

Multimodal Corridor STUDY

Broward County MPO Transportation Planning Hollywood/Pines Blvd



Hollywood/Pines Boulevard Multimodal Corridor Study

FINAL REPORT

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Broward County Metropolitan Planning Organization



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LIST OF ACRONYMS

AADT	Average Annual Daily Traffic
ADA	Americans with Disabilities Act
AVO	Average Vehicle Occupancy
BC	Broward County
BCC	Broward Community College
BCT	Broward County Transit
BLOS	Bicycle Level of Service
BRT	Bus Rapid Transit
CCTV	Closed Circuit Television
CMAQ	Congestion Mitigation and Air Quality
CMS	Congestion Management System
FDOT	Florida Department of Transportation
FEC	Florida East Coast
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HEFT	Homestead Extension of Florida's Turnpike
HOV	High Occupancy Vehicle
HS	High School
LOS	Level of Service
LRTP	Long Range Transportation Plan
MDT	Miami-Dade Transit
MIC	Miami Intermodal Center
MPO	Metropolitan Planning Organization
NE	Northeast
NW	Northwest
PD&E	Project Development & Environment
PLOS	Pedestrian Level of Service
SAFETEA	Safe, Accountable, Flexible, and Efficient Transportation Equity Act
SE	Southeast
SFCS	South Florida Commuter Services
SFRC	South Florida Rail Corridor
SFRTA	South Florida Regional Transportation Authority
SR	State Road
STP	Surface Transportation Program
SW	Southwest
TAC	Technical Advisory Committee
TDP	Transit Development Plan
TEA	Transportation Enhancement Activities
TEA-21	Transportation Equity Act for the 21 st Century
TIP	Transportation Improvement Program
TMC	Turning Movement Count
TOP	Transportation Outreach Program
TOPS	Transportation Options
TSM	Transportation Systems Management

EXECUTIVE SUMMARY

Background

The Hollywood/Pines Boulevard Multimodal Corridor Study was undertaken by the Broward County Metropolitan Planning Organization (MPO) to develop a congestion management system (CMS) plan to enhance travel in the corridor. The CMS plan includes recommended strategies to improve transportation conditions for four primary modes of travel (pedestrian, bicycle, transit, and roadway) plus a multimodal section to integrate efficient transfers between modes into the transportation network. The goal is to develop innovative, yet practical multimodal transportation solutions that support broad social goals such as enhanced community livability and reduced pollution.

Congestion management strategies are intended to improve the efficiency of a transportation corridor through improvements that encourage alternatives to the single occupant vehicle and promote better use of existing resources. Congestion management strategies can often be implemented at a lower cost than traditional roadway widening and can include technology-based solutions that increase the efficiency of existing roadway systems.

Corridor Description and Study Limits

Hollywood/Pines Boulevard is a principal east/west arterial within southern Broward County. The Hollywood/Pines Boulevard CMS study limits include Hollywood/Pines Boulevard from U.S. 27 in the west to Young Circle (U.S. 1) in the east, a distance of approximately 18.1 miles. This study also includes an extended corridor approximately two miles on either side of Hollywood/Pines Boulevard. The northern limit of the study area is Sheridan Street and the southern limit of the study area is Hallandale Beach Boulevard/Miramar Parkway. The purpose of the extended study corridor is to analyze connections to Hollywood/Pines Boulevard and travel mobility along alternate parallel corridors.

Methodology

This study was completed by following a methodology outlined at the beginning of the study. First, a set of performance measures and targets were developed for each mode of travel considered in this study to guide the analysis. Following this, a period of data retrieval was conducted wherein existing data sources were researched to gather information such as traffic volumes, transit ridership, and proposed improvements that have been identified in other transportation plans and programs. After retrieving existing data, new data were collected to fill in gaps in the available data and to replace data that was considered questionable. An existing conditions data analysis was performed to develop the baseline existing transportation conditions (Year 2003 conditions) within the study corridor. Transportation projects expected to be implemented within five years were accounted for along with expected travel growth to develop the short-range conditions analysis (Year 2008 conditions) within the study corridor. The short-range conditions analysis formed the basis for developing multimodal strategies to enhance travel mobility in the corridor by 2008. A financial analysis was performed for the recommended strategies (1) to determine the expected costs associated with the strategies, (2) to rank the recommended strategies using a benefit/cost analysis, and (3) to identify a funding strategy for implementing the recommended strategies. An implementation program was prepared that included a five-year schedule for implementing improvements along with the appropriate agency responsible for various tasks.

Public Involvement

Throughout the course of the Hollywood/Pines Boulevard Multimodal Corridor Study, a public involvement program was conducted to inform area stakeholders of the study and solicit input regarding existing transportation deficiencies and suggested improvements. In general, two rounds of public involvement were conducted including during the data analysis period to assist in the identification of transportation deficiencies and during the development and refinement of recommended strategies to gather suggestions regarding solutions. The public involvement activities were modeled after the MPO's Public Involvement Plan, which strives to not only inform but to educate the public on their role in the transportation planning process.

Intergovernmental coordination was accomplished primarily through a Technical Advisory Committee (TAC) that met nine times throughout the course of the study. Members of the TAC served several vital roles including reviewing interim working papers, providing guidance on relevant data sources, providing information and comments on study progress at the meetings, and serving as ambassadors to the project from the respective agencies and municipalities.

Realizing the Mobility Vision

The Hollywood/Pines Boulevard Multimodal Corridor Study creates a mobility vision for an important travel corridor in southern Broward County. Recommended strategies range from filling in gaps in the sidewalk network to providing a continuous bicycle trail to developing infrastructure at multimodal hubs (key transfer locations) for enhanced integration of transit and other alternative travel modes into the transportation network. Bus stop infrastructure improvements were identified by location to improve the level of comfort and perception associated with bus transit. Intersection improvements were also identified to reduce traffic delay and enhance safety. The table on the following page lists the study recommendations. In addition, the table at the bottom of this page presents expected strategy costs by mode.

The first step toward the realization of the multimodal vision for Hollywood/Pines Boulevard is to adopt the strategies into Broward County's Congestion Management System (CMS) program and Transportation Improvement Program (TIP). The implementation program developed in this study provides guidance for agencies to follow in implementing strategies over the next five years.

Summary of Expected CMS Costs by Mode

Mode	Estimated Cost of Recommended Strategies
Pedestrian	\$1,600,000
Bicycle	\$5,500,000
Transit	\$8,900,000
Multimodal	\$3,100,000
Roadway	\$6,500,000
TOTAL	\$25,600,000

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Summary of CMS Strategies

Mode	Strategy	Description
Pedestrian	Sidewalk Continuity	West of Interstate 75 - Complete sidewalk network (see Bicycle strategies)
		Interstate 75 - Construct sidewalk along Pines Boulevard across I-75
		Construct new sidewalk - between NW 96th Avenue and NW 91st Avenue (north side)
	Sidewalk Connections	Construct new sidewalk - west side of Palm Avenue
		Construct new sidewalk - west side of Douglas Road (south of Pines Blvd)
		Construct new sidewalk - both sides of University Drive (north of Pines Blvd)
	School Crossing Improvements	McArthur High School - Extend bicycle lanes (see Bicycle strategies)
		McArthur High School - Median hedges between SW 64th Way and North 63rd Avenue
	Improved Pedestrian Crossing	Presidential Circle
	Lighting Strategies	Downtown Hollywood from Dixie Highway to N/S 28th Avenue
		Hollywood Blvd from N/S 58th Avenue to McArthur High School
Bicycle	Multipurpose Shared Use Path	U.S. 27 to NW 155th Avenue
	Proposed Bicycle Lanes	NW 155th Avenue to NW 83rd Avenue
		SW 64th Way to Florida's Turnpike
		Florida's Turnpike to U.S. 441 (add to Turnpike PD&E project)
	Transit Bridge	Bicycle lanes along U.S. 441 already planned
	Proposed Bicycle Lanes	Johnson Street - U.S. 441 to U.S. 1 (potential streetscaping improvements too)
		Pembroke Road - Interstate 95 to U.S. 1 (bike lanes already exist to the west)
	Bicycle Parking	Provide covered bicycle parking at multimodal locations and bike lockers where appropriate
Transit	Bus Benches and Trash Receptacles	9 Recommended Benches and 56 Trash Receptacles, See Table 38 of Report for Locations
	Bus Shelters	35 Recommended Bus Shelters, See Table 39 of Report for Locations
	Bus Stop Accessibility	Remove Obstacles from Access Path (17 Locations), See Table 40 of Report for Locations
		Construct Access Path (27 Locations), See Table 41 of Report for Locations
	Far Side Bus Bay	SW 210th Avenue (both sides)
		SW 172nd Avenue (eastbound)
		Flamingo Road (westbound)
		Hiatus Road (westbound)
		Palm Avenue (westbound)
		University Drive (both sides - would likely require right-of-way)
	Headway Reductions	Route 3 (60 to 30 minutes)
		Route 5 (60 to 30 minutes)
		Route 7 (30 to 20 minutes)
	Express Bus Service	Route 7 Limited Stop from Pembroke Lakes Mall to Downtown Hollywood NTC
Multimodal	Neighborhood Transit Centers	Young Circle (relocate existing)
		Red Road & Hiatus Road (proposed in TDP)
	Multimodal Hub	Hollywood Tri-Rail Station (upgrade)
		Sheridan Street Tri-Rail Station (upgrade)
		Hollywood Fashion Center (Transit Bridge)
		Pembroke Lakes Mall (upgrade)
		C.B. Smith Park park-n-ride lot
	"Enhanced" Benches and Shelters	At NTCs, multimodal hubs, and Young Circle
	TDM Strategies	Work with SFCS, especially at Memorial Hospital, Pembroke Lakes Mall, BCC South
	ITS Strategies	ATIS improvements and passenger information kiosks
		Trailblazer signage for guidance and awareness of facility
Roadway	Intersection Improvements	Pines Blvd @ U.S. 27 - Florida "T" Intersection
		Pines Blvd @ NW 155th Avenue - NB right-turbo, WB dual lefts, SB lane restriping for shared
		Pines Blvd @ NW 118th Avenue - Extend EB and WB left-turn storage
		Pines Blvd @ Hiatus Road - NB and SB dual lefts
		Pines Blvd @ Palm Avenue - Construct SB through lane
		Hollywood Blvd @ Florida's Turnpike - Access ramp reconstruction
		Hollywood Blvd @ Park Road - NB right-turn overlap phase
		Hollywood Blvd @ SW 63rd Terrace - convert to westbound directional median opening
	Access Management	Hollywood Blvd @ N/S 62nd Avenue - remove traffic signal and close the median opening
		Hollywood Blvd @ N 61st Avenue - convert to eastbound directional median opening
		Hollywood Blvd from U.S. 441 to Presidential Circle - raised median and access mgmnt study
	Long-Term Solutions	Pines Boulevard @ Flamingo Road
		Pines Boulevard @ University Drive
	ITS Strategies	Enhance to fiber-optic communications network to allow signal-system upgrade, detectors to monitor vehicle flow, enhanced signal timing, and dynamic message sign

INTRODUCTION

The Hollywood/Pines Boulevard Multimodal Corridor Study was commissioned by the Broward County Metropolitan Planning Organization (MPO) to identify congestion management strategies for the corridor. Congestion management strategies are intended to improve the efficiency of a transportation corridor through improvements that encourage alternatives to the single occupant vehicle and promote better use of existing resources. Alternative modes of travel can include transit, carpooling, bicycling, and walking. Congestion management strategies can often be implemented at a lower cost than traditional roadway widening and can include technology-based solutions that increase the efficiency of existing roadway systems.

The federal government requires congestion management systems in urbanized areas with populations over 200,000 persons. The congestion management system is a process developed to monitor and analyze the magnitude of congestion on the multimodal transportation network and to plan and implement actions to reduce congestion and to enhance the performance of the network. The congestion management system requires that all reasonable alternatives be identified and evaluated for their ability to alleviate congestion and enhance mobility. Although priority is given to alternative travel modes, in some cases the addition of general purpose traffic lanes is determined to be the appropriate solution for a particular corridor or intersection. In these instances, the congestion management system requires that appropriate demand and operational management strategies also be implemented to increase the efficiency of the corridor and extend the life of the improvement.

Broward County's Congestion Management System (CMS) identified Hollywood/Pines Boulevard as one of sixteen corridors in need of congestion mitigation. Of the sixteen congested corridors, four have been studied in past CMS multimodal corridor studies.

- Oakland Park Boulevard (1995)
- U.S. 441 (1998)
- Atlantic Boulevard (1999)
- Sunrise Boulevard (2001)

Purpose, Goals, and Objectives

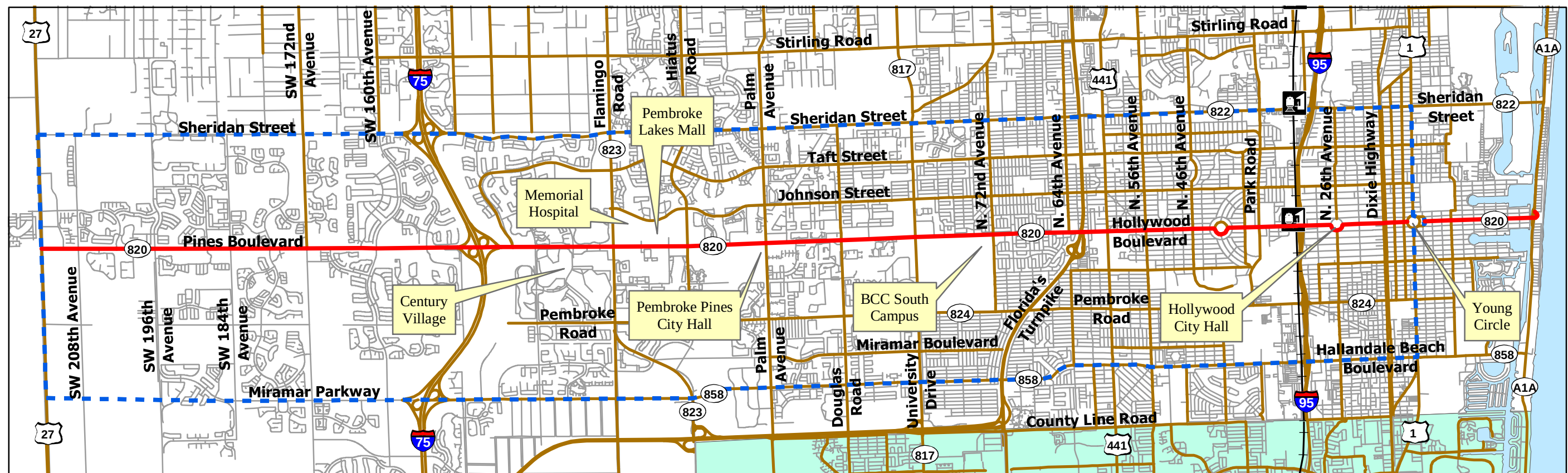
The purpose of the Hollywood/Pines Boulevard Multimodal Corridor Study is the preparation of a congestion management plan for the Hollywood/Pines Boulevard corridor. This plan will be developed in accordance with the requirements of the Transportation Equity Act for the 21st Century (TEA-21) and the Broward County Congestion Management System (CMS). The goal is to develop innovative, yet practical multimodal transportation solutions that support broad social goals such as enhanced community livability and reduced pollution.

The objectives of this multimodal corridor study include identifying performance measures and targets, analyzing existing and short-range transportation conditions, identifying and prioritizing congestion management and mobility enhancement strategies, and developing an implementation program. In addition, various other tasks are necessary to achieve these objectives, such as data collection and public involvement.

Corridor Description and Study Limits

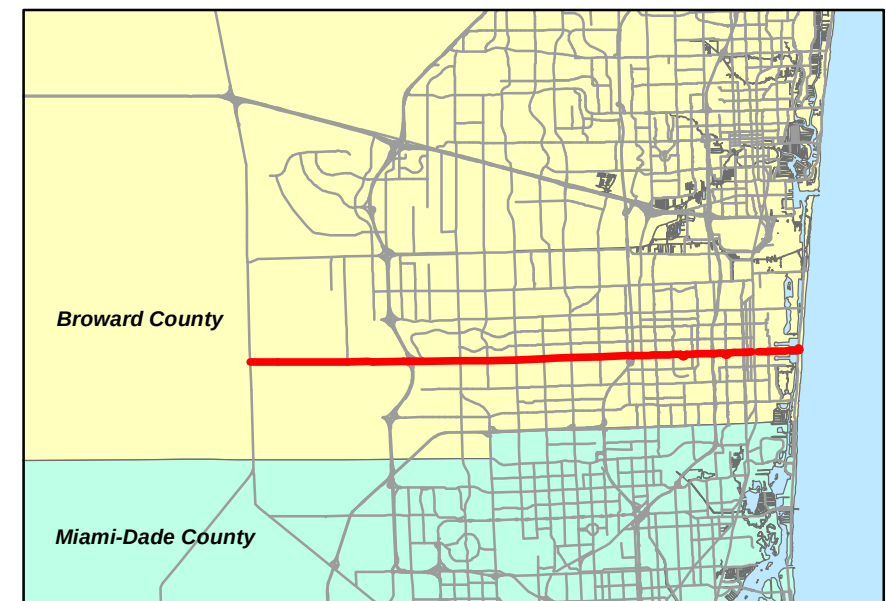
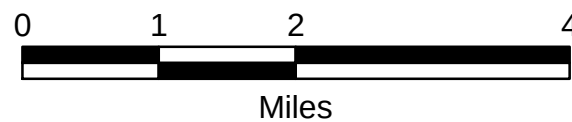
Hollywood/Pines Boulevard is an east/west arterial within southern Broward County. It extends the entire width of the developed portion of southern Broward County from U.S. 27 in the west to S.R. A1A in the east, a distance of approximately 19.7 miles. The Hollywood/Pines Boulevard CMS study limits exclude the short segment of Hollywood Boulevard east of Young Circle. Therefore, the study limits include Hollywood/Pines Boulevard from U.S. 27 in the west to Young Circle (U.S. 1) in the east, a distance of approximately 18.1 miles. The study limits of the Hollywood/Pines CMS study are depicted in Figure 1.

This study will also include an extended corridor approximately two miles on either side of Hollywood/Pines Boulevard. The northern limit of the study area is Sheridan Street and the southern limit of the study area is Hallandale Beach Boulevard/Miramar Parkway. The Multimodal Corridor Study focuses on Hollywood/Pines Boulevard while analysis along



Legend

- Hollywood / Pines Boulevard
- - - Extended Study Area Boundary
- Major Roadways
- Local Streets
- + + Tri-Rail
-  Tri-Rail Stations



Sheridan Street, Pembroke Road, and Hallandale Beach Boulevard/Miramar Parkway will be to provide congestion mitigation and travel mobility strategies.

The majority of Hollywood/Pines Boulevard is a six-lane facility. Exceptions include the four-lane segment between U.S. 27 and SW 196th Avenue, the eight-lane segment between I-75 and Flamingo Road, the four-lane segment between 28th Avenue and Dixie Highway, and the two-lane segment between Dixie Highway and Young Circle within the City of Hollywood.

Hollywood/Pines Boulevard is entirely contained within two municipalities – the City of Hollywood in the east and the City of Pembroke Pines in the west. The segment of the roadway between 72nd Avenue and Florida's Turnpike serves as a boundary between Hollywood to the north and Pembroke Pines to the south. The roadway is generally referred to as Hollywood Boulevard for the portion within the City of Hollywood and Pines Boulevard for the portion within the City of Pembroke Pines. This study will follow this nomenclature for specific locations along the roadway. The name Hollywood/Pines Boulevard will be used to refer to the roadway corridor as a whole.

