by the SAC for Kimley-Horn to further discuss Project #16: NE 19th Avenue between NE 163rd Street and Miami Gardens Drive (Roadway Widening) and Project #29: NE 171st Street between NE 15th Avenue and US 1 (Roadway Widening) with the City of North Miami Beach before final elimination of these projects, as a representative from the City was not present at the meeting.
- The SAC agreed with eliminating Project #21: Biscayne Boulevard Reversible Lane Study and Project #22: 163rd/167th Street Reversible Lane Study, as there is a lack of directional traffic split to justify the projects. Greg further stated the existing bottleneck on Biscayne Boulevard at NE 125th Street would be exacerbated with a reversible lane project. Additionally, 163rd/167th Street is a heavy commercial corridor and businesses would be greatly impacted by a reversible lane project.
- Greg stated that a detailed operational analysis was prepared for Project #26: Biscayne Boulevard and William Lehman Causeway (Intersection Capacity) and the existing approach laneage reflects the recommended laneage. Therefore, the project is completed and should be removed.
- Larry Foutz stated that at the last meeting Project #27: Highland Lakes Boulevard between Ives Dairy Road and NE 215th Street (Roadway Widening) was recommended to be eliminated because the roadways dead end within the residential neighborhood.
- Greg stated that Project #28: NE 151st Street (New Corridor Connections) was eliminated since it is located in a primarily single-family residential area. Furthermore, several single-family homes and a multi-family residential complex would require acquisition and demolition to construct project.

Signal Re-Timing Projects

- Greg stated that the County performs signal re-timing on an ongoing basis and that, if specific adjustments were recommended, the County would consider them.
- John stated that the County had done a good job with Project #8: Biscayne Boulevard and NE 125th Street. He also asked if these re-timing projects were for entire corridors or specific intersections only. Greg stated that the proposed re-timing projects were only for specific intersections.
- Larry stated that the County is approximately 50 percent complete with the upgrade of the traffic signal control system. Greg and Adrian stated that the upgrade would allow for multiple signal timings plans, enhanced phasing flexibility, and greater corridor progression.

Potentially Feasible Projects

- Larry explained that the County was working with Ojus Elementary School to relocate the existing school pick-up/drop-off area on Miami Gardens Drive. He also mentioned that the County needed to move forward with this project "while the iron was still hot."

- John asked what the implementation steps were for Project #3: Biscayne Boulevard and NE 163rd Street (Grade Separation). Larry and Greg stated that the first step was to get the project into the Long Range Transportation Plan (LRTP), the second step would be to prepare a Project Development and Environment (PD&E) study for the project, and the final step was to develop a funding strategy for the project. Greg reiterated that FDOT would be the lead agency for this project.
- Larry stated that Project # 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening) could be a "development of a livable-communities corridor" opposed to just a roadway widening project. Consideration could include landscaping, bicycle and pedestrian facilities, ornamental bridge features, etc. Rolando Jimenez stated that the bridge over the Snake Creek Canal would require widening.
- Project #20: NE 135th Street Reversible Lane Study. John mentioned that Florida Power and Light (FPL) recently had installed new power poles along NE 135th Street and that the community may be resistant to another project. John also asked about the viability of extending the western limit of the project to Opa Locka Boulevard. Greg stated that impacts to residents, businesses, and safety concerns would be issues with extending the limits.
- Larry asked Joanne Carr if the City had a concept for Project #23: Direct Connection between William Lehman Causeway and Aventura Mall. Joanne said that she could contact the City Engineer. Carlton Card stated that this project should be moved to the Potentially Controversial/Constrained list. It was also agreed at the direction of Joanne to rename the Potentially Controversial Projects to Constrained Projects.
- Larry stated that Project #24: Intermodal Center at Biscayne Boulevard and NE 163rd Street should consist of short-term and long-term improvements. The short-term improvements would consist of bus rider amenities such as a bus shelter, benches, etc. The long-term improvement would consist of getting an intermodal facility included in the South Florida East Coast Corridor (SFECC) study. Larry also asked Kimley-Horn to review the frequency of buses on NE 163rd Street.
- Greg discussed how several of the subprojects mentioned in Project #25: Intersection Improvements along Biscayne Boulevard in Aventura have been completed and a status section was added to the project summary sheet for the subprojects.

Potentially Controversial (Constrained) Projects

- Greg stated that Project #11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening) had traffic calming devices previously installed and the corridor passes through a residential neighborhood. The viability of this project needs to be discussed with North Miami Beach.
- Wisler Pierre-Louis stated that Project #14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening) was not in North Miami but rather in North Miami Beach. John stated that a new high school was going to be built in the area and, with the FIU traffic there may be demand for this project. Larry asked if the project would be beneficial since it terminates at NE 10th Avenue. Larry added that the project could be reduced to a 3-lane widening. John stated that this project could be completed in unison with Project #13: NE 14th Avenue between NE 135th Street and NE 163rd Street

(Roadway Widening). Please note that the alignment of Project #13 may be switched to NE 16th Avenue.

- John mentioned that he thought Project #15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening) could be a more viable project than #14.
- Adrian stated that in order for Project #15 to be viable that Project #19: NE 159th Street (New Corridor Connections) would be necessary.
- Project #17: Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening) was discussed. It was agreed to discuss the project's viability with Bal Harbour and Sunny Isles.

Next Steps

- Joanne asked if additional projects developed by a city could be added to the implementation plan. It was agreed to include additional city projects within the implementation plan.
- **Please provide additional specific projects to Kimley-Horn by Friday, June 26, 2009.**
- Greg explained that the next steps would include specific one-on-one meetings with the Cities, as well as developing cost estimates and funding strategies for the projects.

Implementation Plan for the Northeast Corridor Traffic Flow Study
City of North Miami Beach Meeting Notes
August 11, 2009

A follow-up to the second study advisory committee meeting for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held with the City of North Miami Beach on Tuesday, August 11, 2009, at the City's Planning Department. The attendees of the meeting were:

- Larry Foutz – Miami-Dade MPO
- Bob Nix – City of North Miami Beach
- Chris Heid – City of North Miami Beach
- Jose Casio – City of North Miami Beach
- Greg Kyle – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.

At the outset, Kimley-Horn distributed several handouts, including a map of the northeast area of the County, project summary map, meeting minutes from previous meetings, and project summary sheets. Larry Foutz discussed the purpose of the study and background information including that this is a follow-up study to implement recommendations made in a prior MPO Study. The following list describes the pertinent discussion topics during the meeting.

Eliminated project were discussed first, followed by signal re-timing projects, potentially controversial projects, and potentially feasible projects. The following presents the projects in the order that they were discussed.

Eliminated Projects

Project 13: NE 14th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)

- Adrian Dabkowski stated that based on input for the study advisory committee relocating the roadway widening to NE 16th Avenue was an option. Bob Nix asked what the future traffic volumes would be if NE 16th Avenue was widened to 4-lanes. Larry stated that if the project was advanced then the County travel forecasting model would be run with this improvement to quantify the impact. Chris Heid stated that a cemetery wall along the east side of NE 16th Street would need to be considered as well as a wall screening a residential community along the west side of NE 16th Avenue. He also stated that single-family home driveways did not directly connect to NE 16th Avenue. As a follow-up to the meeting, the City will consider the validity of widening NE 14th Avenue or the alternative of NE 16th Avenue, and the City will provide direction regarding which improvement to advance.

Project 16: NE 19th Avenue between NE 163rd Street and Miami Gardens Drive (Roadway Widening)

- Bob and Chris both stated that this roadway was not congested enough to justify the need to widen to 6-lanes. Chris also stated that from a planning perspective he was not in favor of any projects, where landscaped medians would be removed in favor of widening the roadway.

Project 21: Biscayne Boulevard Reversible Lane Study (between NE 125th Street and NE 151st Street) and Project 22: 163rd/167th Street Reversible Lane Study (between US 1 and NE 6th Avenue)

- Greg Kyle discussed how the directional traffic split was only 60/40 and was not enough to justify reversible lanes. He also mentioned that the landscaped median along Biscayne Boulevard was recently installed, and that the commercial/retail land uses along 163rd/167th Street were not conducive to reversible lanes. Bob and Chris agreed.