Hollywood/Pines Boulevard is a State of Florida facility from U.S. 27 to 28th Avenue in Hollywood; thus, it is also known by its state road designation (S.R. 820). From 28th Avenue to Young Circle, Hollywood Boulevard is maintained by the City of Hollywood.

In addition to Hollywood and Pembroke Pines, the extended study boundary includes three other municipalities – the City of Miramar, the City of Pembroke Park, and the City of Hallandale Beach. Hollywood/Pines Boulevard does not pass through these three municipalities; however, parallel facilities such as Hallandale Beach Boulevard and Pembroke Road do pass through them.

Land use and density vary dramatically along Hollywood/Pines Boulevard. The western portion is typically a mix of suburban residential and commercial land uses. East of U.S. 441, land uses

include abutting commercial, office, and institutional. In general, density tends to increase from west to east.

Technical Advisory Committee

A Technical Advisory Committee (TAC) was established to provide technical support and assistance needed in the data collection process and to guide the development of multimodal solutions. TAC participants are responsible for attending scheduled meetings, reviewing reports, and analyzing methodologies. TAC members included representatives from the following organizations.

- Broward County MPO
- Broward County Transportation Planning Division
- Broward County Mass Transit Division
- Broward County Engineering Division
- Broward County Traffic Engineering Division
- City of Pembroke Pines
- City of Hollywood
- Tri-County Commuter Rail (SFRTA/Tri-Rail)
- Florida Department of Transportation (FDOT) District 4 Office of Modal Development
- Florida Department of Transportation (FDOT) District 4 Office of Planning and Environmental Management
- Florida Department of Transportation (FDOT) District 4 Office of Traffic Operations

Report Organization

The purpose of this report is to document the Hollywood/Pines Boulevard Multimodal Corridor Study. The report is segmented into chapters to describe the various aspects of the study in a logical manner. The report is segmented into the following chapters.

- Introduction
- Identification of Performance Measures and Targets
- Data Retrieval and Collection
- Analysis of Existing Transportation Conditions
- Analysis of Short Range Transportation Conditions
- Congestion Management and Mobility Enhancement Strategies
- Financial Analysis and Implementation Programs
- Conclusion

IDENTIFICATION OF PERFORMANCE MEASURES AND TARGETS

Performance measures and targets for the Hollywood/Pines Boulevard Multimodal Corridor Study were developed for use in evaluating the corridor and selecting congestion management and mobility enhancement strategies. Performance measures were developed for each mode of travel considered in this study – pedestrians, bicycle, transit, and roadway (automobile). In addition, performance measures were identified for multimodal facilities to develop strategies for connecting the individual modes of travel. Table 1 presents the performance measures and targets developed for this study.

To evaluate the performance of a mode, performance categories were developed and applied to the five modes identified above. The three primary performance categories are congestion, mobility, and accessibility. These categories were modified as needed based on characteristics of individual modes. For instance, congestion was not considered a performance category for the pedestrian or bicycle modes since no portion of the subject corridor is considered to be overcapacity from the standpoint of these two alternative modes. In addition, safety was added as a performance category for the roadway mode.

For each performance category, measurements were developed that provide means of assessing the performance category for each mode. For example, pedestrian level of service (PLOS) is a measurement that provides a means of assessing mobility for the pedestrian travel mode. Multiple measurements were developed for some performance categories. Level of service was used as a measurement for three travel modes – pedestrian, bicycle, and roadway. A distinct difference exists between roadway level of service and pedestrian/bicycle level of service utilized in this study. Both pedestrian and bicycle level of service are determined using formulas that gauge the environment experienced by pedestrians or bicyclists, such as comfort and safety. However, roadway level of service is a measure of traffic congestion along a roadway.

For each measurement, targets were developed to gauge the success of each performance category. For example, LOS C was determined to be a desirable target for the pedestrian level of

Table 1. Identification of Performance Measures and Targets

MODE	PERFORMANCE CATEGORIES	MEASUREMENTS	TARGETS
Pedestrian	Accessibility	Existence and Continuity of Facilities	Continuous facility and enhanced design features.
	Mobility	Pedestrian LOS	Pedestrian LOS C.
Bicycle	Accessibility	Existence and Continuity of Facilities	Greater than 80% of trip generators covered by bike facilities.
	Mobility	Bicycle LOS	Bicycle LOS C.
Transit	Mobility	Passengers/Mile	Increase Passengers / Mile by 10 percent.
		Passengers/Hour	Increase Passengers / Hour by 10 percent.
		Travel Time	No more than 50 percent greater than the time by auto.
		On Time Performance	Improve on-time performance by 10 percent.
	Congestion	Peak Load Factor	≤ 1.0
	Accessibility	Pedestrian Access	Meet ADA requirements.
Multimodal	Interconnection Between Modes	Park-n-Ride Lots	Provide bus stops with convenient service to attract choice riders.
		Intermodal Terminals	Provide intermodal facilities incorporating transit, pedestrian, and bicycle modes.
			Target the intersection of Hollywood Boulevard and U.S 441 for a link to the bus rapid transit (BRT) project.
		Intersecting Bus Routes	Transfer time less than five minutes.
	Human Environment	Survey Infrastructure	Enhance the safety and sense of security of users.
			Provide appropriate facilities at all bus terminals and bus stops.
Roadway	Mobility	Auto Occupancy	Increase auto occupancy by 10 percent.
		Person Throughput	Increase person throughput by 10 percent.
	Safety	Crash Rate	95-percent confidence level.
	Accessibility	Access Management (Medians, Signals, and Driveways)	Less than 20-percent deviation from FDOT Access Management Classification.
	Congestion	Travel Speed (Roadway)	LOS D or better.
		HCM Methodology (Intersection)	LOS D or better.

service measurement. Two unique types of targets were developed for this study – (1) those that provide a snapshot of the existing performance of the system and (2) those that provide guidance for future monitoring activities. The first type of targets are specific goals in which existing conditions can be measured and compared to the target level. The latter type of targets have been developed as percent changes over time, in which measurements must be taken in the future and compared to previous measurements to gauge the success of improvements in providing positive transportation impacts.

The performance measures and targets for the Hollywood/Pines Boulevard Multimodal Corridor Study were developed based on standards accepted by Broward County, previous congestion management system corridor studies, and characteristics unique to the Hollywood/Pines Boulevard corridor. An initial draft of the performance measures and targets was developed and presented at a meeting of the Technical Advisory Committee (TAC) for this study. Modifications recommended by the TAC were incorporated into the performance measures and targets included in this report.

DATA RETRIEVAL AND COLLECTION

This section of the report describes the various methods of obtaining data utilized during the Hollywood/Pines Boulevard Multimodal Corridor Study. The data retrieval and collection effort represents a key study component to develop the base of information required to analyze the existing and short range transportation conditions of the Hollywood/Pines Boulevard corridor.

A data collection methodology was developed to obtain data in an efficient manner. First, previous and ongoing studies were identified and reviewed to gather information regarding future corridor improvements and development along the corridor. Next, available data were retrieved from existing data sources including the previous and ongoing transportation studies, Broward County Metropolitan Planning Organization (MPO), Broward County Transportation Planning Division, Broward County Mass Transit Division, Broward County Traffic Engineering Division, Florida Department of Transportation (FDOT), and municipalities within the study corridor. Only data collected between 2000 and 2003 were considered recent enough to use for this study, with the exception of crash data for which 1999 to 2001 were the most recent three years of data available for the study. All data that were retrieved for this study were screened for accuracy and reliability. Gaps in the data were then identified based on either a lack of recent available data or the identification of questionable data from the reliability screening. Following the identification of gaps in the data, field data were collected to form a more complete database of information for the Hollywood/Pines Boulevard corridor. Examples of field data collection efforts include intersection turning movement counts, approach traffic counts, travel time runs, sidewalk inventories, review of bus stop infrastructure, and field observations of traffic conditions. All data collected in the field were also screened for accuracy and reliability.

Summary of Transportation Programs and Plans

Transportation programs and plans were reviewed to gather information regarding future improvements to various transportation modes within the study area, as defined in the “Introduction” chapter of this report. Review of these documents demonstrates where

programmed and planned improvements will be taking place and helps generate the future conditions of the corridor. Recommendations developed for the Hollywood/Pines Boulevard Multimodal Corridor Study should be compatible with improvements previously identified in work programs and long range planning efforts. The review of transportation programs and plans undertaken for this study include the following documents:

- Broward County MPO Transportation Improvement Program (TIP)
- Broward County Transit Development Plan (TDP)
- Florida Department of Transportation (FDOT) Work Program
- Broward County Metropolitan Planning Organization (MPO) Long Range Transportation Plan (LRTP)

Broward County MPO Transportation Improvement Program (TIP)

The *Broward County MPO Transportation Improvement Program* was published in July 2003 for Fiscal Year 2003/04 to 2007/08. The TIP specifies countywide improvements in various facets of transportation including mass transit, roadways, bridges, aviation, seaports, rail, bicycle facilities, pedestrian provisions, and landscaping. The 5-year improvements specified in the TIP are listed along with the identified funding source and a cost estimate. Although the TIP is published by the MPO, it is developed through the input and involvement of several governmental agencies including FDOT, South Florida Regional Transportation Authority (SFRTA/Tri-Rail), municipalities, and several departments of the Broward County government.

The programmed improvements along Hollywood/Pines Boulevard (and within the extended study boundary) as listed in the TIP are summarized in Tables 2 and 3. Roadway, bicycle/pedestrian, and transportation system management (TSM) improvements are listed in Table 2 and mass transit improvements are listed in Table 3. Table 2 presents separate listings for projects along the Hollywood/Pines Boulevard corridor and projects within the extended study area boundary. Although a funding source has been identified for these improvements, all items listed are subject to change by the implementing agencies.

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Table 2. TIP Funded Projects Listing - Roadways, Bikeway/Pedestrian, and Transportation System Management Projects

Hollywood/Pines Boulevard Programmed Improvements							
<i>Project ID</i>	<i>Project Name</i>	<i>From</i>	<i>To</i>	<i>Fiscal Year</i>	<i>Length (miles)</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
58	U.S. 27	At Pines Boulevard		04-05		Safety Project - Install Dragnet	\$166
948	Pines Boulevard	At NW/SW 208th Avenue		03-04		Installation of Traffic Signals	\$150
189	Pines Boulevard	At NW/SW 186th Avenue		Underway		Installation of Traffic Signals	\$150
853	Pines Boulevard	SW 136th Avenue	Hiatus Road	06-07	2.0	Safety Project	\$2,587
273	Pines Boulevard	At Flamingo Road		Underway		Grade Separation - PD&E Study	\$550
72	Florida's Turnpike	At Hollywood Boulevard	-	06-07		Interchange Modification	\$26,355
842	Hollywood Boulevard	U.S. 441 (S.R. 7)	Presidential Circle	04-05	1.4	Landscaping	\$8,300
183	Hollywood Boulevard	U.S. 441 (S.R. 7)	Presidential Circle	05-06		Drainage Improvements	\$140
17	Hollywood Boulevard	West of Presidential Circle	West of Hollywood Canal	05-06	1.1	Resurfacing	\$3,876
123	Hollywood Boulevard	City Hall Circle	Dixie Highway	03-04		Landscaping	\$4,800
931	U.S. 1 (Young Circle)	Young Circle South	Young Circle North	06-07	0.2	Resurfacing	\$1,284
943	Hollywood Boulevard	U.S. 1	S.R. A1A	07-08	1.6	Resurfacing	\$1,861
259	Hollywood Boulevard	Bridge over ICWW		04-05	0.2	Bridge Rehabilitation	\$7,264
222	City of Hollywood	Citywide		03-04		Construct New and Repair Sidewalks	\$150

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Table 2. TIP Funded Projects Listing - Roadways, Bikeway/Pedestrian, and Transportation System Management Projects (continued)

Extended Study Area Programmed Improvements							
Project ID	Project Name	From	To	Fiscal Year	Length (miles)	Project Description	Cost (\$000)
950	U.S. 27	At Johnson Street		03-04		Installation of Traffic Signals	\$183
406	U.S. 27	Miami-Dade County Line	Griffin Road	Underway		Resurfacing	\$8,920
874	Dykes Road (SW 160 Ave.)	At Miramar Parkway		03-04		Add Left Turn Lanes	\$1,000
828	I-75	Miami-Dade County Line	North of Sheridan Street	04-05	5.9	Resurfacing	\$12,694
982	I-75	Miami-Dade County Line	Sawgrass Expressway	07-08	12.0	ITS Freeway Management	\$15,576
362	SW 145th Avenue	1500' South of Pembroke Road	North End of SW 145th Ave	03-04	0.3	New 4 Lanes (Divided)	\$534
104	Flamingo Road	Miramar Parkway	Pembroke Road	05-06	1.4	Install Decorative Street Lighting	\$1,028
942	Flamingo Road	Red Road Connector	NW 4th Street	07-08	1.332	Resurfacing	\$3,749
192	Hiatus Road	Red Road	Pembroke Road	03-04	1.0	2 to 4 Lanes	\$1,550
138	University Drive	South of Pembroke Road	South of Pines Boulevard	Prior Year	1.2	Resurfacing, Modify Turn Lanes	\$4,848
934	University Drive	Pines Boulevard	Sheridan Street	07-08	3.7	Resurfacing	\$6,643
55	Florida's Turnpike	HEFT	Griffin Road	06-07	6.0	6 to 8 Lanes	\$204,880
15	U.S. 441 (State Road 7)	Hallandale Beach Boulevard	Funston Street	07-08	1.7	Add 2 Lanes and Reconstruct (6LD)	\$55,823
917	U.S. 441 (State Road 7)	Funston Street	North of Fillmore Street	07-08	1.0	Add 2 Lanes and Reconstruct (6LD)	\$23,654
126	U.S. 441 (State Road 7)	North of Fillmore Street	South of Farragut Street	03-04	2.1	Add 2 Lanes and Reconstruct (6LD)	\$100
164	U.S. 441 (State Road 7)	Park Road	Farragut Street	06-07	0.4	Extend Turn Lanes, Traffic Separator	\$1,000
816	U.S. 441 (State Road 7)	At Johnson Street		06-07		Safety Project - Intersection Improvements	\$778
814	U.S. 441 (State Road 7)	At Taft Street		06-07		Safety Project - Intersection Improvements	\$808
23	I-95	Miami-Dade County Line	Dania Cutoff Canal	03-04	13.661	Resurfacing	\$14,627
122	I-95	Hallandale Beach Boulevard	Pembroke Road	03-04		Landscaping	\$274
47	U.S. 1	Hallandale Beach Boulevard	Young Circle	05-06	1.7	Resurfacing	\$200 ⁽¹⁾
932	U.S. 1	Young Circle	Dixie Highway	06-07	2.0	Resurfacing	\$5,423 ⁽²⁾
769	Miramar Parkway	Old Flamingo Road	Red Road	03-04	1.0	4 to 6 Lanes	\$1,500
302	Miramar Parkway	Douglas Road	Palm Avenue	03-04		Construct Sidewalks, Signing, Landscape, Lighting	\$4,108
332	Miramar Parkway	U.S. 441 (State Road 7)	SW 64th Avenue	03-04		Streetscape	\$2,000
843	Hallandale Beach Boulevard	At I-95		04-05	0.1	Landscaping/Drainage Basins	\$74
930	Hallandale Beach Boulevard	West of Triler Park	West of U.S. 1	07-08	1.67	Resurfacing	\$5,499
949	Hallandale Beach Boulevard	At NW 8th Avenue		03-04		Safety Project - Add Turn Lanes, Mast Arms, Optimize Signal Timing	\$450
105	Hallandale Beach Boulevard	South Dixie Highway	U.S. 1	03-04	0.4	Safety Project - Median Modifications	\$1,252
883	Hallandale Beach Boulevard			03-04		Install bus shelters, benches, and landscaping	\$260
473	Miramar Boulevard	Red Road	Hiatus Road	03-04	0.4	New 2 Lanes	\$3,000
373	Miramar Boulevard	Hiatus Road	Palm Avenue	03-04	1.1	2 to 4 Lanes	\$1,500
873	Pembroke Road	SW 172nd Avenue	SW 160th Avenue	Underway	1.0	New 2 Lanes	\$1,500
266	Pembroke Road	SW 160th Avenue	SW 136th Avenue	03-04	2.1	New 4 Lanes	\$13,000
818	Pembroke Road	Flamingo Road	Douglas Road	Underway	3.0	2 to 4 Lanes	\$9,457
832	Pembroke Road	East of University Drive	SW 62nd Avenue	05-06	2.1	Resurfacing	\$6,188
150	Pembroke Road	At Hillcrest Golf Course		Prior Year		Drainage Improvements	\$135
159	Pembroke Road	At South 30th Street		Underway		Drainage Improvements	\$1,150
978	Pembroke Road	SW 27th Avenue	SW 26th Avenue	04-05		Safety Project - Install New Signals, Construct Median, Relocate Pedestrian Signal	\$330
288	Sheridan Street	SW 196th Avenue	SW 172nd Avenue	03-04	2.0	2 to 4 Lanes	\$6,500
166	Sheridan Street	At North 52nd Avenue		04-05		Safety Project - Median and Signal Modifications, Extend Turn Lanes	\$465
904	Sheridan Street	Sheridan Street/Ely Boulevard		03-04		Streetscape	\$3,318
905	Sheridan Street	I-95	Hollywood City Limits	03-04		Landscaping	\$140
108	Sheridan Street	Dixie Highway	U.S. 1	03-04	0.6	Add 2 lanes and Reconstruct (6LD)	\$1,600 ⁽³⁾

⁽¹⁾ - Cost only includes the Construction Incentive.

⁽²⁾ - Project is expected to end at Sheridan Street instead of Dixie Highway, so funding may be reduced.

⁽³⁾ - This phase of project is Preliminary Engineering only, Construction is unfunded.

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Table 3. TIP Funded Projects Listing - Mass Transit and Commuter Rail

Hollywood/Pines Boulevard Programmed Improvements							
<i>Project ID</i>	<i>Project Name</i>	<i>From</i>	<i>To</i>	<i>Fiscal Year</i>	<i>Length (miles)</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
496	Hollywood Boulevard	At Tri-Rail Intermodal Facility		Prior Year		Construct/Expand Terminal Facility	\$1,150

Extended Study Area Programmed Improvements							
<i>Project ID</i>	<i>Project Name</i>	<i>From</i>	<i>To</i>	<i>Fiscal Year</i>	<i>Length (miles)</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
409	Transit Bridge	Golden Glades Interchange	I-595	Prior Year		Preliminary Engineering Phase	\$1,500
511	BCT	Broward County	Miami-Dade County	Prior Year		Route 2 Extension	\$433
454	South Florida Rail Corridor	Various Sections		03-04, 04-05, 05-06, 06-07	43.3	FFGA Double Track Segment #5 - Track and Signal Improvements	\$168,747
481	Commuter Rail			03-04, 04-05, 05-06		Procure and Implement Ticket Vending Machines with Smart Card	\$10,273

Most of the improvements that will add physical roadway capacity are programmed for parallel roadways such as Miramar Parkway, Pembroke Road, and Sheridan Street, whereas the typical improvements listed for Hollywood/Pines Boulevard are items such as resurfacing and landscaping. This is consistent with the goal of enhancing Hollywood/Pines Boulevard as a multimodal corridor while roadway widenings are concentrated on alternate facilities. Programmed improvements include interchange modifications at Florida's Turnpike, landscaping and drainage improvements between U.S. 441 and Presidential Circle, and Neighborhood Transit Centers to be constructed at major bus terminals, such as Young's Circle.

Broward County Transit Development Plan (TDP)

The *Broward County Transit Development Plan* is prepared annually by the Metropolitan Planning Organization (MPO) staff in coordination with the Mass Transit Division (BCT). The TDP Major Update is a 5-year plan addressing operational and capital improvements for Broward County Transit. The TDP serves as a guide for capital and operating improvements of the transit system from fiscal year 2004/2005 through 2008/2009. The TDP considers the existing transit environment, socioeconomic data, trip generators, intergovernmental coordination, and Broward County goals and policies to develop improvements to the transit system. This subsection of the report documents recommendations included in the TDP within the extended study boundary for the Hollywood/Pines Boulevard Multimodal Corridor Study.