Project 28: NE 151st Street (New Corridor Connections)

- Greg, Larry, Adrian discussed the various obstacles for implementing this project such as the need to acquire single family homes and multi-family residences in order to implement the project. Bob and Chris agreed with eliminating the project.

Project 29: NE 171st Street between NE 15th Avenue and US 1 (Roadway Widening)

- Jose Casio stated that drainage issues occur on the east portion of the corridor near Dixie Highway and Biscayne Boulevard. Chris reiterated that any projects that removed the median would not be supported.

Signal Re-Timing Projects

Greg stated that the County performs signal re-timing on an ongoing basis and that if the City had specific concerns at intersections to provide that information to Kimley-Horn, and the County would be notified.

Potential Constrained Projects

Project 11: NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)

- Chris stated that the neighborhood is well-organized politically and residents walk a lot. It was also stated that the roadway was congested. As a follow-up to the meeting, the City will consider the validity of this project and provide direction on whether the project should be included in the implementation plan.

Project 14: NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening) and Project 19: NE 159th Street (New Corridor Connections)

- Bob and Chris discussed the NE 159th Street corridor and that it could be the preferred corridor to NE 159th Street. The at-grade railroad crossing (project 19) would be critical and is an improvement that the City has desired for some time.

Project 15: NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)

- Bob and Chris discussed extending the west limit of the widening to NW 2nd Avenue or the I-95 frontage road.

Potentially Feasible Projects

Project 2: NW 2nd Avenue and NW 167th Street (Intersection Capacity)

- The City did not state any concerns with the project.

Project 3: Biscayne Boulevard and NE 163rd Street (Grade Separation)

- Larry explained the concept of grade separating the north-south through movements.
- Greg explained this improvement was long range and would require several steps for implementation.
- Bob and Chris stated they liked the idea and to move forward with the project.

Project 18: West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)

- Jose stated that drainage issues should be addressed with the project. Chris stated he liked the concept of a decorative bridge and the parkway-type aesthetics.

Project 24: Intermodal Center at Biscayne Boulevard and NE 163rd Street

- Bob and Chris discussed potentially locating a future FEC passenger rail station in the area along NE 164th Street (Main Street corridor). They also agreed with the short-term bus shelter improvements in the area.

Next Steps

- **Please provide additional specific projects to Kimley-Horn by Monday, August 24, 2009.**

Implementation Plan for the Northeast Corridor Traffic Flow Study
City of Aventura Meeting Notes
August 20, 2009

A follow-up to the second study advisory committee meeting for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held with the City of Aventura on Thursday August 20, 2009, at the City Manager's Office. The attendees of the meeting were:

- Larry Foutz – Miami-Dade MPO
- Eric Soroka – City of Aventura
- Joanne Carr – City of Aventura
- Greg Kyle – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.

At the outset, Kimley-Horn distributed several handouts, including a project summary map and project summary sheets. Larry Foutz discussed the purpose of the study and background information including that this is a follow-up study to implement recommendations made in a prior study. The following list describes the pertinent discussion topics during the meeting.

Eliminated project were discussed first, followed by signal re-timing projects, potentially feasible projects, and potentially constrained projects. The following presents the projects in the order they were discussed.

Eliminated Projects

Project 26: Biscayne Boulevard and William Lehman Causeway (Intersection Capacity)

- Adrian Dabkowski stated this project was eliminated as the existing lane geometry is based on results of a detailed operational analysis.

Signal Re-Timing Projects

Adrian stated that the County performs signal re-timing on an ongoing basis and that if the City had specific concerns at intersections to provide that information to Kimley-Horn, and the County would be notified. Eric Soroka stated that the City has prepared signal/intersection improvements along Biscayne Boulevard at NE 191st Street and NE 183rd Street. Greg Kyle and Larry Foutz mentioned that these intersection improvements and several others are included as Project 25: Intersection Improvements along Biscayne Boulevard in Aventura.

Potential Feasible Projects

Project 25: Intersection Improvements along Biscayne Boulevard in Aventura

- Adrian discussed the proposed intersection improvements along Biscayne Boulevard at NE 182nd Street, NE 183rd Street, NE 187th Street, NE 191st Street, NE 192nd Street, NE 203rd

Street, NE 208th Street, NE 209th Street, and NE 213th Street. Eric stated that NE 192nd Street is a private road, and that the owner of the property was approached regarding improvements and was not interested at that point.

Potential Constrained Projects

Project 23: Direct Connection between William Lehman Causeway and Aventura Mall

- Joanne Carr stated that this project was previously listed as a potentially feasible project and Florida Department of Transportation (FDOT) asked for it to be moved to the potentially constrained project list, since the Lehman Causeway is a limited access roadway. Larry discussed several options including an eastbound exit-only flyover configuration from the mall.
- Eric stated that the initial concern was traffic entering the mall via the frontage road and County Club Drive. He also stated that this may longer be an issue and an eastbound exit-only flyover could be considered.
- Joanne and Greg stated that there are several examples of direct connections between limited access roadways and private properties in Districts 4 and 6.

Project 30: NE 213th Street Extension between Biscayne Boulevard and E. Dixie Highway

- Eric stated this project may not be needed if development does not occur on the vacant parcels to the west of NE 213th Street at Biscayne Boulevard. Larry stated that with the current economic conditions it may be prudent to move forward with the project as it could be more cost feasible. Larry suggested including the project in the City's Comprehensive Plan to facilitate the dedication of right-of-way as the area is redeveloped.

Next Steps

- Kimley-Horn will move forward with completing the funding and implementation sections, as well as finalizing the study.
- Eric suggested presenting the results of the study to the City Commission at a workshop.

Implementation Plan for the Northeast Corridor Traffic Flow Study
City of North Miami Meeting Notes
August 20, 2009

A follow-up to the second study advisory committee meeting for the *Implementation Plan for the Northeast Corridor Traffic Flow Study* was held with the City of North Miami on Thursday, August 20, 2009, at the City's Planning Department. The attendees of the meeting were:

- Larry Foutz – Miami-Dade MPO
- Maxine Calloway – City of North Miami
- John O'Brien – City of North Miami
- Greg Kyle – Kimley-Horn and Associates, Inc.
- Adrian Dabkowski – Kimley-Horn and Associates, Inc.

At the outset, Kimley-Horn distributed several handouts, project summary map and project summary sheets. Larry Foutz discussed the purpose of the study and background information including that this is a follow-up study to implement recommendations made in a prior study. The following list describes the pertinent discussion topics during the meeting.

Eliminated project were discussed first, followed by signal re-timing projects, and potentially feasible projects. The following presents the projects in the order that they were discussed.

Eliminated Projects

Project 13: NE 14th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)

- Adrian Dabkowski stated that based on input for the study advisory committee relocating the roadway widening to NE 16th Avenue was an option. John O'Brien stated that NE 16th Avenue is a major transit route and that federal stimulus funding is being used to implement bus shelters along this roadway.

Project 21: Biscayne Boulevard Reversible Lane Study (between NE 123rd Street and NE 151st Street)

- Adrian stated that the directional traffic split was only 60/40 which is not enough to justify reversible lanes and that the landscaped median along Biscayne Boulevard was recently installed.
- Greg mentioned that Frank Prats from Miami-Dade County Public Works recommended a southbound bus pull-out bay on Biscayne Boulevard south of NE 123rd Street. John recommended provided bus pull-out bays in both the northbound and southbound directions along Biscayne Boulevard and to consider moving the bus stop locations north of NE 123rd Street. He also stated that this bus stop was the 2nd busiest in the City and if right-of-way was not available, the southbound bus stop could potentially be located on Johnson and Wales University property.

Signal Re-Timing Projects

Adrian stated that the County performs signal re-timing on an ongoing basis and that if the City had specific concerns at intersections to provide that information to Kimley-Horn, and the County would be notified.

Potentially Feasible Projects

Project 12: NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)

- John asked if bike lanes could be added and stated this project should be combined with the extension to NE 163rd Street. Greg stated that the right-of-way width would need to be reviewed to make a determination. He also mentioned that if right-of-way acquisition was required that the project's implementation steps and timeframe would be expanded.