Past Year Accomplishments (Fiscal Year 2002)

Weekday frequency improvements were made on Route 1 (20-minute headways to 15-minute headways) and Route 2 (30-minute headways to 20-minute headways). Weekend frequency was increased on Route 23 from 60 minutes to 45 minutes. No new routes nor span of service improvements were added during fiscal year 2002.

The Community Bus Service was expanded during fiscal year 2002 to nineteen communities, including the three newest member municipalities – Coral Springs, Lauderdale-by-the-Sea, and

Pompano Beach. The Community Bus Service is provided through a partnership between the individual cities and BCT using interlocal agreements and is based on local ridership demand. Within the extended study boundary of the Hollywood/Pines Boulevard Multimodal Corridor Study, Pembroke Pines and Miramar participate in the Community Bus Service program. In addition, Hollywood and Hallandale Beach also operate municipal bus service.

Development of the Five-Year Alternative

The TDP Major Update provided revisions to the recommendations included in the previous TDP and developed new recommendations for the fifth year. A goal of the five-year transit plan is to improve core service frequencies (headways), provide service to areas that may require new or additional transit service, and to improve mainline bus service connections with local feeder services. Several recommendations include making frequency improvements that were identified in the previous TDP but not implemented during the previous fiscal year due to a lack of available funds. Table 4 summarizes the improvements identified in the TDP affecting bus routes along Hollywood/Pines Boulevard and within the extended study boundary of this study. Along various portions of Hollywood/Pines Boulevard, weekday frequency improvements have been identified for Route 3 (60 to 30 minutes), Route 5 (60 to 30 minutes), Route 7 (30 to 20 minutes), Route 9 (40 to 30 minutes), and Route 28 (30 to 20 minutes). Weekday frequency improvements were also identified for Routes 1, 2, 12, 15, and 18. In addition, Saturday frequency improvements have been identified for Route 2 (40 to 30 minutes) and Route 9 (60 to 40 minutes). Sunday frequency improvements have been identified for Route 6 (60 to 45 minutes), Route 7 (40 to 30 minutes), and Route 9 (60 to 40 minutes).

Recommendations to existing bus routes for future years within the extended study boundary include route straightening along Route 12 and an extension of Route 88. Route 12 is planned to be extended along Sheridan Street from University Drive to SW 172nd Avenue in order to provide continuous corridor service from SW 172nd Avenue to the Anne Kolb Nature Center near the Intracoastal Waterway. Route 88 is planned to be extended south from its current southern terminus at the West Regional Terminal to northwest Miami-Dade County, serving Douglas

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Table 4. TDP Major Update Recommendations Listing

Hollywood/Pines Boulevard Planned Improvements				
<i>Project Name</i>	<i>From</i>	<i>To</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
Bus Route 5 (Weekdays)	60 minutes	30 minutes	Headway Improvement	\$900
Bus Route 7 (Weekdays)	30 minutes	20 minutes	Headway Improvement	\$900
Bus Route 7 (Sundays)	40 minutes	30 minutes	Headway Improvement	\$115
Neighborhood Transit Center	Downtown Hollywood	-	Conversion from Bus Stop into a Shopping/Community Center	

Extended Study Area Planned Improvements				
<i>Project Name</i>	<i>From</i>	<i>To</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
Bus Route 1 (Weekdays)	15 minutes	10 minutes	Headway Improvement	\$1,200
Bus Route 2 (Weekdays)	20 minutes	15 minutes	Headway Improvement	\$1,800
Bus Route 2 (Saturdays)	40 minutes	30 minutes	Headway Improvement	\$122
Bus Route 3 (Weekdays)	60 minutes	30 minutes	Headway Improvement	\$900
Bus Route 6 (Sundays)	60 minutes	45 minutes	Headway Improvement	\$45
Bus Route 9 (Weekdays)	40 minutes	30 minutes	Headway Improvement	\$900
Bus Route 9 (Saturdays)	60 minutes	40 minutes	Headway Improvement	\$45
Bus Route 12	University Drive	SW 172nd Avenue	Extension of Existing Route along Sheridan Street, Headway Improvements	\$379
Bus Route 12 (Weekdays)	40 minutes	30 minutes	Headway Improvement	\$300
Bus Route 12 (Saturdays)	45 minutes	30 minutes	Headway Improvement	
Bus Route 12 (Sundays)	60 minutes	45 minutes	Headway Improvement	
Bus Route 15 (Weekdays)	40 minutes	30 minutes	Headway Improvement	\$300
Bus Route 18 (Weekdays)	15 minutes	10 minutes	Headway Improvement	\$1,800
Bus Route 28 (Weekdays)	30 minutes	20 minutes	Headway Improvement	\$1,200
Bus Route 88	Broward Boulevard	Miami-Dade County (NW 207th Street)	Extension of Existing Route along Douglas Road, Headway Improvements	\$3,162
U.S. 441 (State Road 7)			Express Transit Service Corridor	
U.S. 1			Express Transit Service Corridor	
Neighborhood Transit Center	Miramar (Red Rd & Hiatus Rd)	-	Conversion from Bus Stop into a Shopping/Community Center	

Road south to NW 207th Street. The proposed extension to Route 88 would intersect with Route 7 along Pines Boulevard at the Douglas Road intersection.

Providing higher capacity bus transportation in Broward County will continue to be pursued throughout the five-year transit plan. Express transit service alternatives will improve transit options as well as provide positive effects on the economic vitality of the region. BCT will continue to coordinate with Miami-Dade Transit, Palm Tran, and Tri-Rail through FDOT and the South Florida Regional Transportation Authority (SFRTA) on improving high capacity and regional transit routes. Hollywood/Pines Boulevard is identified as a future express transit service corridor. In addition, Sheridan Street is identified as another east-west express transit service corridor with future bus rapid transit (BRT) service. Four north-south express transit service or BRT corridors are planned that intersect Hollywood/Pines Boulevard: U.S. 1, U.S. 441, University Drive, and Flamingo Road. High-performance transit is also being considered by FDOT in the Interstate 75 Master Plan to connect western Broward County with the Miami-Dade Metrorail at the new Palmetto Metrorail Station.

Florida Department of Transportation (FDOT) Work Program

The *Florida Department of Transportation (FDOT) 2004 - 2008 Work Program* was reviewed to determine State projects that are programmed for the Hollywood/Pines Boulevard corridor. Most of the projects listed in the FDOT Work Program have already been discussed in the Broward County TIP subsection of this report. However, some projects listed in the FDOT Work Program are not contained in the TIP. These projects include the following.

- Lighting improvements are scheduled for the intersection of Pines Boulevard and U.S. 27 for construction in Fiscal Year 2004.
- Resurfacing at Hollywood Boulevard and the CSX Railroad crossing is scheduled for Fiscal Year 2004.
- Rail crossing improvements along Hollywood Boulevard at the Florida East Coast (FEC) rail crossing is scheduled for Fiscal Year 2004 (recently completed).

Broward County MPO Year 2025 Long Range Transportation Plan (LRTP)

The *Broward County Year 2025 Long-Range Transportation Plan* was adopted in 2001 by the Broward County MPO. The purpose of the LRTP is to develop financially feasible long-range improvements to the transportation network. Since long-term transportation needs often exceed expected funding levels, the LRTP seeks to provide a prioritization list for the planned improvements to determine which projects may provide the best investment of transportation funding. Although the objectives of the Hollywood/Pines Boulevard Multimodal Corridor Study include developing short-term congestion management system strategies, a need exists to coordinate strategies with long-range planning efforts to ensure efficient, integrated transportation systems.

The goals of the LRTP are as follows:

1. A balanced, multimodal transportation system that serves local and regional movement of people, goods, and services and provides choices in mobility.
2. A safe transportation system.
3. Protection of Broward County's investment in transportation in a cost-feasible manner.
4. A transportation system that is coordinated and consistent with future development plans of Broward County's constituent communities and neighbors.
5. An aesthetically pleasing transportation system which minimizes impact on the natural and built environment.

The projects presented in Tables 5 through 8 are identified in the 2025 Cost Feasible Plan of the LRTP as improvements along Hollywood/Pines Boulevard and the extended study boundary for this study. Table 5 presents the projects identified in the Pedestrian Element. Table 6 presents the projects identified in the Bicycle Element. Table 7 presents the projects identified in the Transit Element. Table 8 presents the projects identified in the Roadway Element.

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Table 5. Broward County 2025 Cost Feasible Plan - Pedestrian Element

Hollywood/Pines Boulevard Planned Improvements			
Priority	Project Location / Project Limits	Project Description	Cost (\$000)
36	Pines Boulevard: SW 198th Terrace and SW 196th Avenue	Complete Missing Sidewalks	\$20
39	Pines Boulevard and Flamingo Road	Pedestrian Signalization	\$50
41	Pines Boulevard and Douglas Road (Pines Middle School)	Mid-Block Crossing	\$100
42	Pines Boulevard and Douglas Road	Intersection Pedestrian Crossing Improvements	\$50
47	S.R. A1A and Sheridan Street, Johnson Street, and Hollywood Boulevard	Improve Pedestrian Marking	\$10
48	Young Circle (Hollywood Boulevard and Federal Highway)	Improve Pedestrian Marking	\$10
49	Hollywood Boulevard and S.R. 7	Improve Pedestrian Marking	\$10
70	Young Circle	Provide Improved Signage at Approaches to Intersections	\$10
71	Hollywood Boulevard at I-95	Create Pedestrian Medians Refuge	\$50
80	Pines Boulevard at I-75	Construct Bikepath/Sidewalk	\$44

Extended Study Area Planned Improvements			
Priority	Project Location / Project Limits	Project Description	Cost (\$000)
38	Sheridan Street at NW 171st Avenue (Charter High School)	Complete Missing Sidewalks	\$20
40	Pembroke Road and Flamingo Road	Pedestrian Signalization	\$50
43	Johnson Street and Douglas Road	Intersection Pedestrian Crossing Improvements	\$50
44	Sheridan Street and Park Road	Improve Pedestrian Marking	\$10
45	Sheridan Street and 56th Avenue	Improve Pedestrian Marking	\$10
46	Sheridan Street and 52nd Avenue	Improve Pedestrian Marking	\$10
51	S.R. 7: Pembroke Road to Griffin Road	Sidewalk Continuity to Transit Routes	\$41
52	Washington Street at S.R. 7	Sidewalk Continuity to Transit Routes	\$17
53	Johnson Street at S.R. 7	Sidewalk Continuity to Transit Routes	\$10
56	28th Avenue: Pembroke Road to Johnson Street	Pedestrian Improvements	\$50
57	24th Avenue: Pembroke Road to Sheridan Street	Pedestrian Improvements	\$50
58	56th Avenue: Pembroke Road and Griffin Road	Pedestrian Improvements	\$50
59	Young Circle from Tyler Street	Pedestrian Access	\$12
60	Sheridan Street and 64th Avenue	Timing of Pedestrian Signals	\$10
61	Johnson Street: North 30th Road to Federal Highway	Missing Sidewalks	\$49
62	Federal Highway (Hollywood)	Mid Block Crossings	\$200
79	Palm Avenue: Miramar Parkway to Stirling Road	Construct Bikepath/Sidewalk	\$1,041
89	C-42 Flamingo - Hiatus Greenway Corridor	Greenway	\$4,127
116	Sheridan Street: SW 172nd Avenue to SW 196th Avenue	(1)	\$93
120	Sheridan Street: SW 196th Avenue to SW 172nd Avenue	(1)	\$91
121	Sheridan Street: Flamingo Road to Palm Avenue	(1)	\$108
122	Sheridan Street: SW 98th Avenue to University Drive	(1)	\$87
123	Sheridan Street: SW 76th Avenue to SW 66th Avenue	(1)	\$66
129	Johnson Street: NW 108th Avenue to NW 103rd Avenue	(1)	\$30
161	SW 101st Avenue: Pembroke Road to Miramar Parkway	(1)	\$50
164	160th Avenue: 54th Place to Sedgewick Circle	(1)	\$50
168	Taft Street: 196th Avenue to 20th Street	(1)	\$33

(1) = No project description provided in LRTP.

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Table 6. Broward County 2025 Cost Feasible Plan - Bicycle Element

Hollywood/Pines Boulevard Planned Improvements				
<i>Priority</i>	<i>Street</i>	<i>Segment</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
92	Hollywood Boulevard	U.S. 441 to Presidential Circle	Add Bike Lane	\$246
93	Hollywood Boulevard	Florida's Turnpike to U.S. 441	Resurface and Restripe for Bike Lane	\$39

Extended Study Area Planned Improvements				
<i>Priority</i>	<i>Street</i>	<i>Segment</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
7	Sheridan Street	U.S. 441 to Dixie Highway	Add Bike Lane	\$1,388
9	Sheridan Street	Dixie Highway to U.S. 1	Resurface and Restripe for Bike Lane	\$50
11	Johnson Street	Dixie Highway to U.S. 1	Resurface and Restripe for Bike Lane	\$38
12	Hallandale Beach Boulevard	I-95 to Dixie Highway	Add Bike Lane	\$418
13	Hallandale Beach Boulevard	Dixie Highway to Diplomat Parkway	Add Bike Lane	\$483
16	Pembroke Road	I-95 to U.S. 1	Add Bike Lane	\$578
49	Sheridan Street	University Drive to U.S. 441	Add Bike Lane	\$1,002
54	Johnson Street	Park Road to I-95	Resurface and Restripe for Bike Lane	\$58
55	Johnson Street	North 56th Avenue to Park Road	Add Bike Lane	\$578
56	U.S. 1	Hollywood Boulevard to Sheridan Street	Add Bike Lane	\$352
58	U.S. 1	Hallandale Beach Boulevard to Pembroke Road	Add Bike Lane	\$289
61	University Drive	Pembroke Road to Stirling Road	Add Bike Lane	\$1,349
65	Miramar Parkway	University Drive to U.S. 441	Add Bike Lane	\$1,002
78	Pembroke Road	Douglas Road to University Drive	Resurface and Restripe for Bike Lane	\$97
81	U.S. 1	Pembroke Road to Madison Street	Resurface and Restripe for Bike Lane	\$68
82	Washington Street	U.S. 441 to Park Road	Resurface and Restripe for Bike Lane	\$184
86	Johnson Street	North 72nd Avenue to North 56th Avenue	Resurface and Restripe for Bike Lane	\$203
102	Sheridan Street	SW 196th Avenue to SW 172nd Avenue	Add Bike Lane	\$771
106	Park Road	Pembroke Road to Stirling Road	Add Bike Lane	\$1,349

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Table 7. Broward County 2025 Cost Feasible Plan - Transit Element

Hollywood/Pines Boulevard Planned Improvements					
Priority	Project Name	From	To	Project Description	Cost (\$000)
23	Bus Route No. 7	30 Minutes	15 Minutes	Headway Improvement	\$15,949
33	Bus Route No. 5	60 Minutes	30 Minutes	Route Realignment, Headway Improvement	\$4,716
61	7R Pines Boulevard BRT	Dykes Road	University Drive ⁽¹⁾	Bus Rapid Transit Route	\$30,544

Extended Study Area Planned Improvements					
Priority	Project Name	From	To	Project Description	Cost (\$000)
3	Bus Route No. 1	20 Minutes	10 Minutes	Headway Improvement	\$18,390
7	Bus Route No. 2	30 Minutes	15 Minutes	Headway Improvement	\$6,130
12	Bus Route No. 18	15 Minutes	10 Minutes	Headway Improvement	\$13,671
18	Bus Route F	Flamingo / Miramar	Sawgrass Mills Mall	New Route	\$8,440
25	Bus Route No. 9	40 Minutes	20 Minutes	Headway Improvement	\$11,003
26	Bus Route No. 28	30 Minutes	15 Minutes	Headway Improvement	\$7,859
31	Bus Route No. 6	30 Minutes	20 Minutes	Route Realignment, Headway Improvement	\$3,144
35	Bus Route No. 12	40 Minutes	20 Minutes	Headway Improvement	\$6,287
39	Bus Route No. 3	60 Minutes	30 Minutes	Route Realignment, Headway Improvement	\$2,596
40	Bus Route No. 15	45 Minutes	30 Minutes	Headway Improvement	\$865
42	Bus Route No. 17	40 Minutes	30 Minutes	Route Realignment, Headway Improvement	\$865
49	Bus Route No. 23	45 Minutes	20 Minutes	Headway Improvement	\$4,326
50	Transit Bridge	Golden Glades	I-595	High Performance Transit	\$37,005
52	FEC Railroad Phase 1	Atlantic Boulevard	Aventura	Light/Commuter Rail	\$196,800
58	2R University Drive BRT	County Line Road	Parkland City Hall	Bus Rapid Transit Route	\$105,892
59	75R I-75/Sawgrass BRT	Miami-Dade County	Sawgrass Mills Mall	Bus Rapid Transit Route	\$70,359
60	12R Sheridan Street BRT	Dykes Road	U.S. 1	Bus Rapid Transit Route	\$67,391
N/A	Flamingo Road BRT	Miami-Dade County	Sawgrass Mills Mall	(2)	N/A

⁽¹⁾ - Although the Cost Feasible Transit Plan map in the 2025 LRTP indicates the 7R BRT will extend to Downtown Hollywood, the table of Cost Feasible Transit improvements in the 2025 LRTP only lists the BRT section from Dykes Road to University Drive.

⁽²⁾ - Although not listed in the Cost Feasible Plan Transit Element table in the 2025 LRTP, Flamingo Road is identified on the map for the Cost Feasible Transit Plan as Proposed Bus Rapid Transit (BRT) in the 2025 LRTP.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 8. Broward County 2025 Cost Feasible Plan - Roadway Element

Hollywood/Pines Boulevard Planned Improvements							
<i>Priority</i>	<i>Project ID</i>	<i>Project Name</i>	<i>From</i>	<i>To</i>	<i>Length (miles)</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
FIHS - 9	173	Florida's Turnpike	At Hollywood Boulevard	-	0.2	Interchange Improvement	\$26,000
26	96	Pines Boulevard	Flamingo Road	University Drive	3.0	New Interchanges	\$18,900

Extended Study Area Planned Improvements							
<i>Priority</i>	<i>Project ID</i>	<i>Project Name</i>	<i>From</i>	<i>To</i>	<i>Length (miles)</i>	<i>Project Description</i>	<i>Cost (\$000)</i>
2	29	U.S. 441 (State Road 7)	County Line Road	Griffin Road	6.0	4 to 6 Lanes	\$140,370
8	127	SW 172nd Avenue	Miramar Parkway	Sheridan Street	3.7	2 to 4 Lanes	\$8,637
16	116	SW 196th Avenue	Miramar Parkway	Pines Boulevard	2.0	New 4 Lanes	\$8,622
22	61	SW 184th Avenue	Basscreek Road	Griffin Road	5.2	2 to 4 Lanes	\$21,634
28	102	Pembroke Road	U.S. 27	SW 136th Avenue	6.4	New 4 Lanes	\$20,007
30	92	Sheridan Street	I-75	University Drive	5.3	4 to 6 Lanes	\$17,506
31	94	Sheridan Street	SW 160th Avenue	West of I-75	0.2	4 to 6 Lanes	\$300
32	174	Sheridan Street	North 63rd Avenue	North 62nd Avenue	0.2	Bridge 4 to 6 Lanes	\$7,025
33	175	Sheridan Street	Dixie Highway	U.S. 1	0.9	4 to 6 Lanes	\$39,800
34	162	Pembroke Road	Florida's Turnpike	SW 62nd Avenue	0.7	4 to 6 Lanes	\$10,523
37	99	Pembroke Road	Douglas Road	University Drive	1.0	4 to 6 Lanes	\$2,594
39	106	Miramar Parkway	Palm Avenue	University Drive	2.0	4 to 6 Lanes	\$11,224

Other Transportation Studies

In addition to the transportation programs and plans discussed previously, other transportation projects and studies were reviewed in order to coordinate with results of these studies and for purposes of data retrieval. This section of the report summarizes these projects and studies as of the date of inclusion in this study (October, 2003).