Project 20: NE 135th Street Reversible Lane Study

- John asked if NE 16th Avenue was widened to NE 163rd Street if reversible lanes on NE 135th Street would be needed. Larry stated that instead of reversible lanes, unbalanced lanes (3-eastbound and 2-westbound) could be an alternative.

John stated that a Florida East Coast (FEC) rail station is being contemplated at either NE 125th Street or NE 135th Street within the South Florida East Coast Corridor Study (SFECC). He also stated that NE 125th Street was the preferred location. Based on the discussions an intermodal center at NE 125th Street will be added to the potentially feasible project list.

Next Steps/Follow-up

- The following projects will be added as potentially feasible projects:
  - NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)
  - Intermodal Center at NE 125th Street
  - Bus pull-out bays Biscayne Boulevard and NE 123rd Street
- Kimley-Horn will move forward with completing the funding and implementation sections as well as finalizing the study.
- Maxine suggested presenting the results of the study to the City Commission at a workshop.

APPENDIX B:
Project Cost Estimates

IMPLEMENTATION PLAN FOR NORTHEAST CORRIDOR TRAFFIC FLOW STUDY
PLAN LEVEL PROJECT COST ESTIMATES

Kimley-Horn and Associates, Inc.

Project		Model	Length (miles)/ Units	Cost per Mile/Unit	Road Work Cost	Signal Work	Project Cost	Design/Study Cost (20 Percent)	Total Project Cost
Project 1	**West Dixie Highway and Miami Gardens Drive (Intersection Capacity)**								
	Short-Term	Restripe NB approach			$5,000.00		$5,000.00	$1,000.00	$6,000.00
	Long-Term	NDRAXL-U-10-BB	0.3	$628,410.00	$189,000.00	$500,000.00	$689,000.00	$137,800.00	$826,800.00
Project 2	**NW 2nd Avenue and NW 167th Street (Intersection Capacity)**								
	Short-Term	South/North bound approaches, striping			$30,000.00	$50,000.00	$80,000.00	$16,000.00	$96,000.00
	Long-Term	2 Turn Lanes (NDRAXL-U-10-BB), Signal	0.14	$628,410.00	$176,000.00	$250,000.00	$426,000.00	$85,200.00	$511,200.00
Project 3	**Biscayne Boulevard and NE 163rd Street (Grade Separation)**				TBD		TBD	TBD	TBD
Project 4	**Biscayne Boulevard and NE 163rd Street (Signal Re-Timing)**				$0.00		$0.00	$0.00	$0.00
Project 5	**West Dixie Highway and NE 163rd Street (Signal Re-Timing)**				$0.00		$0.00	$0.00	$0.00
Project 6	**NE 10th Avenue and NE 167th Street (Signal Re-Timing)**				$0.00		$0.00	$0.00	$0.00
Project 7	**NE 10th Avenue and NE 163rd Street (Signal Re-Timing)**				$0.00		$0.00	$0.00	$0.00
Project 8	**Biscayne Boulevard and NE 123rd Street (Signal Re-Timing)**				$0.00		$0.00	$0.00	$0.00
Project 9	**Biscayne Boulevard and NE 135th Street (Signal Re-Timing)**				$0.00		$0.00	$0.00	$0.00
	Short-Term	Striping, Split Phase			$5,000.00	$250,000.00	$255,000.00	$51,000.00	$306,000.00
	Long-Term	NDRAXL-U-10-BB	0.14	$628,410.00	$88,000.00	$250,000.00	$338,000.00	$67,600.00	$405,600.00
Project 10	**Dixie Highway and NE 135th Street (Signal Re-Timing)**				$0.00		$0.00	$0.00	$0.00
Project 11	**NE 10th Avenue between NE 151st Street and Miami Gardens Drive (Roadway Widening)**	WUUA24-U-19-BB/ WUUA24-U-20-BB (AVG.)	2.02	$4,569,546.34	$9,231,000.00	$750,000.00	$9,981,000.00	$1,996,200.00	$11,977,200.00
Project 12	**NE 16th Avenue between US 1 and NE 135th Street (Roadway Widening)**	WUUA35-U-21-BB	1.2	$4,203,039.59	$5,044,000.00	$750,000.00	$5,794,000.00	$1,158,800.00	$6,952,800.00
Project 13	**NE 14th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)**	Project Eliminated			--		--	--	--
Project 14	**NE 151st Street between NE 10th Avenue and West Dixie Highway (Roadway Widening)**	WUUA24-U-19-BB/ WUUA24-U-20-BB (AVG.)	1	$4,569,546.34	$4,570,000.00	$400,000.00	$4,970,000.00	$994,000.00	$5,964,000.00
Project 15	**NE 159th Street between NE 6th Avenue and West Dixie Highway (Roadway Widening)**	WUUA35-U-21-BB	2	$4,203,039.59	$8,407,000.00	$2,000,000.00	$10,407,000.00	$2,081,400.00	$12,488,400.00
Project 16	**NE 19th Avenue between NE 163rd Street and Miami Gardens Drive (Roadway Widening)**	Project Eliminated			--		--	--	--

IMPLEMENTATION PLAN FOR NORTHEAST CORRIDOR TRAFFIC FLOW STUDY
PLAN LEVEL PROJECT COST ESTIMATES

Kimley-Horn and Associates, Inc.

	Project	Model	Length (miles)/ Units	Cost per Mile/Unit	Road Work Cost	Signal Work	Project Cost	Design/Study Cost (20 Percent)	Total Project Cost	
Project 17	**Collins Avenue between Harbour Way and Bayview Drive (Roadway Widening)**				TBD		TBD	TBD	TBD	
Project 18	**West Dixie Highway between NE 163rd Street and County Line Road (Roadway Widening)**	WUUA24-U-19-BB/ WUUA24-U-20-BB (AVG.)	3.45	$4,569,546.34	$15,765,000.00	$2,000,000.00	$17,765,000.00	$3,553,000.00	$21,318,000.00	(Does not include bridge cost)
Project 19	**NE 159th Street (New Corridor Connections)**	Rail-Crossing and Signalization (NUU5LN-U-07-BB)	0.05	$6,656,065.05	$333,000.00	$500,000.00	$833,000.00	$166,600.00	$999,600.00	(Does not include rail crossing equipment nor closure of existing grade crossing)
Project 20	**NE 135th Street Reversible Lane Study**				$0.00		$80,000.00	$16,000.00	$96,000.00	
Project 21	**Biscayne Boulevard Reversible Lane Study**	Project Eliminated			$0.00		$0.00	$0.00	$0.00	
Project 22	**163rd/167th Street Reversible Lane Study**	Project Eliminated			$0.00		$0.00	$0.00	$0.00	
Project 23	**Direct Connection between William Lehman Causeway and Aventura Mall**				$0.00		TBD	TBD	TBD	
Project 24	**Intermodal Center at Biscayne Boulevard and NE 163rd Street**				$0.00					
	Short-Term	Bus Shelters	2	$10,000.00	$20,000.00	$0.00	$20,000.00	$0.00	$20,000.00	
	Long-Term	Intermodal Center			TBD		TBD	TBD	TBD	
Project 25	**Intersection Improvements along Biscayne Boulevard in Aventura**				$0.00		TBD	TBD	TBD	
Project 26	**Biscayne Boulevard and William Lehman Causeway (Intersection Capacity)**	Project Eliminated			$0.00		$0.00	$0.00	$0.00	
Project 27	**Highland Lakes Boulevard between Ives Dairy Road and NE 215th Street (Roadway Widening)**	Project Eliminated			$0.00		$0.00	$0.00	$0.00	
Project 28	**NE 151st Street (New Corridor Connections)**	Project Eliminated			$0.00		$0.00	$0.00	$0.00	
Project 29	**NE 171st Street between NE 15th Avenue and US 1 (Roadway Widening)**	Project Eliminated			$0.00		$0.00	$0.00	$0.00	
Project 30	**NE 213th Street Extension between Biscayne Boulevard and E. Dixie Highway**	NDUA4L-U-05-BB	0.3	$7,482,557.07	$2,245,000.00	$500,000.00	$2,745,000.00	$549,000.00	$3,294,000.00	
Project 31	**NE 16th Avenue between NE 135th Street and NE 163rd Street (Roadway Widening)**	WUUA24-U-19-BB/ WUUA24-U-20-BB (AVG.)	1.75	$4,569,546.34	$7,997,000.00	$1,000,000.00	$8,997,000.00	$1,799,400.00	$10,796,400.00	
Project 32	**Biscayne Boulevard Bus Bays at 123rd Street**	2 bus bays (northbound and southbound)	2	$75,000.00	$150,000.00		$150,000.00	$30,000.00	$180,000.00	
Project 33	**Intermodal Center at NE 125th Street**	Intermodal Center			TBD		TBD	TBD	TBD	