Pines Boulevard at Flamingo Road PD&E

The Florida Department of Transportation (FDOT) has initiated phase one of a project development and environment (PD&E) study for the intersection of Pines Boulevard (S.R. 820) and Flamingo Road (S.R. 823) within the City of Pembroke Pines. The study will include an analysis of Pines Boulevard from SW 136th Street to Hiatus Road. The project will evaluate potential at-grade and grade-separated improvements and will include a focus on urban sensitive concepts and design.

The need for this study was developed based on the crash history within the study area and current and projected future traffic volumes that are in excess of existing intersection capacity. A recent study within the insurance industry identified the intersection of Pines and Flamingo as having a severe traffic crash problem. The purpose of the study and recommendations is to identify the best improvement that will address the needed capacity at the intersection of Pines and Flamingo as well as community concerns. The objective of the study is to provide an acceptable level of service for the design year, improve the safety of the intersection, and include the needs of all transportation modes in the proper context of the corridor.

The Hollywood/Pines Boulevard Multimodal Corridor Study will coordinate with the progression of the Pines Boulevard at Flamingo Road PD&E study. Although the objective of the PD&E study is to provide long-term solutions for the intersection of Pines Boulevard and Flamingo Road, whereas an objective of the Hollywood/Pines Boulevard Multimodal Corridor Study is to identify and prioritize short-term congestion management and mobility enhancement

strategies within the corridor, recommendations developed in the two studies should be consistent.

FDOT District Four Safety and Operational Study – S.R. 823 (Flamingo Road) from Pembroke Road to Sheridan Street

The Florida Department of Transportation (FDOT) undertook a qualitative assessment study of the Flamingo Road corridor from Pembroke Road to Sheridan Street including the Pines Boulevard intersection. The purpose of the assessment was to evaluate existing traffic and safety characteristics of the corridor and to identify recommendations for further safety studies, if necessary. The study documented several traffic safety concerns along the corridor and recommended more detailed safety analyses at five Flamingo Road intersections including Pembroke Road, Pines Boulevard, Johnson Street, Taft Street, and Sheridan Street. At the intersection of Pines Boulevard and Flamingo Road, the study found excessive queues on the eastbound left-turn movement (during both AM and PM peak periods) as well as the southbound right-turn movement (during the PM peak period). Despite the construction of a new high school in the southeast corner of the intersection of Flamingo Road and Sheridan Street, no pedestrian features are provided at the intersection of Flamingo Road and Sheridan Street.

FDOT District Four Safety and Operational Study – S.R. 817 (University Drive) at S.R. 820 (Pines/Hollywood Boulevard)

The Florida Department of Transportation (FDOT) undertook a safety and operational study at the intersection of Hollywood/Pines Boulevard and University Drive. The purpose of the study was to evaluate existing conditions and recommend improvements that will enhance the safety and operational characteristics of the subject intersection. Various alternatives were evaluated including a “do nothing” alternative. The study recommended an alternative consisting of optimizing the signal timing, providing an overlap indication for right-turning traffic on all approaches to the intersection, and converting the existing right-in/right-out driveway, located on northbound University Drive south of the intersection, to a right-in driveway only. Crash

reduction factors, a cost estimate, and a benefit/cost ratio were prepared for the preferred alternative.

Interstate 75 Master Plan

The Florida Department of Transportation (FDOT) is conducting the Interstate 75 Master Plan to study long-term capacity improvements along the I-75 corridor from I-595/Sawgrass Expressway to the Palmetto Expressway. Sixteen initial alternatives were considered and reduced to five alternatives through a Tier I screening process. The five Tier II alternatives included fixed guideway transit in the corridor, a system of collector-distributor roads, express lanes within the median, high occupancy vehicle (HOV) lanes within the median, and reversible lanes within the median.

The recommended Tier II alternative includes a two-lane transitway for express buses along Interstate 75 and does not include any new interchanges. However, significant improvements to existing interchanges are planned including “urbanizing” the interchanges by reconstructing the partial cloverleaf interchanges closer to I-75 in a manner that requires less space. In addition, ramp layouts would be modified to favor high-speed travel from intersecting streets to I-75. This modified interchange design would provide space for a transitway to be built east of I-75. Furthermore, park-n-ride lots could be accommodated near the interchanges with stations due to the tighter interchange designs. A two-way transitway is envisioned from the Sawgrass Mills Mall / Office Depot Center to the Palmetto Expressway. Following the construction of the transitway, two reversible lanes in the median of I-75 are proposed to supply additional capacity in the peak direction. In addition, the transitway could be converted from bus rapid transit service to a rail system if passenger demand warrants.

Broward County MPO Transit Bridge Study

The Broward County Metropolitan Planning Organization (MPO) sponsored a study to evaluate alternatives for developing a premium transit service in the Broward Transit Bridge corridor between Pro Player Stadium in northern Miami-Dade County and the Hollywood Tri-Rail station

in Broward County. A connection to Pro Player Stadium was intended to link to a potential bus rapid transit (BRT) corridor along NW 27th Avenue south of Pro Player Stadium that had been identified by Miami-Dade Transit. The transit bridge concept was intended to create new premium transit service that would connect the two counties and supplement local transit service in the area. Two tiers of analysis regarding many potential alignments were performed, during which (1) the Golden Glades Intermodal Center was identified as an additional southern destination and (2) the northern terminus was relocated to the intersection of U.S. 441 and Hollywood Boulevard. Two “build” corridor alternatives were developed and assessed as described below.

- U.S. 441 from the Golden Glades Intermodal Center to Hollywood Boulevard, and NW 199th Street from NW 27th Avenue to U.S. 441.
- Florida’s Turnpike mainline from the Golden Glades Intermodal Center to Hollywood Boulevard, and the Homestead Extension of Florida’s Turnpike (HEFT) from the Turnpike mainline to NW 27th Avenue.

Transit mode technologies were developed for the “build” alternatives including concurrent flow and contra flow bus lanes. For the Turnpike alternative, exclusive bus ramps were identified at the Hollywood Boulevard interchange and the NW 27th Avenue interchange. A major terminal station was identified at each of the three termini, including the intersection of U.S. 441 and Hollywood Boulevard. These stations would be located off-street with bus bays, passenger shelters, park-n-ride lots, automobile drop-off/pickup facilities, and extensive amenities. Another key component of the U.S. 441 alternative is bus signal priority along the corridor.

A transportation impact assessment was performed using transit ridership modeling projections and roadway level of service. It was assumed that BRT service would extend north of Hollywood Boulevard to I-595 although no exclusive bus lane provisions were assumed north of Hollywood Boulevard. Transit ridership projections were significantly higher for the U.S. 441 alternative than the Turnpike alternative due to the opportunity for intermediate stations and greater density of employment and population along the corridor.

Environmental and financial analyses were also performed. Environmental impacts are expected to be insignificant with the bus lanes accommodated within the widening of U.S. 441 north of County Line Road proposed by FDOT. The financial analysis concluded that the contra flow lanes alternative would cost twice as much as the concurrent flow bus lanes. The subsequent environmental documentation and preliminary engineering stages will build on the public involvement and interagency coordination framework achieved during the alternatives analysis study.

Tri-County Commuter Rail Authority (SFRTA/Tri-Rail) Master Plan

Tri-Rail, the only commuter rail system in Florida, operates trains in the South Florida Rail Corridor (SFRC) in Miami-Dade, Broward, and Palm Beach Counties. The line extends 72 miles from the Miami International Airport to Mangonia Park in Palm Beach County. Tri-Rail service was initiated in January 1989 as part of a major traffic mitigation effort during construction and expansion of I-95. Tri-Rail provides access to the region's three international airports: Miami International Airport, Ft. Lauderdale-Hollywood International Airport, and Palm Beach International Airport. Two Tri-Rail stations exist within the extended study area for the Hollywood/Pines Boulevard Multimodal Corridor Study: Sheridan Street and Hollywood Boulevard.

The SFRC is operating at capacity, serving Tri-Rail, Amtrak, and freight trains. To address this restraint, Tri-Rail has undertaken a program of projects to improve the corridor. This program, known as the "Double Track Corridor Improvement Program," consists of laying a second mainline track, upgrading grade crossing and signal systems, and modifying stations to accommodate the double track. The project is scheduled for completion by March 2006. The double-tracking and related improvements will (1) improve Tri-Rail's schedule reliability, (2) reduce Tri-Rail's peak period headways from 60 minutes to 20 minutes, and (3) improve the safety of train operations along the SFRC. As presented previously, an expansion of the Hollywood Boulevard terminal is ongoing that will improve convenience for Tri-Rail patrons at

this station. In addition, FDOT is planning a joint development project at the Sheridan Street Tri-Rail station.

In addition to the “Double Track Corridor Improvement Program,” Tri-Rail has developed a mid- and long-term infrastructure investment strategy called the Tri-Rail Long Range Master Plan. As part of this ongoing master planning process, Tri-Rail is considering the following five projects:

- Broward East-West Line – Establishing an east-west fixed guideway line between the Office Depot Center in Sunrise and Downtown Fort Lauderdale. The proposed alignment would operate at-grade along Broward Boulevard and continue south to the Fort Lauderdale-Hollywood International Airport.
- FEC Corridor – Establishing commuter rail service in Miami-Dade and Broward Counties in the FEC rail corridor, which is a north-south rail corridor line generally located about 1 to 2 miles east of I-95. Eleven new stations would be constructed.
- Dolphin Extension – Extending Tri-Rail service parallel to SR 836 (Dolphin Expressway) from the Miami Intermodal Center (MIC) west approximately 8.8 miles to the Dolphin Mall along an existing CSX rail alignment. Three new stations would be added.
- Jupiter Extension – Extending Tri-Rail service from West Palm Beach approximately 15.7 miles north to Jupiter in the Florida East Coast (FEC) rail right-of-way. Six new stations would be added.
- Kendall Extension – Extending Tri-Rail service southwest from the MIC to the Kendall area. This route would follow SR 874 (Don Shula Expressway) to a terminus at Coral Reef Drive along an existing CSX rail alignment. Five new stations would be added including a station that is also incorporated in the Dolphin Extension.

Only the FEC Corridor service identified in the Tri-Rail Long Range Master Plan would directly affect the study area for the Hollywood/Pines Boulevard Multimodal Corridor Study. However, system-wide Tri-Rail ridership is expected to increase by varying levels if the five improvements are implemented.

Broward County Clean Air Cooperative

The purpose of the Broward County Clean Air Cooperative study was to plan an electric or electric-hybrid vehicle transit circulator service that will serve eastern Broward County including Downtown Fort Lauderdale, the Broward County Convention Center, the Fort Lauderdale-Hollywood International Airport, and the Young Circle area of Downtown Hollywood. Transit demand in the area was assessed by examining trip purposes within the study area and employment data. In addition, transit supply was examined including transit providers and passenger infrastructure.

Five potential routes were identified as part of this study. Only one of the five routes would directly affect the study area for the Hollywood/Pines Boulevard Multimodal Corridor Study. An Airport Express route was developed to provide limited stop service between Downtown Fort Lauderdale, Fort Lauderdale-Hollywood International Airport, and Young Circle in Hollywood. This route would be targeted to airport patrons as well as airport employees. In addition to the southern terminus of the route at Young Circle, stops would be provided along U.S. 1 at Johnson Street and Taft Street.

Downtown Hollywood Subarea Sidewalk Inventory Update

The Downtown Hollywood Subarea Sidewalk Inventory Update was performed to create a database of sidewalk conditions along transit streets and at transit stops in the central part of the City of Hollywood. The intent of the study was to identify poor locations rather than as a report of average or overall conditions. An additional intent of the study was to provide a prototype sidewalk data collection effort; therefore, the study was reviewed and sidewalk data for Hollywood/Pines Boulevard was collected in a similar manner. In addition, the study was reviewed as a part of this study's data retrieval effort since the study included an inventory of sidewalks, existing bus stops, bus shelters, transfer centers, and intermodal centers.

Recommendations were made for further study of new bus shelters at thirty locations within the study area based on daily boarding and alighting activity. In addition, recommendations were made to study the feasibility of lighting improvements and bicycle parking at four locations.

Retrieval of Existing Transportation Data

This section of the report describes existing transportation data retrieved from various sources including public sector agencies and prior transportation studies within the corridor study area. As described earlier in this report, available data were retrieved from existing data sources before new transportation data were collected. The data that were retrieved for this study were screened for accuracy and reliability. Gaps in the data were identified based on either a lack of recent available data or the identification of questionable data from the reliability screening. Examples of existing transportation data retrieved included the following.

- Twenty-four hour roadway machine traffic counts
- Historical traffic volumes
- Turning movement counts
- Traffic signal timings
- Roadway functional classification
- Transit data
- Bicycle data
- Crash data

Twenty-four Hour Traffic Counts

Twenty-four (24) hour average annual daily traffic (AADT) counts collected during 2000, 2001, and 2002 were obtained from the Florida Department of Transportation (FDOT) and the Broward County Transportation Planning Division. The data obtained were in 15-minute intervals during the 24-hour period along Hollywood/Pines Boulevard at the following locations.

- U.S. 27
- NW/SW 184th Avenue

- NW/SW 178th Avenue
- NW/SW 172nd Avenue
- Dykes Road (NW/SW 160th Avenue)
- Flamingo Road
- Hiatus Road
- Palm Avenue
- Douglas Road
- University Drive
- N/S 72nd Avenue
- North 64th Avenue
- U.S. 441 (State Road 7)
- N/S 56th Avenue
- Park Road
- I-95
- Dixie Highway

In addition to the counts obtained along Hollywood/Pines Boulevard, 24-hour AADT counts were also obtained for other roadways within the extended study boundary. Counts along other east-west facilities were of particular interest to evaluate congestion levels along parallel facilities. The parallel facilities that were evaluated in this study include the following.

- Hallandale Beach Boulevard / Miramar Parkway
- Pembroke Road
- Johnson Street
- Taft Street
- Sheridan Street

The base year for existing conditions analysis in this study was 2003 since this was the year the new data that would be field-collected for this study would be obtained. Therefore, a growth factor was applied to 2000, 2001, and 2002 traffic counts to obtain 2003 AADT. Calculation of this factor is explained below.

Historical Traffic Volumes

Historical traffic volumes were obtained from the Broward County Transportation Planning Division. A growth factor was calculated based on the given historical average annual daily traffic (AADT) counts to determine the projected 2003 AADT. A linear growth rate methodology was used to calculate the growth factor using the following formula:

Annual growth factor =

$$\frac{\frac{\text{AADT}_{2001} - \text{AADT}_{2000}}{\text{AADT}_{2000}} + \frac{\text{AADT}_{2002} - \text{AADT}_{2001}}{\text{AADT}_{2001}}}{2002 - 2000}$$

Turning Movement Counts

Turning movement counts were retrieved from the Broward County Transportation Planning Division for intersections along Hollywood/Pines Boulevard and within the extended study boundary. Each signalized intersection is identified by a unique identification number, which was used to locate available turning movement counts. AM and PM peak period turning movement counts were obtained to help evaluate peak period congestion levels for specific movements at signalized intersections.

As with AADT counts, turning movement counts collected during 2000, 2001, and 2002 were considered recent enough to use for this study. In cases where multiple turning movement counts were available, the most recent count was used except if the most recent count was found to be questionable during the reliability screening. A growth factor was applied to prior year turning movement counts to convert all counts to 2003 data. The growth factor used for the turning movement counts was calculated from historical approach counts. Therefore, a growth rate was calculated for each intersection approach separately based on the growth experienced on that particular approach.

Traffic Signal Timings

Traffic signal timing data were obtained from the Broward County Traffic Engineering Division for each signalized intersection along Hollywood/Pines Boulevard. Signal timings were used to evaluate capacity and delays at signalized intersections. Any uncertainties or other unclear traffic signal information was clarified during field reviews.

Roadway Functional Classification

For transportation planning purposes, roadway facilities are grouped by functional classification to help define the roadway's character. In urban areas, the hierarchy of the functional classification system consists of principal arterials, minor arterials, collectors, and local streets. Principal arterials primarily serve through traffic and carry the highest traffic volumes; minor arterials augment principal arterials at a somewhat lower level of mobility; collector roadways carry lower traffic volumes and provide a connection between high traffic corridors and the local street network; local streets provide access to adjacent land uses. Functional classification information for roadways within the extended study boundary was obtained from the Transportation Systems Planning Section of the Broward County Transportation Planning Division. Functional classification data used in this study is current as of June 2003.

Transit Data

The *Broward County Transit Ridership Report* contains ridership information on every transit route in the Broward County Transit (BCT) system from the year 2001. Specifically, data obtained from this report included maximum loads, maximum load factors, and average daily ridership for all routes in the bus network. The report also includes average daily boardings, average daily alightings, and a list of bus stops. The report was used to document transit data for routes within the extended study boundary including Route 7, which travels the length of Hollywood/Pines Boulevard. Additional transit data, such as route schedules and the latest published transit fares, were obtained from the BCT website at <http://www.broward.org/bct>.

Bicycle Data

Information on existing bicycle facilities was obtained from the Broward County Transportation Planning Division. The Broward County Bicycle Suitability Map shows existing on-road bicycle facilities within Broward County including bicycle lanes, wide curb lanes, and paved shoulders. In addition, a bicycle suitability rating is depicted on the map. Bicycle suitability refers to the amount of interaction with traffic experienced by bicyclists on a certain roadway.

Crash Data

Hollywood/Pines Boulevard is part of the State Highway System (State Road 820) from U.S. 27 in the west to 28th Avenue in the east. Therefore, crash data were obtained for this portion of the corridor from the crash database maintained by the Florida Department of Transportation (FDOT) for three years, 1999 through 2001. The crash data obtained from the FDOT database included pedestrian crashes and bicycle crashes for the portion of the roadway in the State Highway System.

Collection of Additional Transportation Data

Following the data retrieval phase of this study, gaps in the data were identified based on either a lack of recent available data or the identification of questionable data from the reliability screening. In these cases, field data were collected to form a more complete database of information for the Hollywood/Pines Boulevard corridor. This section of the report summarizes data collected specifically for purposes of this study. Examples of field data collection efforts include intersection turning movement counts, approach traffic counts, travel time runs, sidewalk inventories, a review of bus stop infrastructure, and field observations of traffic conditions. All data collected in the field were screened for accuracy and reliability. A description of the data collection efforts will be presented by mode in the same order as on the Performance Measures and Targets Table: pedestrian, bicycle, transit, multimodal, and roadway.

Pedestrian

A field inventory was conducted of pedestrian facilities, such as sidewalks, pedestrian paths, and crosswalks along Hollywood/Pines Boulevard. In addition, factors that could affect pedestrian accessibility and mobility along the corridor, such as curb cut access ramps, sidewalk widths, sidewalk conditions, posted speed limits, distances from edge of pavement to sidewalk, and total through travel lanes, were collected. The pedestrian data collection efforts were designed to facilitate the calculation of pedestrian level of service, as defined by FDOT in the *2002 Quality/Level of Service Handbook*.

Bicycle

A field inventory was conducted of bicycle facilities, such as bicycle lanes and bicycle paths, along Hollywood/Pines Boulevard. In addition, factors that could affect the confidence and safety of bicyclists in the corridor were measured. The width of bicycle lanes, width of outside through travel lanes, posted speed limit, percentage of heavy vehicles, and total through travel lanes were inventoried along the corridor. The bicycle data collection efforts were designed to facilitate the calculation of bicycle level of service, as defined by FDOT in the *2002 Quality/Level of Service Handbook*.