Updated as of: 07/02/09

Generic Cost Per Mile Models

Disclaimer: These models are generic in nature, and not based on actual construction projects. They are for reference purposes only, and are not intended to predict or support future estimates.

	Models	Cost Per Mile
OTHER	Two Directional 12' Shared Use Path	$240,408.46
	Rails to Trails project 12' width	$199,638.66
	Sidewalk construction` 5' one side 4 inch depth	$141,624.86
	Mid-Block Crossing	$101,560.99
RURAL	New Construction Undivided 2 Lane Rural Road with 5' Paved Shoulders	$2,486,073.68
	New Construction Undivided 3 Lane Rural Road with 5' Paved Shoulders Center Turn Lane	$2,957,908.38
	New Construction Undivided 4 Lane Rural Road with 5' Paved Shoulders	$3,545,579.86
	New Construction 4 Lane Divided Rural Road with 2' Paved Shoulders Inside and 5' Paved Shoulders Outside	$4,864,097.09
	New Construction Divided Rural 4 Lane Interstate with Paved Shoulders 10' Outside and 4' Inside	$5,973,609.10
	New Construction Undivided 5 Lane Rural Road with 5' Paved Shoulders Center Turn Lane	$4,155,009.58
	New Construction 6 Lane Divided Rural Road with 5' Paved Shoulders Inside and Out	$5,898,440.46
	New Construction Divided Rural 6 Lane Interstate with 10' Paved Shoulders Inside and Out	$6,933,740.73
	New Construction Extra Cost for 1 Single Additional Lane on Rural Arterial	$574,847.16
	New Construction Extra Cost for 1 Single Additional Lane on a Rural Interstate	$657,815.82
	Milling and Resurfacing 2 Lane Rural Road with 5' Paved Shoulders	$485,809.21
	Milling and Resurfacing 3 Lane Rural Road with 5' Paved Shoulders and Center Turn Lane	$670,913.28
	Milling and Resurfacing 4 Lane Rural Road with 5' Paved Shoulders	$1,091,238.76
	Mill + Resurface 4 Lane Divided Rural Arterial with 5' Outside Shoulders and 2' Inside	$1,161,276.41
	Mill + Resurface 4 Lane Divided Rural Interstate with Paved Shoulders 10' Outside and 4' Inside	$1,315,105.50
	Milling and Resurfacing 5 Lane Rural Road with 5' Paved Shoulders and Center Turn Lane	$1,312,562.13
	Mill + Resurface 6 Lane Divided Rural Arterial with 5' Paved Shoulders Inside and Out	$1,632,306.39
	Mill + Resurface 6 Lane Divided Rural Interstate with 10' Paved Shoulders Inside and Out	$1,857,802.51
	Mill + Resurface 1 Additional Lane Rural Interstate	$328,307.46
	Mill + Resurface 1 Additional Lane Rural Arterial	$268,157.84
	Widen Existing 2 Lane Arterial to 4 Lanes Undivided` Add 1 Lane to Each Side` 5' Paved Shoulders	$2,256,994.67
	Widen Existing 2 Lane Arterial to 4 Lane Divided` Resurface Existing 2 Lanes` 5' Paved Shoulders Inside + Out	$3,175,654.00
	Widen Existing 4 Lane Divided Arterial to 6 Lane Divided` Resurface Existing 4 Lanes` 5' Paved Shoulders Inside + Out	$2,716,845.57
	Widen 4 Lane Interstate to 6 Lanes In Median ` Mill + Resurface Existing` 10' Paved Shoulders Inside + Out	$3,988,677.67
	Widen 4 Lane Interstate to 6 Lanes Outside ` Mill + Resurface Existing` 10' Shoulders Outside` Widen Existing 4' Inside Shoulders to 10'	$3,863,455.60
	Widen Existing 6 Lane Divided Arterial to 8 Lane Divided` Resurface Existing 4 Lanes` 5' Paved Shoulders Inside + Out	$3,033,083.59
	Widen 6 Lane Interstate to 8 Lanes in Median ` Mill + Resurface Existing` 10' Paved Shoulders Inside and Out	$4,466,998.73
	Widen Divided Rural 4-Lane for Right Turn Lane 300'	$145,511.96
SUBURBAN	New Construction Suburban 4 Lane with Paved Shoulders Outside and Curb Median	$4,848,788.90
	Widen Exisiting Rural Facility to the Inside with Addition of Closed Drainage System and Median Barrier Wall	$3,223,946.18
	Widen 4 Lane Suburban Roadway with 6~5' Paved Shoulder and Convert to C+G Out` Stripe for Bike Lane	$2,463,946.37
	Add 2 Lanes with C+G Out to Existing 4 Lane Urban or Suburban Roadway with C+G Out	$2,567,773.01
URBAN	New Construction 2 Lane Undivided Urban Arterial with 4' Bike Lanes	$4,939,337.00
	New Construction 3 Lane Undivided Urban Arterial with Center Lane and 4' Bike Lanes	$5,425,217.98
	New Construction Undivided Urban Arterial with 4' Bike Lanes	$5,850,289.45
	New Construction 4 Lane Urban Road with 22' Median and 4' Bike Lanes	$7,482,557.07