Designated bicycle lanes have appropriate pavement marking and signage. According to FDOT's *Plans Preparation Manual*, the FDOT standard width for bicycle lanes is five feet on roadways with flush shoulders, which corresponds with FDOT's standard for paved shoulders. However, on curb and gutter roadways, a width of four feet is required as measured from the lip of the gutter. This provides for a width of 5.5 feet to the face of the curb when Type F curb and gutter is used. Furthermore, a width of five feet is desired for bicycle lanes adjacent to the outermost through lane at intersections where a right-turn lane is present, although a width of four feet in this case is considered minimum. Undesignated bicycle lanes do not have proper signage and pavement markings, but are still clearly separated from automobile lanes and are less than 5 feet in width.

Transit

In addition to the transit data obtained from the Broward County Mass Transit Division (BCT), a field review was conducted to survey each bus stop along Hollywood/Pines Boulevard for accessibility. This field review consisted of checking for compliance with the Americans with Disabilities Act (ADA) requirements, which stipulate a landing pad eight feet in width and a clear sidewalk to connect the main sidewalk to the street. Bus bays, which keep the bus from blocking through traffic while loading and unloading, were also inventoried and measured.

Multimodal

A review of the existing multimodal facilities within the study corridor was conducted. Multimodal facilities include major transfer points that facilitate the use of more than one mode of transportation. Data collected in the field included surveying features that would hinder or encourage the use of more than one mode of transportation. The park-n-ride lot at C.B. Smith Park along Pines Boulevard west of Flamingo Road was studied. In addition, the Hollywood Boulevard Tri-Rail Station provides a connection to Tri-Rail commuter trains. Bus stops along the corridor were also surveyed for existing infrastructure such as benches, shelters, and trash cans.

Roadway

Following the retrieval of existing roadway data discussed previously in this report, more data were necessary to be collected to replace questionable data or to fill in missing gaps in the data. Roadway data collection efforts undertaken for this study included turning movement counts, 24-hour traffic volumes, vehicle classification counts, and travel time and delay runs. Field reviews were conducted to document detailed intersection geometries and to observe traffic conditions during peak periods.

The travel time runs were utilized to calculate average travel speed, which was used to determine arterial level of service (LOS) and to gain an understanding of the locations of roadway

congestion and delays along Hollywood/Pines Boulevard. Ten trips were conducted during the AM peak period (five in each direction) and ten trips during the PM peak period (five in each direction) for the travel time and delay runs.

An auto occupancy survey was performed during the AM and PM peak periods in four different locations (in both directions) along Hollywood/Pines Boulevard. Based on the results, the average vehicle occupancy (AVO) was calculated for the four locations.

Intersections where FDOT or Broward County traffic counts were not available were counted to obtain turning movement data and AADT. These intersections included the following locations.

- U.S. 27
- NW 155th Avenue
- NW/SW 136th Avenue
- NW/SW 129th Avenue
- NW/SW 118th Avenue (Pembroke Lakes Mall entrance)
- NW/SW 114th Avenue
- SW 64th Way
- SW 63rd Terrace
- Florida's Turnpike
- N/S 62nd Avenue
- I-95

ANALYSIS OF EXISTING TRANSPORTATION CONDITIONS

This chapter of the report describes the existing conditions analysis for various modes of transportation along Hollywood/Pines Boulevard, based on the data collection effort described in the previous chapter of this report. Existing conditions analysis is necessary to identify transportation deficiencies and justify the need to make improvements in such areas that exhibit deficiencies. The existing conditions analysis is presented in the same order as in the Performance Measures and Targets (Table 1): pedestrian, bicycle, transit, multimodal, and roadway.

Pedestrian

In order for walking to provide a viable transportation alternative, conditions need to be favorable for pedestrian accessibility and mobility. Providing quality pedestrian facilities is important for encouraging short trips to be made on foot instead of by driving.

Sidewalks

The sidewalks along Hollywood/Pines Boulevard were surveyed for continuity. No sidewalks exist along a few sections of the road, mostly in the sparsely developed areas west of SW 186th Avenue. The following list identifies the locations of incomplete or discontinuous sidewalks along Hollywood/Pines Boulevard.

- Undeveloped land from U.S. 27 to SW 208th Avenue (south side)
- Undeveloped land from SW 198th Terrace to west of SW 196th Avenue (south side)
- Undeveloped land from SW 196th Avenue to St. Edward Catholic Church (south side)
- From Dykes Road (near Post Office) to SW 142nd Avenue (south side)
- Between I-75 northbound entrance ramp and southbound exit ramp (north side)
- From 900 feet west of Douglas Road to NW 96th Avenue (north side)

Exhibits 1 and 2 present examples of sidewalk discontinuities along Hollywood/Pines Boulevard near Douglas Road.



Exhibit 1. Sidewalk discontinuity 900 feet west of Douglas Road (facing EB)



Exhibit 2. Sidewalk discontinuity 900 feet west of Douglas Road (facing WB)

Table 9. Inventory of Sidewalk Continuity

From	To	North Side Sidewalk	South Side Sidewalk
U.S. 27	SW 208 th Avenue	discontinuous	no sidewalk
SW 208 th Avenue	SW 196 th Avenue	continuous	discontinuous
SW 196 th Avenue	SW 184 th Avenue	continuous	discontinuous
SW 184 th Avenue	SW 172 nd Avenue	continuous	continuous
SW 172 nd Avenue	Dykes Road	continuous	continuous
Dykes Road	SW 155 th Avenue	continuous	discontinuous
SW 155 th Avenue	SW 142 nd Avenue	discontinuous	no sidewalk
SW 142 nd Avenue	SW 136 th Avenue	continuous	continuous
SW 136 th Avenue	Flamingo Road	continuous	continuous
Flamingo Road	Hiatus Road	continuous	continuous
Hiatus Road	Palm Avenue	continuous	continuous
Palm Avenue	Douglas Road	discontinuous	continuous
Douglas Road	University Drive	continuous	continuous
University Drive	SW 72 nd Avenue	continuous	continuous
SW 72 nd Avenue	SW 64 th Avenue	continuous	continuous
SW 64 th Avenue	U.S. 441 (S.R. 7)	continuous	continuous
U.S. 441 (S.R. 7)	South 56 th Avenue	continuous	continuous
South 56 th Avenue	Presidential Circle	continuous	continuous
Presidential Circle	I-95	continuous	continuous
I-95	Hollywood City Hall	continuous	continuous
Hollywood City Hall	Young Circle	continuous	continuous

According to the sidewalk inventory along Hollywood/Pines Boulevard, sidewalks are provided along 98 percent of the facility length on the north side and 84 percent of the facility length on the south side. Overall, sidewalks are provided along 91 percent of the road. The sidewalk inventory performed for this study was compared to the “Inventory of Missing Sidewalk Links” provided by the Broward County Transportation Planning Division; the missing links identified in Broward County’s inventory were identified and included on the list for this study, as well as other links that were identified during the field review.

Pedestrian Crosswalks and Signals

Pedestrian features such as crosswalks and signals at intersections along Hollywood/Pines Boulevard were inventoried and summarized in Table 10 to identify crossing opportunities and provide an analysis of design features for pedestrian mobility and safety at intersections.

Table 10. Pedestrian Crosswalks and Signals

Location	Crosswalk				Pedestrian Signal			
	West	East	North	South	West	East	North	South
U.S. 27	N/A	No	No	No	N/A	No	No	No
SW 196 th Avenue	Yes	Yes	Yes	(1)	Yes	Yes	Yes	(1)
SW 186 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 184 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 172 nd Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dykes Road	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Westfork Plaza	Yes	Yes	Yes	N/A	Yes	Yes	Yes	N/A
SW 155 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 136 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 129 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flamingo Road	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 118 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 114 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hiatus Road	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NW 108 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
K-Mart Plaza	Yes	No	Yes	N/A	Yes	No	Yes	N/A
Palm Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NW 96 th Avenue	Yes	No	(1)	Yes	Yes	No	(1)	Yes
Douglas Road	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
University Drive	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 72 nd Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SW 64 th Way	Yes	No	N/A	Yes	Yes	No	N/A	Yes
Florida's Turnpike	Yes	Yes	N/A	Yes	Yes	Yes	N/A	Yes
U.S. 441 (S.R. 7)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N/S 56 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N/S 46 th Avenue	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Park Road	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
I-95	Yes	Yes	No	No	Yes	Yes	No	No
N/S 28 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City Hall Circle (W)	N/A	Yes	Yes	Yes	N/A	No	No	No
N/S 26 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City Hall Circle (E)	Yes	N/A	Yes	Yes	No	N/A	No	No
N/S 24 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dixie Highway	Yes	No	Yes	Yes	Yes	No	Yes	Yes
N/S 21 st Avenue	No	Yes	Yes	Yes	No	Yes	Yes	Yes
N/S 20 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N/S 19 th Avenue	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Young Circle	Yes	Yes	No	No	Yes	Yes	No	No

Notes:

N/A – No approach

(1) – Sidewalk connections not provided

Pedestrian Crash Data

Figure 2 presents the location of pedestrian and bicycle crashes that occurred between 1999 and 2001 along the study segment of Hollywood/Pines Boulevard between U.S. 27 and 28th Avenue, which is the portion of the roadway contained within the State Highway System.

A total of 29 pedestrian collisions occurred along Hollywood/Pines Boulevard between 1999 and 2001. Of the 29 pedestrian collisions, 26 (90 percent) of the collisions occurred within 0.05 miles (250 feet) of an intersection. Of those 26 collisions at intersections, 21 (81 percent) occurred at signalized intersections. The highest concentration of pedestrian collisions occurred in the segment between Florida's Turnpike and 56th Avenue, where land use is dense, commercial buildings are situated close to the roadway, and higher pedestrian volumes are generally observed. In addition, pedestrian safety along this segment of Hollywood/Pines Boulevard is paramount because a higher volume of transit boardings and alightings occur in the eastern area of the study corridor. Providing safe and accessible pedestrian facilities are important for encouraging transit use. Pedestrian safety in the vicinity of schools is also of vital concern for the safety of school-aged children. Several pedestrian and bicycle crashes were recorded west of North 64th Avenue, in the vicinity of McArthur High School.

Pedestrian Level of Service

According to the performance measures developed for this study and presented in Table 1, pedestrian mobility is measured by pedestrian level of service (PLOS). The Florida Department of Transportation (FDOT) has developed the pedestrian level of service model as the accepted analytical model for evaluating pedestrian mobility. The pedestrian level of service was calculated for Hollywood/Pines Boulevard according to the procedures stated in FDOT's *2002 Quality/Level of Service Handbook*. Pedestrian LOS is affected by the following factors.

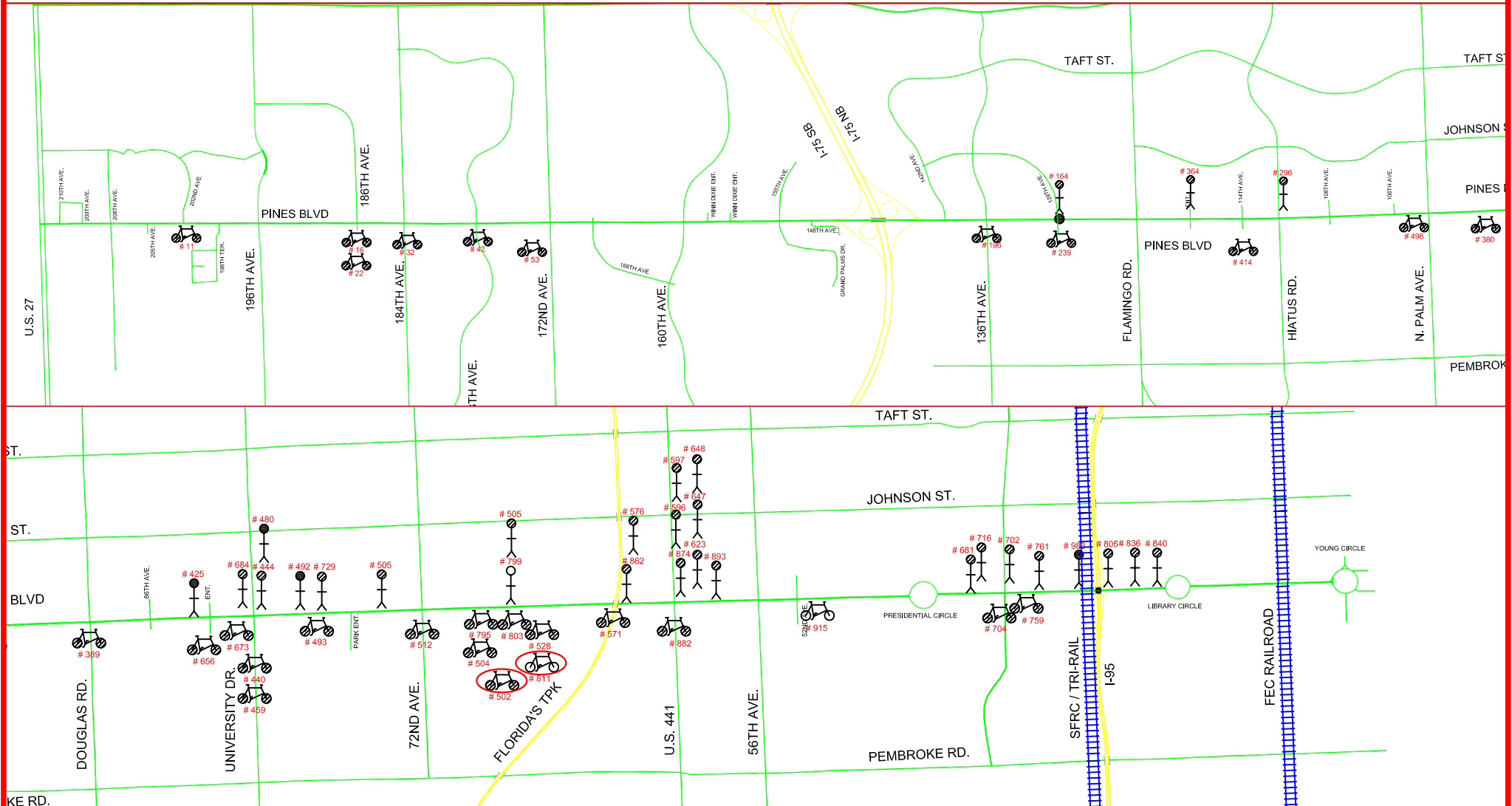
- Existence of a sidewalk and sidewalk width.

A wider sidewalk creates greater ease of movement and allows for more pedestrian traffic on the sidewalk.

HOLLYWOOD PINES BOULEVARD MULTIMODAL CORRIDOR STUDY



NOT TO SCALE



**FIGURE 2. BICYCLE AND PEDESTRIAN
CRASHES (1999-2001)**

- Lateral separation from motorized traffic.
If a sidewalk is at a farther distance from the roadway, pedestrians feel safer to walk along the sidewalk provided along such a roadway.
- Barriers between pedestrians and vehicular traffic.
Trees, bushes, on-street parking, and other barriers provide a sense of security for pedestrians and can create a more pleasant walking experience.
- Volume and speed of motorized traffic.
Vehicles traveling at a higher speed exhibit more momentum, present more danger for pedestrians, and can be more intimidating to be walking alongside. The slower the speed of vehicles on a road, the more attractive it is for pedestrians.

Table 11 provides a summary of the pedestrian level of service calculations for Hollywood/Pines Boulevard for both the north side and the south side of the roadway. Separate calculations are provided for the AM peak period and the PM peak period, based on prevailing traffic volumes. Figure 3 depicts a map of AM peak pedestrian level of service along the study corridor. Figure 4 depicts a map of PM peak pedestrian level of service along the study corridor. Appendix A contains a table demonstrating pedestrian level of service calculations.

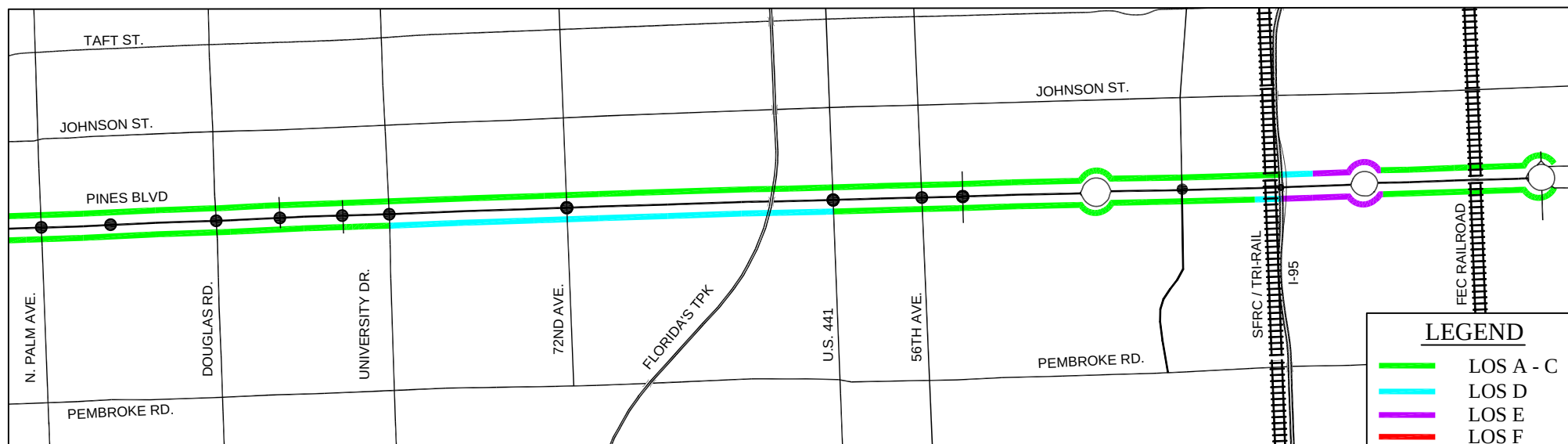
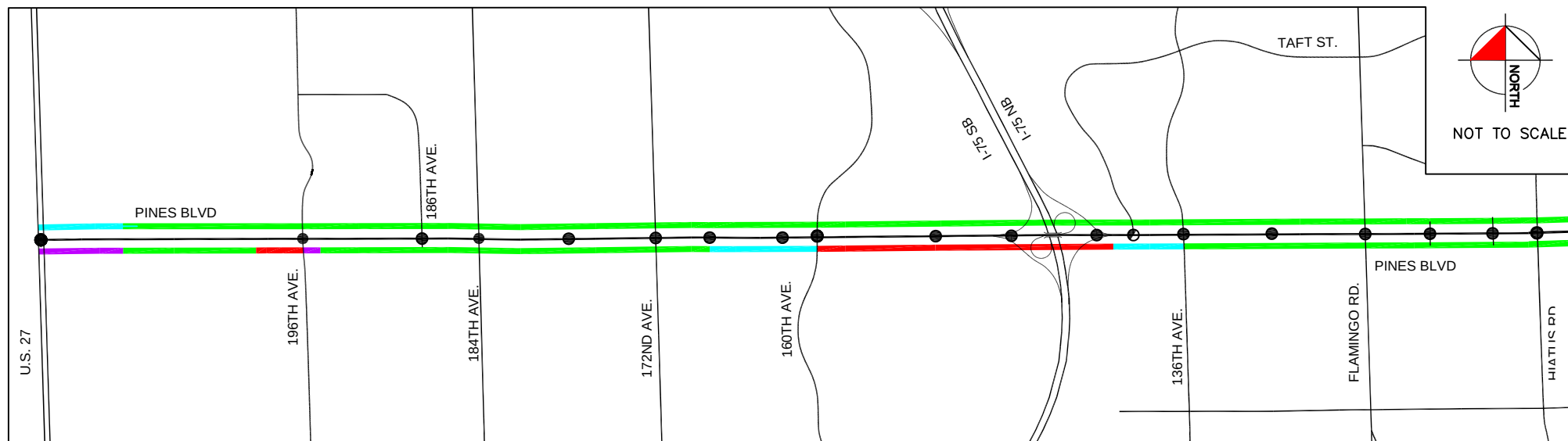
HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

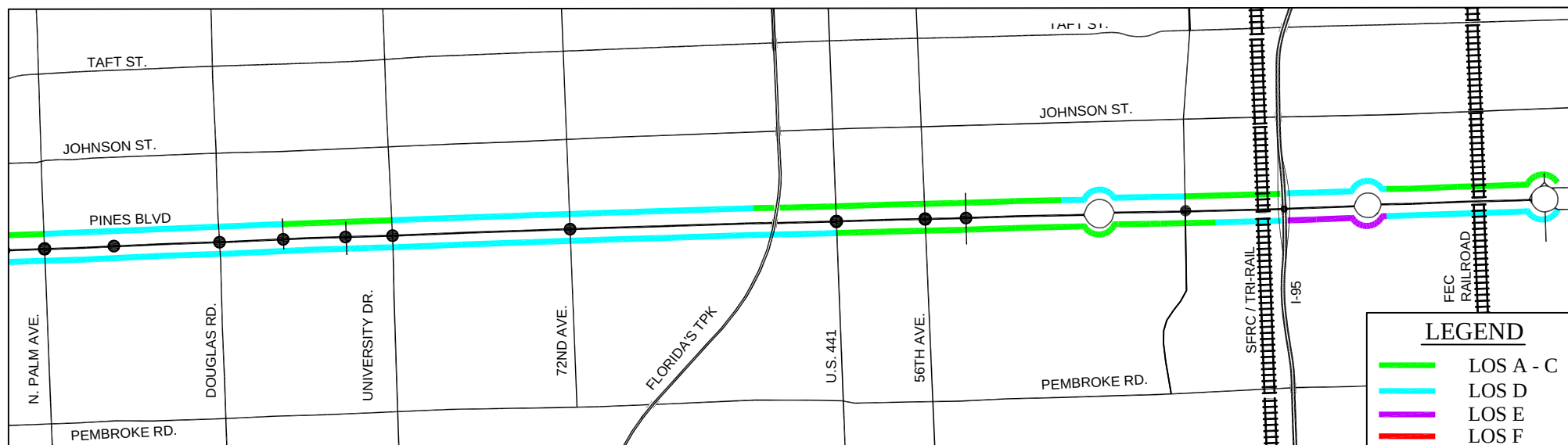
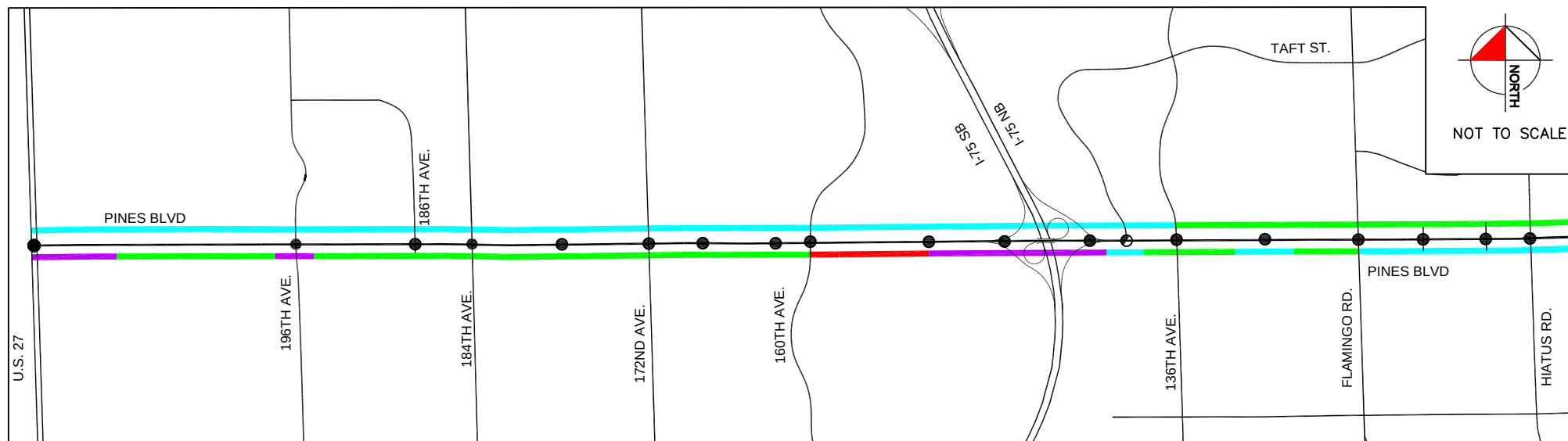
Table 11. Pedestrian Level of Service

	Intersecting Street	Location	Pedestrian LOS	
			AM Peak	PM Peak
North Side	Dixie Highway	East of intersection	C	C
	Dixie Highway	West of intersection	C	C
	City Hall Circle	Around the circle	E	D
	City Hall Circle	West of circle	E ⁽¹⁾	D ⁽¹⁾
	28th Ave		D ⁽¹⁾	D ⁽¹⁾
	I-95 (Tri-Rail Station)		C	C
	West of Tri-Rail		C	C
	Park Road		C	D
	35th Ave		C	D
	North Circle Drive (E)		C	D
	North Circle Drive (W)		C	D
	44th Ave		C	C
	48th Ave		C	C
	U.S. 441		C	C
	62nd Ave	West of intersection	C	C
	64th Way (McArthur High School)	West of intersection	C	D
	McArthur Pkwy		C	D
	74th Terr		C	D
	83rd Ave		C	C
	Douglas Road		C	D
	Hiatus Road		C	C
	114th Ave		B	C
	Flamingo Road		C	C
	I-75		C	D
	Westfork Plaza		C	D
	Dykes Road		C	D
	196th Ave		C	D
	208th Ave		D	D
South Side	U.S. 27		E	E
	208th Ave		C	C
	198th Terr		F	E
	196th Ave		E	E
	St. Edward Church access road		C	C
	186th Ave		C	C
	168th Ave		D	C
	Dykes Road		F	F
	155th Grand Palm Drive		F	E
	145th Ave		D	D
	136th Ave		C	C
	129th Ave		C	D
	Flamingo Road	West of intersection	C	C
	Flamingo Road	At intersection	C	D
	Flamingo Road	1st driveway east of int.	C	D
	Palm Ave		C	D
	83rd Ave		C	D
	Marketplace access road	West of University Drive	C	D
	University Drive		D	D
	Access road (Hooters)	East 300 feet from Univ.	D	D
	McArthur HS parking lot entrance	West of 64th Way	D	D
	62nd Ave		D	D
	U.S. 441		C	C
	access road to vacant mall	1000' east of SR 7	C	C
	58th Ave	E of int.	C	C
	56th Ave		C	C
	Presidential Circle		C	C
	Presidential Circle	East of Circle	C	C
	emergency signal	350' east of 35th Ave	C	C
	Entrada Drive		C	C
	I-95	After NB E exit merges	D	D
	28th Ave		E ⁽¹⁾	E ⁽¹⁾
	City Hall Circle	East of Circle	E ⁽¹⁾	E ⁽¹⁾
	Dixie Highway		C	D

Note:

- (1) - Recent sidewalk improvements in the vicinity of N/S 28th Avenue have improved conditions for pedestrians in the area. However, the improvements did not significantly alter factors that comprise FDOT's pedestrian level of service formula. The pedestrian level of service is heavily influenced by the volume of traffic in the vicinity of I-95.





Bicycle

Providing bicycle facilities are important to enhance bicycling as a viable transportation option. Bicycle infrastructure can include amenities that enhance the experience of the user and encourage greater use. It is important to combine bicycle facilities and bicycle infrastructure into an integrated system that augments bicycling as a mode of transportation.

Bicycle facilities can include bike lanes, bike paths, shared use paths, wide curb lanes, and paved shoulders. Bike lanes form a portion of the roadway and have been designated for exclusive use by bicycles. Bike lanes are not physically separated from traffic, but are marked through pavement markings, striping and signage. Bike paths and shared use paths are physically separated by an open space or a barrier and typically attract additional recreational riders. Shared use paths may be used by pedestrians as well as bicyclists. Wide curb lanes are similar to bike lanes but are not designated by striping or pavement markings. Paved shoulders are separated from travel lanes by the striping representing the outside edge of the outermost travel lane. Paved shoulders are meant to provide space for vehicle breakdowns and correction for driver error. Bicyclists may use the paved shoulder for travel, although the pavement surface is often not as smooth and is sometimes littered with debris.

Bicycle infrastructure can include bicycle parking racks, bicycle transport racks, lockers, and even workplace showers. Bicycle racks and lockers are used for bicycle parking and are typically available at schools, libraries, government buildings, and public transit terminals. Traditional bike racks provide little security; bicycle storage lockers provide additional security from theft and protection from the elements. Bicycle transport racks are facilities provided on public transit vehicles that allow transit patrons to bring their bicycle along with them and therefore allow the user to bring the bicycle from trip origin to trip destination. In addition, the availability of showers and lockers at a workplace encourages bicycle commuting by providing facilities that allow employees to maintain a professional appearance.

Bike Lanes

The bike lanes along Hollywood/Pines Boulevard were surveyed for continuity and accessibility. Three separate segments of bike lanes were identified as described below. According to the field inventory along Hollywood/Pines Boulevard, bicycle lanes are provided along only 14 percent of the roadway.

- Segment 1: From Hollywood City Hall to North/South 28th Avenue.

This bike lane exists around Hollywood City Hall Circle and extends along both the north side and south side of Hollywood Boulevard to the North/South 28th Avenue intersection just east of I-95. West of the Circle, there are two through lanes of traffic on one side of the bike lane and 60° on-street parking on the other side. There are appropriate pavement markings and signage indicating the eastern terminus of the bike lane as depicted in Exhibit 3. However, there is no signage indicating the western terminus of the bike lane.



Exhibit 3. Bike lane signage looking westbound approaching Hollywood City Hall Circle

- Segment 2: From SW 64th Way to SW 83rd Avenue.

A bike lane exists along both sides of Hollywood/Pines Boulevard between SW 64th Way and SW 83rd Avenue. The 6501 block of Hollywood Boulevard is the location of McArthur High School, near the eastern terminus of the bike lane; the

location of the bike lane lends itself to use by high school students that may ride to school. Pavement markings and striping exist demarcating the presence of the bike lane, as shown in Exhibit 4. Exhibit 5 depicts the signage indicating the western terminus of the bike lane.



Exhibit 4. Bike lane along westbound Hollywood Boulevard west of 68th Avenue



Exhibit 5. Western terminus of bike lane at the NW/SW 83rd Avenue intersection

- Segment 3: From 40 feet west of Douglas Road to shopping plaza entrance.

A bike lane exists only along the north side of Pines Boulevard from 40 feet west of the Douglas Road intersection to the shopping plaza entrance, providing access to the shopping plaza adjacent to the roadway. The bike lane only extends approximately 700 feet in length. Exhibit 6 depicts this segment of bike lane, which begins adjacent to a bus bay.



Exhibit 6. Bike lane along westbound Pines Boulevard west of Douglas Road

Bicycle Crash Data

Figure 2, located on page 44, presents the location of pedestrian and bicycle crashes that occurred between 1999 and 2001 along the study segment of Hollywood/Pines Boulevard between U.S. 27 and 28th Avenue, which is the portion of the roadway that is part of the State Highway System.

A total of 29 bicycle collisions occurred along Hollywood/Pines Boulevard between 1999 and 2001. Of the 29 bicycle collisions, 27 (93 percent) of the collisions resulted in injuries. Only 5 of the 29 bicycle collisions (17 percent) occurred during dark conditions. The majority of the bicycle collisions occurred when bicyclists were crossing Hollywood/Pines Boulevard, not riding alongside the roadway. Only 2 of the 29 bicycle collisions (7 percent) occurred when the

bicyclist was riding in a bike lane. The highest concentration of bicycle collisions occurred in the segment west of McArthur High School between North 72nd Avenue and North 64th Avenue. Bicycle and pedestrian safety in the vicinity of schools is of vital concern for the safety of school-aged children.

Bicycle Level of Service

According to the performance measures developed for this study and presented in Table 1, bicycle mobility is measured by bicycle level of service (BLOS). The Florida Department of Transportation (FDOT) has developed the bicycle level of service model as the accepted analytical model for evaluating bicycle mobility. The bicycle level of service was calculated for Hollywood/Pines Boulevard according to the procedures stated in FDOT's *2002 Quality/Level of Service Handbook*. Bicycle LOS is affected by the following factors.

- Effective width of the outside through travel lane.

Bicyclists typically travel in the outermost lane of the roadway. Therefore, the width of the outside through travel lane is a key factor in a bicyclist's comfort level while riding adjacent to motor vehicles. The wider the outside lane, the more comfortable a bicyclist may be riding alongside larger and faster vehicles.
- Motorized vehicle traffic volumes.

Bicyclists may feel safer, and thus more comfortable, riding along roads with lower traffic volumes. Higher volumes create more potential conflicts with bicyclists and lower the level of service.
- Motorized vehicle traffic speed.

A higher vehicular speed will reduce a bicyclist's comfort level and discourage bicyclists for safety reasons. Higher vehicular speeds can increase the probability of injuries resulting from a collision and can also decrease the perception and reaction time for the driver of the motorized vehicle.
- Percentage of heavy trucks.

Heavy trucks travel with a greater momentum due to their weight; therefore, they present various problems for bicyclists including increased risk of injury in a

crash, increased noise and vibration, increased breaking distance for the truck, and reduced space available for the bicyclist due to the larger size of the truck versus a standard automobile.

- Pavement condition.

Pavement condition is a general classification of the roadway surface where bicycling usually occurs. As a planning technique, three classifications are used including desirable, typical, and undesirable.

- Presence of on-street parking.

Although it enhances pedestrian level of service by acting as a barrier between pedestrians and the roadway, on-street parking acts as somewhat of a hindrance to bicyclists, thus lowering the level of service. Automobiles accessing on-street parking must pass through the space typically occupied by bicyclists to get to the parking area. Furthermore, bicyclists must observe cars leaving their parking spaces. In general, there is a greater potential for a bicycle collision in this situation.

Bicycle mobility can also be measured by the bicycle suitability rating, which is a measure of the amount of interaction with traffic a bicyclist can expect. The bicycle suitability rating was obtained from the Broward County Bicycle Suitability Map, prepared by the Broward County Transportation Planning Division. Roadways are assigned ratings from least to extremely high amount of interaction with traffic.

Table 12 contains a summary of the bicycle level of service calculations for Hollywood/Pines Boulevard for both the north side of the roadway and the south side of the roadway. Separate calculations are made for the AM peak period and the PM peak period based on different traffic volumes. High traffic volumes have a severe detrimental impact on bicycle level of service. Table 13 contains the bicycle suitability rating for various segments of Hollywood/Pines Boulevard. Figure 5 depicts a map of AM peak bicycle level of service along the study corridor. Figure 6 depicts a map of PM peak bicycle level of service along the study corridor. Appendix B contains a table showing bicycle level of service calculations.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

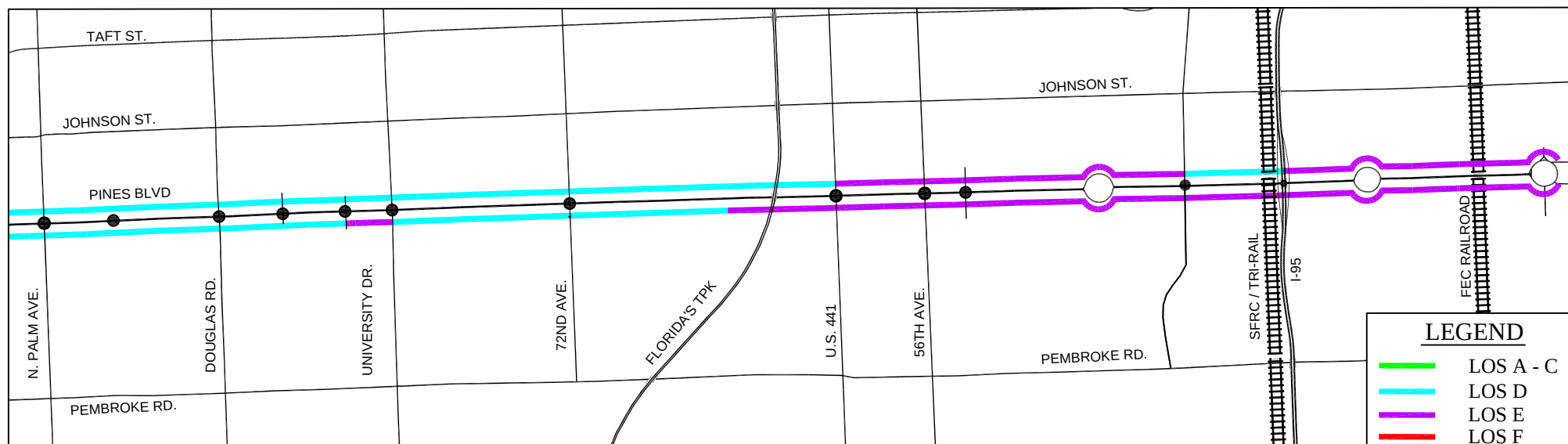
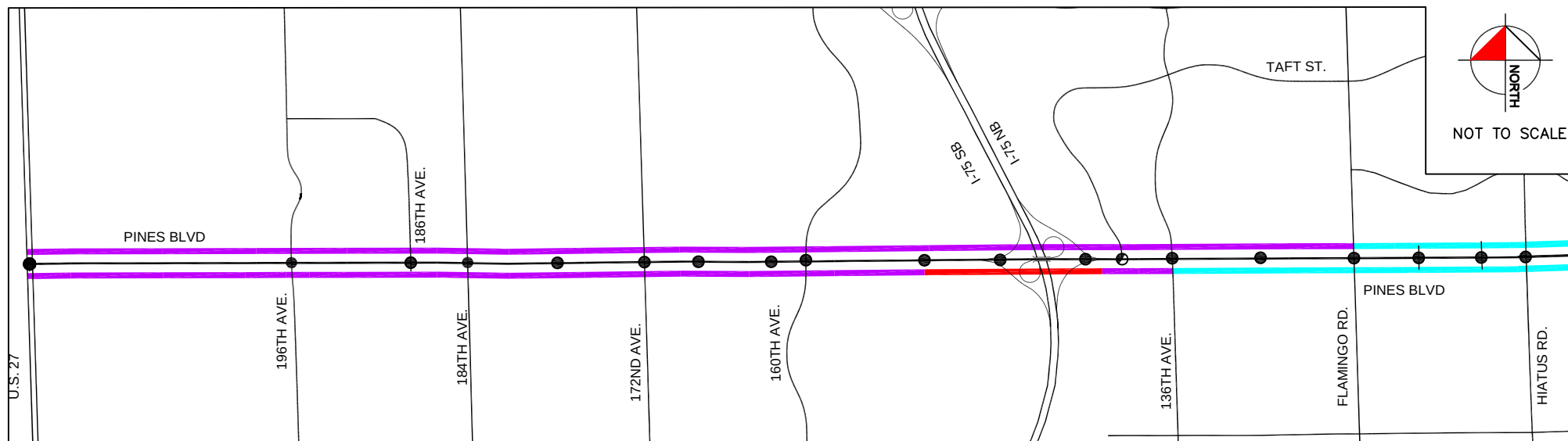
Table 12. Bicycle Level of Service