Updated as of: 07/02/09

Generic Cost Per Mile Models

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	Models	Cost Per Mile
URBAN	New Construction 4 Lane Divided Urban Interstate Closed 22' Median with Barrier Wall 10' Shoulders Inside + Out	$10,401,456.12
	New Construction 5 Lane Undivided Urban Arterial with Center Turn Lane and 4' Bike Lanes	$6,656,065.05
	New Construction 6 Lane Urban Road with 22' Median and 4' Bike Lanes	$8,391,013.66
	New Construction Divided Urban 6 Lane Interstate with 22' Closed Median with Barrier Wall 10' Shoulders Inside + Out	$11,581,715.07
	New Construction Extra Cost for Additional Lane on Urban Arterial	$628,410.16
	New Construction Extra Cost for Additional Lane on Urban Interstate	$702,490.35
	Mill + Resurface 2 Lane Urban Road with 4' Bike Lanes	$528,660.94
	Mill + Resurface 3 Lane Urban Road with Center Turn Lane and 4' Bike Lanes	$720,119.95
	Mill + Resurface 4 Lane Undivided Urban Roadway with 4' Bike Lanes	$1,037,739.27
	Mill + Resurface 4 Lane Divided Urban Roadway with 4' Bike Lanes	$1,057,669.17
	Mill + Resurface 5 Lane Urban Roadway with Center Turn Lane and 4' Bike Lanes	$1,234,255.89
	Mill + Resurface 6 Lane Divided Urban Arterial with 4' Bike Lanes	$1,634,299.92
	Mill + Resurface 1 Additional Lane Urban Arterial	$226,444.49
	Add 2 Lanes to Existing 2 Lane Undivided Arterial 1 Lane Each Side with 4' Bike Lanes	$4,007,106.81
	Widen 2 Lane Urban Arterial to 4 Lane Divided with 22' Median + 4' Bike Lanes	$5,131,985.86
	Add 2 Lanes to Existing 3 Lane Undivided Arterial 1 Lane Each Side with Center Turn Lane and 4' Bike Lanes	$4,203,039.59
	Widen 4 Lane Urban Divided Arterial to 6 Lane Urban Divided with 22' Median and 4' Bike Lanes	$4,522,407.17
	Widen 4 Lane Urban Interstate with Closed Median to 6 Lanes Outside ` Mill + Resurface Existing` 10' Shoulders Outside	$7,349,223.59
	Widen 6 Lane Urban Divided Arterial to 8 Lane Urban Divided with 4' Bike Lanes	$4,898,534.53
	Widen 6 Lane Urban Interstate with Closed Median to 8 Lanes Outside ` Mill + Resurface Existing` 10' Shoulders Outside	$7,880,091.70