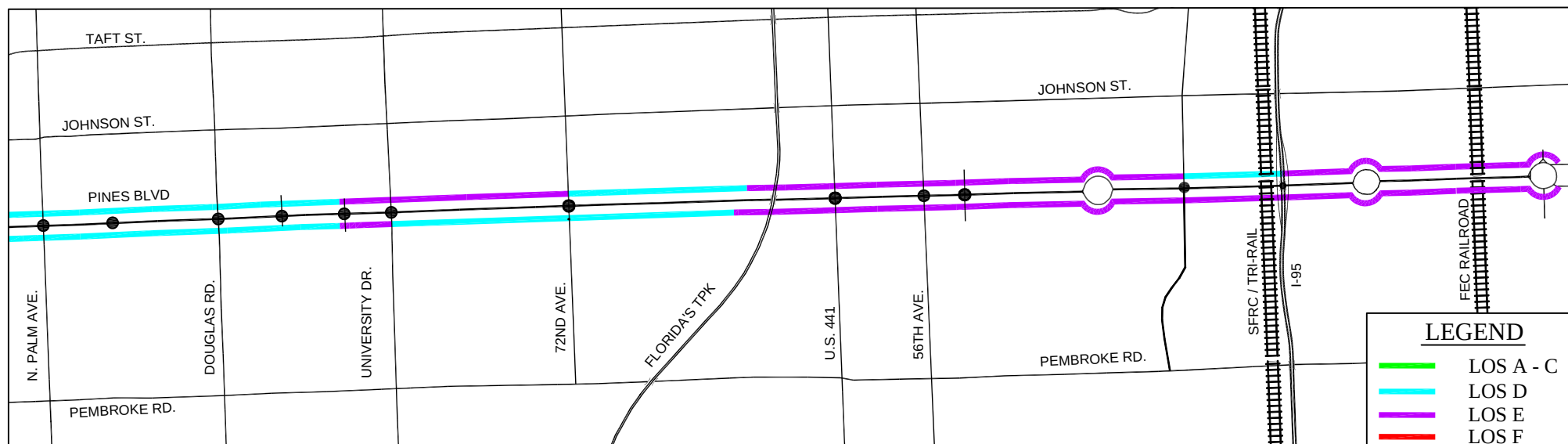
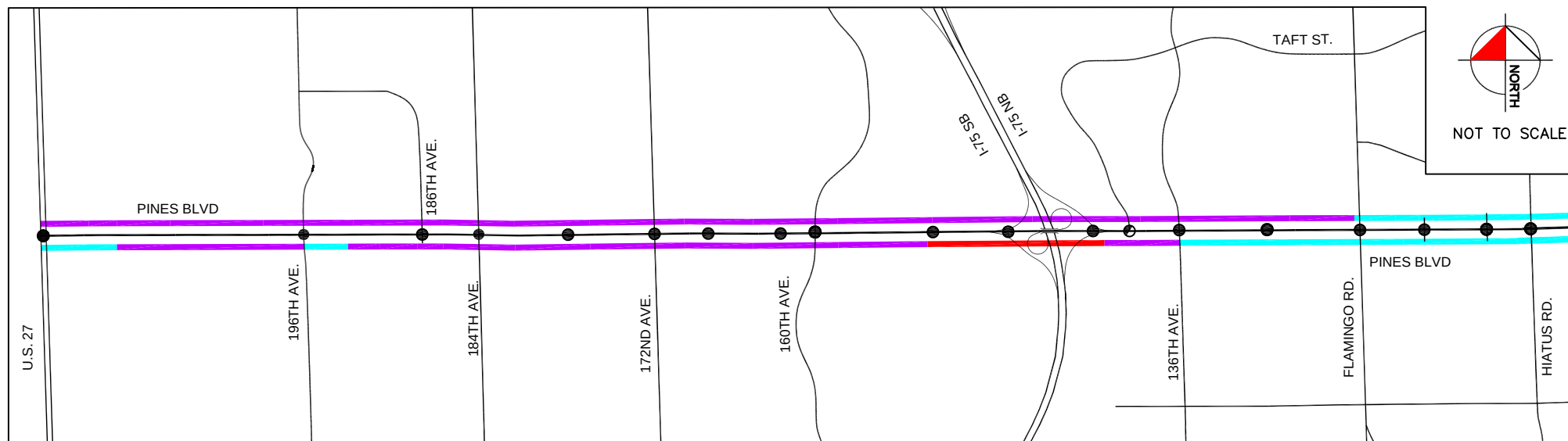
	Intersecting Street	Location	Bicycle LOS	
			AM	PM
North Side	Dixie Highway	East of intersection	E	E
	Dixie Highway	West of intersection	E	E
	City Hall Circle	Around the circle	E	E
	City Hall Circle	West of circle	E	E
	28th Ave		E	E
	I-95 (Tri-Rail Station)		D	D
	West of Tri-Rail		D	D
	Park Road		E	E
	35th Ave		E	E
	North Circle Drive (E)		E	E
	North Circle Drive (W)		E	E
	44th Ave		E	E
	48th Ave		E	E
	U.S. 441		D	E
	62nd Ave	West of intersection	D	E
	64th Way (McArthur High School)	West of intersection	D	D
	McArthur Pkwy		D	E
	74th Terr		D	E
	83rd Ave		D	D
	Douglas Road		D	D
	Hiatus Road		D	D
	114th Ave		D	D
	Flamingo Road		D	D
	I-75		E	E
	Westfork Plaza		E	E
	Dykes Road		E	E
	196th Ave		E	E
	208th Ave		E	E
South Side	U.S. 27		E	D
	208th Ave		E	E
	198th Terr		E	E
	196th Ave		E	E
	St. Edward Church access road		E	D
	186th Ave		E	E
	168th Ave		E	E
	Dykes Rd		E	E
	155th Grand Palm Drive		F	F
	145th Ave		E	E
	136th Ave		D	D
	129th Ave		D	D
	Flamingo Road	West of intersection	D	D
	Flamingo Road	At intersection	D	D
	Flamingo Road	1st driveway east of int.	D	D
	Palm Ave		D	D
	83rd Ave		E	E
	Marketplace access rd	West of University Drive	E	E
	University Drive		D	D
	Access road (Hooters)	East 300 feet from Univ.	D	D
	McArthur HS parking lot entrance	West of 64th Way	E	E
	62nd Ave		E	E
	U.S. 441		E	E
	access rd to vacant mall	1000' east of SR 7	E	E
	58th Ave	E of int.	E	E
	56th Ave		E	E
	Presidential Circle		E	E
	Presidential Circle	East of Circle	E	E
	emergency signal	350' east of 35th Ave	E	E
	Entrada Dr		E	E
	I-95	After NB E exit merges	E	E
	28th Ave		E	E
	City Hall Circle	East of Circle	E	E
	Dixie Hwy		E	E

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 13. Bicycle Suitability Rating

From	To	Existing Bicycle Facilities	Bicycle Suitability Rating (Traffic Interaction)
U.S. 27	I-75 Southbound Ramps	None	Low to Moderate
I-75 Southbound Ramps	I-75 Northbound Ramps	None	Moderate to High
I-75 Northbound Ramps	Flamingo Road	Paved Shoulder	High to Extremely High
Flamingo Road	Palm Avenue	Paved Shoulder	Moderate to High
Palm Avenue	Douglas Road	Paved Shoulder	High to Extremely High
Douglas Road	University Drive	Paved Shoulder	Low to Moderate
University Drive	McArthur Parkway	Bike Lane	Moderate to High
McArthur Pkwy	SW 72nd Avenue	Bike Lane	Least
SW 72nd Avenue	SW 67th Avenue	Bike Lane	Low to Moderate
SW 67th Avenue	SW 64th Way	Bike Lane	Moderate to High
SW 64th Way	U.S. 441 (State Road 7)	None	Moderate to High
U.S. 441 (State Road 7)	South 56th Avenue	None	High to Extremely High
South 56th Avenue	Presidential Circle	None	Moderate to High
Presidential Circle	Presidential Circle	None	High to Extremely High
Presidential Circle	Park Road	None	Moderate to High
Park Road	I-95	None	High to Extremely High
I-95	City Hall Circle	Bike Lane	Moderate to High
City Hall Circle	Dixie Highway	None	High to Extremely High
Dixie Highway	Young Circle	None	Moderate to High
Young Circle	Young Circle	None	High to Extremely High





Transit

Existing transit service within the extended study area of the Hollywood/Pines Boulevard Multimodal Corridor Study was inventoried to gauge current transit service levels and to identify system needs. Characteristics that were identified for this study include route alignments, hours of operation, headways (service frequencies), fare structure, bus stop locations, and ridership data.

The Broward County Mass Transit Division (BCT) provides fixed-route, express bus, and paratransit (demand responsive) services within Broward County. Transit service within the extended study area is primarily provided by BCT. Other bus transit service within the study area is provided by Miami-Dade Transit (MDT) and municipalities that participate in the Broward County Community Bus Program including Pembroke Pines and Miramar. Hollywood and Hallandale Beach also operate municipal bus service. In addition, SFRTA/Tri-Rail provides commuter rail service in the South Florida Rail Corridor (SFRC) adjacent to I-95.

BCT Fixed-Route Transit

Broward County Transit (BCT) provides fixed-route bus transit service throughout the county on a repetitive, fixed-schedule basis. BCT's fixed-route system is a network of forty routes using 255 full-size buses with seating capacities of 39 to 43 passengers. In 2001, BCT carried a total of 32.2 million passengers. Figure 7 presents the transit routes that travel along or intersect Hollywood/Pines Boulevard. Table 14 presents the route characteristics of the BCT routes within the study area.

Twelve of the forty BCT routes either travel along or intersect Hollywood/Pines Boulevard. Route 7 is the primary route within the study area; Route 7 is a trunk line serving Hollywood/Pines Boulevard from U.S. 27 in the west to Young Circle in the east. Route 7 continues east on Hollywood Boulevard to S.R. A1A before turning north to also serve Dania Beach. Primary destinations along Route 7 include the Pembroke Lakes Mall, Broward County

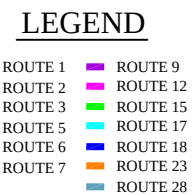
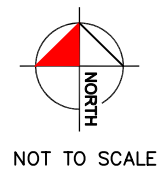


Table 14. Transit Route Characteristics

Route	Days of Service	Hours	Headway	Number of Buses
3	Monday - Saturday	5:55 AM to 8:00 PM	60 minutes	3
5	Monday - Friday	5:35 AM to 9:50 PM	60 minutes	3
	Saturday	7:15 AM to 9:35 PM	60 minutes	3
	Sunday	8:05 AM to 8:35 PM	60 minutes	3
6	Monday - Saturday	5:10 AM to 10:05 PM	30 minutes	4
	Sunday	10:00 AM to 5:00 PM	60 minutes	2
7	Monday - Saturday	5:00 AM to 11:45 PM	30 minutes	7
	Sunday	9:30 AM to 7:00 PM	40 minutes	5
17	Monday - Friday	5:30 AM to 8:35 PM	40 minutes	2
	Saturday	6:20 AM to 8:35 PM	40 minutes	2
	Sunday	10:10 AM to 6:50 PM	75 minutes	1
28	Monday - Saturday	5:10 AM to 11:50 PM	30 minutes	5
	Sunday	9:30 AM to 7:25 PM	45 minutes	3
1 ^(A)	Monday - Friday	5:10 AM to 11:40 PM	15 minutes	10
	Saturday	5:10 AM to 11:30 PM	30 minutes	5
	Sunday	8:45 AM to 9:25 PM	30 minutes	5
2 ^(A)	Monday - Friday	5:05 AM to 12:35 AM	20 minutes	15
	Saturday	5:15 AM to 12:00 AM	40 minutes	7
	Sunday	8:35 AM to 9:40 PM	40 minutes	7
9 ^(A)	Monday - Friday	5:55 AM to 10:35 PM	40 minutes	6
	Saturday	6:00 AM to 10:30 PM	60 minutes	4
	Sunday	8:25 AM to 8:35 PM	60 minutes	4
15 ^(A)	Monday - Saturday	5:00 AM to 10:10 PM	45 minutes	2
	Sunday	10:15 AM to 7:10 PM	90 minutes	1
18 ^(A)	Monday - Friday	4:40 AM to 12:40 AM	15 minutes	20
	Saturday	4:30 AM to 12:40 AM	30 minutes	11
	Sunday	6:35 AM to 10:20 PM	30 minutes	10
23 ^(A)	Monday - Friday	6:30 AM to 7:50 PM	45 minutes	3
	Saturday - Sunday	8:00 AM to 7:50 PM	45 minutes	3
12 ^(B)	Monday - Friday	6:00 AM to 8:00 PM	40 minutes	4
	Saturday	6:05 AM to 7:50 PM	45 minutes	4
	Sunday	10:00 AM to 7:15 PM	60 minutes	2

Notes:

^(A) – Route intersects Hollywood/Pines Boulevard, but never travels along it.^(B) – Route 12 does not intersect Hollywood/Pines Boulevard but does service the extended study area.

Community College (BCC) South Campus, Hollywood Tri-Rail Station, Young Circle, and Dania Beach. Weekday and Saturday headways along Route 7 are 30 minutes throughout the daily span of service (5:00 AM – 11:45 PM). On Sundays, 40-minute headways are provided along Route 7.

According to the performance measures developed for this study and included in Table 1, transit mobility is represented by ridership data such as passengers per revenue mile and passengers per revenue hour. Ridership characteristics were collected for the twelve BCT routes within the study area and are presented in Table 15. Ridership data were collected from BCT for the most recent complete year of data (2002) available for this study. Table 15 also presents major destinations along the route.

Travel time is a key indicator of transit performance. Transit systems with system travel times that are competitive with the automobile are more likely to attract choice riders, or those passengers that choose to ride transit despite having other modes of transportation available to make their trip. According to the published BCT schedule for Route 7 dated April 14, 2002, a trip along Hollywood/Pines Boulevard from U.S. 27 to Young Circle can be accomplished in one hour and twenty minutes. According to the average eastbound AM peak automobile travel time run collected for this study (and discussed further in the Roadway section of this chapter), the average automobile trip from U.S. 27 to Young Circle takes forty-five minutes and thirty-three seconds. Thus, the average travel time by bus is 76 percent longer than the average travel time by automobile along eastbound Hollywood/Pines Boulevard. Using a similar methodology, the average westbound PM peak travel time by bus is 79 percent longer than the average westbound PM peak travel time by automobile.

Fare Structure

The fare structure of BCT includes one-way fares and passes that can be used for multiple rides at reduced rates. Discounted rates are available for seniors, youths, and disabled persons. The fare structure for BCT is shown in Table 16.

Table 15. Transit Ridership Characteristics

Route	Weekday Headway	Passengers Per Mile	Passengers Per Hour	Maximum Load Factor	Destinations Served
3	60	1.96	26.37	0.83	Dania Beach, Griffin Road Tri-Rail Station, Sheridan Street Park&Ride, Pembroke Lakes Mall, C.B. Smith, Century Village
5	60	2.86	32.25	0.63	Hallandale&U.S. 1, Pembroke Lakes Mall, Century Village
6	30	2.23	27.26	0.32	Dania Beach, Griffin Road Tri-Rail Station, Young Circle, Hollywood City Hall Circle, County Line Road
7	30	2.34	32.93	0.61	Dania Beach, Hollywood&A1A, Young Circle, Hollywood Tri-Rail Station, BCC South Campus, Pembroke Lakes Mall, C.B. Smith, U.S. 27, Hollywood / Pines Boulevard trunk route
17	40	1.55	17.81	0.17	Sheridan Street Park&Ride, Hollywood Boulevard & Park Road, Hollywood Medical Center
28	30	2.43	35.87	0.43	Young Circle, Hollywood&A1A, Hallandale Beach Boulevard / Miramar Parkway trunk route
1 ^(A)	15	4.20	50.31	0.70	Broward Central Terminal, Fort Lauderdale Airport, Young Circle, Aventura Mall, U.S. 1 trunk route
2 ^(A)	20	1.84	26.65	0.65	Coral Square Mall, Broward Mall, Golden Glades Interchange, University Drive trunk route
9 ^(A)	40	2.22	34.37	0.48	Broward Central Terminal, BCC Central Campus, Young Circle, Aventura Mall
15 ^(A)	45	1.11	16.82	0.16	Griffin Road Tri-Rail Station, Hollywood&56Ave, Hallandale&40Ave
18 ^(A)	15	3.43	46.75	0.74	West Boca Raton, Lauderhill Mall, Golden Glades Interchange, 163rd Street Mall, U.S. 441 trunk route
23 ^(A)	45	0.56	9.78	0.13	Sawgrass Mills Mall, Weston, Pembroke Lakes Mall
12 ^(B)	40	2.15	30.81	0.36	West Regional Terminal, BCC Central Campus, Sheridan Street Tri-Rail Station, Sheridan&U.S. 1, Anne Kolb Nature Center

Notes:

^(A) – Route intersects Hollywood/Pines Boulevard, but never travels along it.^(B) – Route 12 does not intersect Hollywood/Pines Boulevard but does service the extended study area.

Table 16. BCT Fares

<i>Type</i>		<i>Description</i>	<i>Regular</i>	<i>Discounted</i>
Regular	One-way	• Single one-way ride	\$1.00	\$0.50
Bus Passes	All Day	• Unlimited rides all day on all routes	\$2.50	\$1.25
	10 Rides	• 10 rides any day, any time	\$8.00	-
		• Expires after the 10th ride is taken		
	7-Day	• Unlimited rides for 7 consecutive days	\$9.00	-
		• Starts the first day card is used		
		• Expires after the seventh day		
	31-Day Adult	• Unlimited rides for 31 consecutive days	\$32.00	\$16.00
		• Starts on the first day the card is used		
		• Expires after the 31st day		

<i>Discounted Rates</i>	
Regular	People aged 19 - 64 years, no ID required
Youth	18 years and younger, proof of age required
Senior	65 years and older, proof of age required
Disabled	For Disabled fare, proof of disability is required: • Medicare card • Letter from doctor stating 50 percent or more permanent disability • Social Security Income (SSI) printout or check • BCT photo identification card
Medicare	Medicare card and BCT photo identification card
Children (FREE)	Shorter than fare box (under 40 inches)

Source: <http://www.co.broward.fl.us/bct/fares.htm>

The Western Express

The Western Express is a weekday peak period express bus service operated by BCT that connects Pembroke Pines and Weston with Downtown Fort Lauderdale and Tri-Rail. One mini-bus provides service between the park-and-ride at C.B. Smith Park and Downtown Fort Lauderdale. In addition, two buses operate to and from the Weston Town Center. This express bus service is provided through a partnership between BCT and the Federal Highway Administration (FHWA).

Only the “Pembroke Pines Route” of the Western Express passes through the study area for this project. The “Pembroke Pines Route” operates from C.B. Smith Park, located in the northwest corner of the Pines Boulevard and Flamingo Road intersection. The route utilizes Pines Boulevard, I-75, I-595, U.S. 1, and SE 3rd Avenue to reach Downtown Fort Lauderdale. Service is also provided to the Fort Lauderdale Tri-Rail Station along Broward Boulevard. Ridership information from 2002 indicates approximately 40 passengers per day utilize the two Western Express routes.

Paratransit

In addition to fixed route service and express buses, Broward County Transit (BCT) provides paratransit (demand responsive) service within the county. BCT’s paratransit service is known as Transportation Options (TOPS). In accordance with the Americans with Disabilities Act (ADA), BCT offers paratransit service to transport qualified individuals who, because of a functional disability (physical or cognitive), cannot access or use the fixed-route bus system. Qualified individuals must live within three quarters of a mile of regular fixed-route bus system, and pass a functional ability assessment. Paratransit users must call to schedule a ride at least one day in advance of the trip. The TOPS fleet includes a wide variety of vehicles including cars, lift-equipped vans, and wheelchair-accessible vans. The one-way fare per trip is \$2. Within the City of Pembroke Pines, the Area Agency on Aging is the TOPS paratransit provider.

Community Bus Routes

The Broward County Transit (BCT) Community Bus Program subsidizes municipalities in Broward County \$20.00 per revenue service hour per vehicle to operate local transit circulator services. The Community Bus Program is designed to increase the number of destinations available to transit patrons within participating municipalities and to provide connections to standard BCT routes. Within the extended study area for this project, Pembroke Pines and Miramar participate in the Community Bus Program. In addition, Hollywood and Hallandale Beach offer municipal bus service.

Pembroke Pines

The City of Pembroke Pines provides two mini-bus routes that are designed to connect with BCT Routes 3, 5, 7, and 23. The Gold Route primarily operates in the eastern portion of the City and the Green Route primarily operates in the western portion of the City. The two routes intersect at the Memorial Hospital and the Pembroke Lakes Mall. The service operates Mondays through Saturdays.

The Gold Route serves Century Village, Memorial Hospital, the Pembroke Lakes Mall, and the Southwest Focal Point Senior Center; the Gold Route operates along NW/SW 136th Avenue, Taft Street, Flamingo Road, Johnson Street, and NW 103rd Avenue. Headways of 30 minutes are provided along the Gold Route.

The Green Route serves Memorial Hospital, the Pembroke Lakes Mall, and several shopping centers and housing developments west of I-75 including Westfork Plaza, Wal-Mart, Chapel Trail Estates, Price Park, and Heritage Lakes. Headways of 40 minutes are provided along the Green Route. The Green Route also provides a connection to the City of Miramar Green Route at two locations – Memorial Hospital and SW 178th Avenue.

Miramar

The City of Miramar provides two mini-bus routes that are designed to connect with BCT Routes 2, 3, 5, 7, 18, 23, and 28. Both the Green Route and the Red Route serve similar areas in central and eastern Miramar; however, only the Green Route serves the area of Miramar west of I-75. Both routes intersect with BCT and City of Pembroke Pines routes at Memorial Hospital north of Pines Boulevard. The service operates on weekdays only.

The Red Route serves Memorial Hospital, the Pembroke Lakes Mall, Miramar Commons, the Youth Center along Douglas Road, and the Senior Center along Pembroke Road; the Red Route operates along Flamingo Road, Pembroke Road, Hiatus Road, Miramar Boulevard, Douglas

Road, and Miramar Parkway. Headways of 60 minutes are provided along the Red Route. The Red Route is designed to connect to the future Miramar Town Center along Miramar Boulevard east of Red Road.

The Green Route serves Memorial Hospital, Miramar Commons, River Run Shopping Center, the Senior Center along Pembroke Road, and the Civic Center near SW 34th Street and SW 69th Avenue. The Green Route also serves several residential areas along SW 172nd Avenue and SW 178th Avenue west of I-75. Headways of 60 minutes are provided along the Green Route. The Green Route provides a connection to the City of Pembroke Pines Green Route at two locations – Memorial Hospital and SW 178th Avenue.

Hollywood

The City of Hollywood's "Holly Trolley" provides local transportation between Hollywood Beach and Downtown Hollywood. The trolley operates on 30-minute headways between 10:00 AM and 10:00 PM Sundays through Thursdays. On Fridays and Saturdays, the trolley operates until midnight. The "Holly Trolley" serves 32 stops on Ocean Drive, Hollywood Boulevard, and Harrison Street, providing access to hotels, restaurants, tourist destinations, and shopping establishments.

Hallandale Beach

The City of Hallandale Beach has recently initiated community bus service with two routes serving the area of central and eastern Hallandale Beach operating Mondays through Saturdays. However, neither route intersects Hollywood Boulevard. Route 1, operating on 30-minute headways, serves Ocean Drive south of Hallandale Beach Boulevard, the Diplomat Mall Shopping Center, and Wal-Mart. Route 2, operating on 45-minute headways, serves the Diplomat Mall Shopping Center, Atlantic Shores Boulevard, City Hall, Federal Highway between Atlantic Shores Boulevard and Gulfstream Park, and Golden Isles. Only Route 2 along

Federal Highway is within the extended study boundary for the Hollywood/Pines Boulevard Multimodal Corridor Study.

South Florida Regional Transportation Authority (SFRTA/Tri-Rail)

Tri-Rail is a commuter rail service that extends 72 miles from Miami International Airport in Miami-Dade County to Mangonia Park in Palm Beach County. Tri-Rail operates trains in the South Florida Rail Corridor (SFRC). More background information on Tri-Rail can be found in the “Tri-Rail Long Range Master Plan” subsection of the “Data Retrieval and Collection” chapter of this report.

Tri-Rail’s 72-mile alignment features 18 stations. Two Tri-Rail stations are located within the extended study area for this study – the Sheridan Street Station and the Hollywood Station. A large park-n-ride lot is located at the Sheridan Street Station (approximately 800 spaces) with connecting bus service provided by BCT and Tri-Rail’s Sheridan Street Station shuttle service. A smaller parking lot for Tri-Rail and Amtrak patrons is provided at the Hollywood Station (approximately 140 spaces). Buses are unable to enter the parking lot at the Hollywood Station; therefore, connecting passengers must walk to Hollywood Boulevard to board BCT Route 7. No Tri-Rail shuttle is provided at the Hollywood Station.

Tri-Rail trains operate on 60-minute headways on weekdays and 120-minute headways on weekends. Northbound trains presently arrive at the Hollywood Station between 4:44 AM and 11:44 AM during weekday mornings and between 2:00 PM and 8:00 PM during weekday afternoons. Southbound trains presently arrive at the Hollywood Station between 5:43 AM and 12:03 PM during weekday mornings and between 3:19 PM and 9:19 PM during weekday afternoons. The existing mid-day gap in service is necessary to accommodate construction activities associated with the “Double Track Corridor Improvement Program.”

The Tri-Rail system carries approximately 9,500 passengers per average weekday and approximately 3,500 daily passengers on the weekend. Data obtained from *Tri-Rail Station*

Usage Reports indicate annual average daily weekday boardings at the Hollywood Station are approximately 500. Annual average daily weekday alightings at the Hollywood Station are approximately 430. Of the 18 Tri-Rail stations, the Hollywood Station typically experiences the 8th highest boardings total and the 9th highest alightings total. Among the 7 Broward County Tri-Rail stations, the Hollywood Station typically receives the 2nd highest passenger activity behind Fort Lauderdale and slightly ahead of Cypress Creek.

Despite the presence of a large park-n-ride lot and more convenient transit connections, passenger activity at the Sheridan Street Station is not as high. Annual average daily weekday boardings and alightings at the Sheridan Street Station are approximately 220 and 230, respectively. Of the 18 Tri-Rail stations, the Sheridan Street Station typically experiences the 16th highest boardings and alightings total. On a typical weekday, the Sheridan Street Station presently experiences the fewest boardings and alightings among the Broward County stations. FDOT completed a bus/rail interface plan associated with the “Double Track Corridor Improvement Program” that recommended eliminating the existing Tri-Rail shuttle at the Sheridan Street Station and improving the frequency of BCT Routes 3 and 12 to the station.

Miami-Dade Transit (MDT)

Within the extended study boundary for this project, connections to Miami-Dade Transit (MDT) Metrobus routes can be made at the intersection of Hallandale Beach Boulevard and U.S. 1. Three Metrobus routes (3, K, and V) serve the intersection, as well as Hallandale Beach Boulevard to the east including the Diplomat Mall Shopping Center and Wal-Mart. Route 3 travels along U.S. 1 (Biscayne Boulevard) and serves the Aventura Mall, the 163rd Street Mall, the Omni Bus Terminal, and the Downtown Miami Bus Terminal. Headways along Route 3 vary from 20 to 30 minutes throughout the day. Route K travels along S.R. A1A and serves Haulover, Bal Harbour, Miami Beach, the Omni Bus Terminal, and the Downtown Miami Bus Terminal. Route V operates between the Diplomat Mall and the Golden Glades interchange along S.R. A1A, the Sunny Isles Causeway, and NE 163rd/167th Street. Routes K and V operate with 30-minute headways during peak periods and 60-minute headways during off-peak periods.

Bus Stop Passenger Activity

Figure 8 presents the average daily boardings for westbound bus stops along Hollywood/Pines Boulevard, which includes Route 7 (the east-west trunk line along Hollywood/Pines Boulevard), and Routes 3, 5, and 6. Bus stops with 25 or more average daily boardings are depicted in red; 25 daily boardings is often used as a threshold for establishing need for bus shelters. Figure 9 presents the average daily boardings for eastbound bus stops along Routes 7, 3, 5, and 6. Figures 8 and 9 show that some bus stops receive significantly greater passenger activity than others. Young Circle and the Pembroke Lakes Mall are the most significant locations for passenger boardings along the corridor. The Broward Community College (BCC) South Campus also produces a significant amount of boardings. Bus stops near U.S. 441 and University Drive exhibit high levels of passenger activity due in part to the high volume of transfers at these locations to north-south routes, Route 18 and Route 2, respectively. High transfer activity is also observed in the area around Young Circle as passengers can transfer to Routes 1, 6, 9, or 28.

Bus Stop Infrastructure and Accessibility

For purposes of this study, bus stops along Hollywood/Pines Boulevard were surveyed for infrastructure as well as accessibility. Broward County Transit (BCT) has developed guidelines that establish the threshold for providing enhanced transit infrastructure at bus stops as 25 or more passengers per day. Basic transit infrastructure includes bus signs, benches, and trash receptacles. Enhanced transit infrastructure includes bus shelters and bus bays. Table 17 presents the results of the bus stop inventory performed for this study.

Sidewalk accessibility was also included in the field inventory of bus stops. Bus stops where the bench was blocking the sidewalk access were also noted. A total of 73 bus stops were inventoried in the westbound direction along Hollywood/Pines Boulevard (including a portion of Tyler Street) and a total of 76 bus stops were inventoried in the eastbound direction along Hollywood/Pines Boulevard (including a portion of Harrison Street). Of the westbound bus stops, 47 percent offered uninhibited sidewalk access (sidewalk access that was not blocked by a bench). Of the eastbound bus stops, 63 percent offered uninhibited sidewalk access.

Figure 8. Average Daily Boardings - Westbound

Bus stops depicted in red indicate 25 or more average daily boardings.

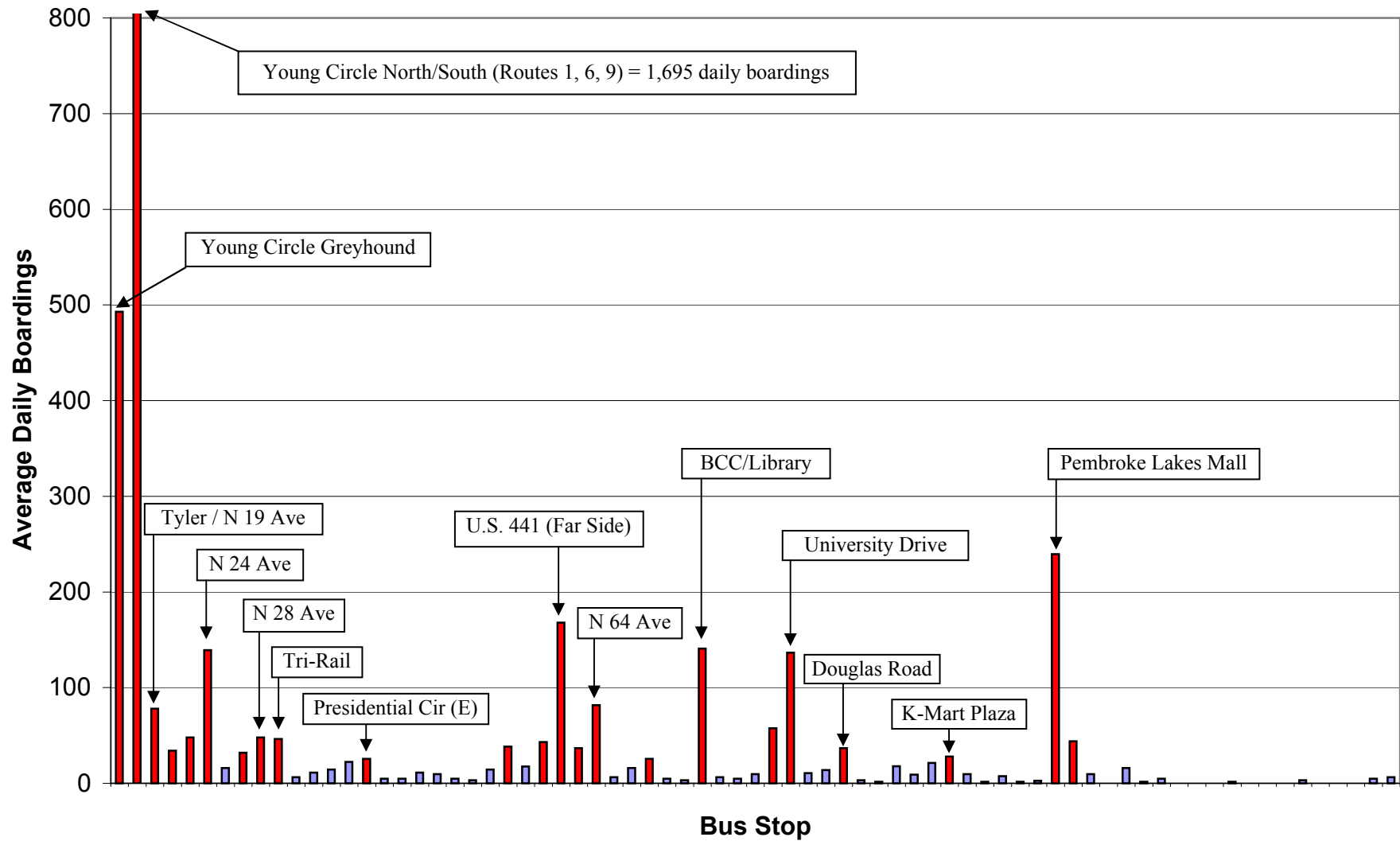
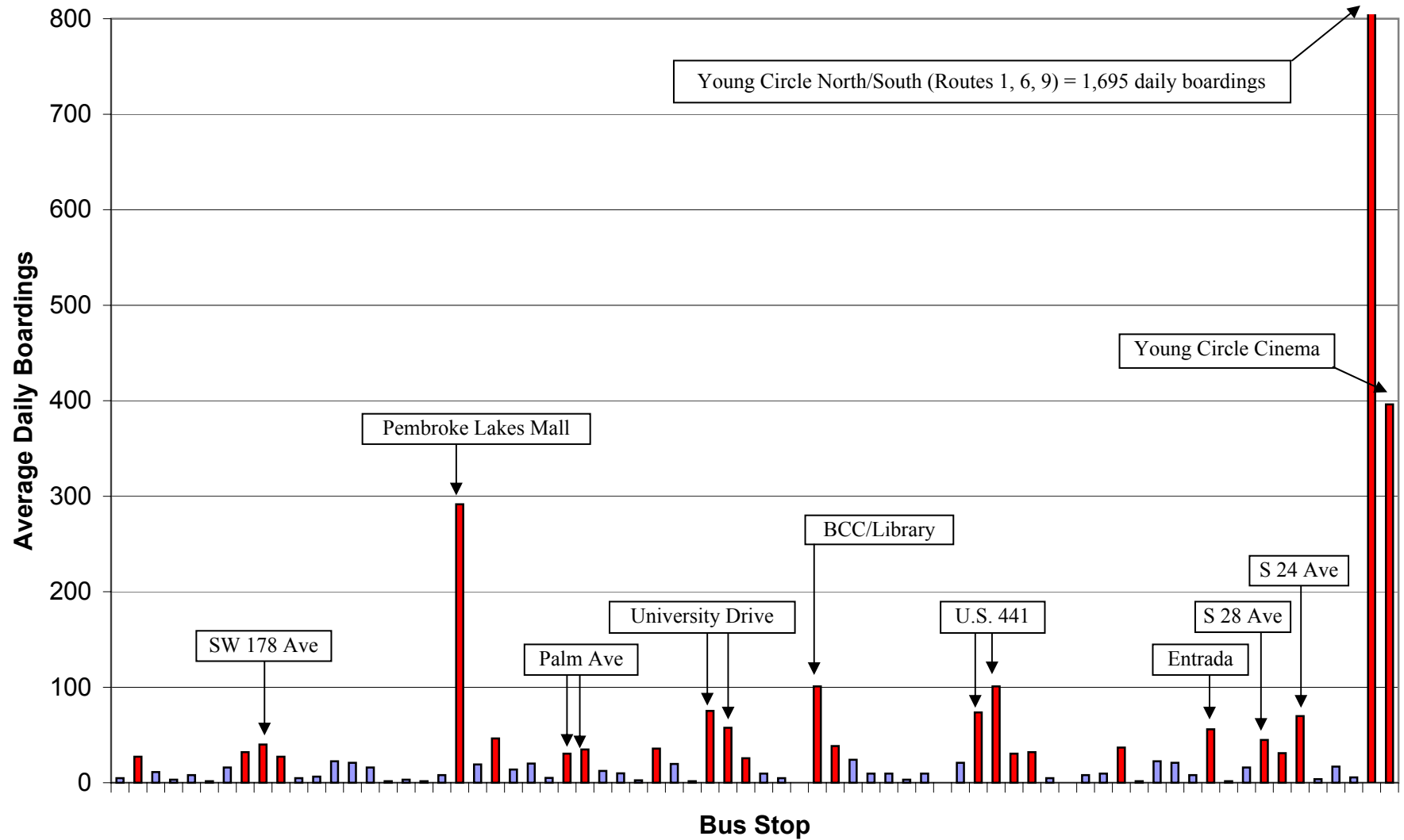


Figure 9. Average Daily Boardings - Eastbound

Bus stops depicted in red indicate 25 or more average daily boardings.



HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 17. Bus Stop Field Inventory

Traveling westbound, bus stops are on north side of the road. Traveling eastbound, bus stops are on the south side of the road.

	North/South Street	Location	Location ID	Daily Boardings	Benches	Shelter w/Bench	Trash Can	Sidewalk Access	Bus Bay Size	Picture Location in Project Photo Log	Notes
WB	Young Circle (Greyhound)	N of 820, E of U.S. 1	608	492.8	4		1	1	190x22	Disk 1: 2-5	
	Young Circle	In front of Walgreens	34	1695.0	5		1	1	200x20	6-10	Routes 1, 6, and 9
WB	Tyler Street / N 19 Ave	W 80	3018	78.0		1		1	60		Routes 6 and 7 utilize Tyler
WB	Tyler Street / N 20 Ave	W 80	3019	34.2	1			1	60		Routes 6 and 7 utilize Tyler
WB	Dixie Hwy	W 45	419	47.8		1	1	1	50x20	16	
WB	24th Ave	W 45	3811	139.3		1	1	1		18-20	
WB	City Hall Circle	E 100	471	15.9	1			1	60	22	
WB	City Hall Circle	NW quadrant of circle	499	32.0	1			1		23	
WB	28th Ave	W 60	500	48.0	1			1		24	bench far from sign
WB	I-95	W 300 (from railroad)	3812	46.4	2		1			Disk 2: 2	
WB	32nd Ave	E 60	2550	6.4	1		1			4	all grass
WB	Park Rd	E 200	3633	11.2	1			1	60	5	not a standard bus bay
WB	33rd Ave	W 40	3634	14.4	1				100	6	
WB	35th Ave	W 100	3813	22.4	1			1		7	
WB	N Circle Drive (E)	W 75	3814	25.6	1			1	50	8	not a standard bus bay
											not a standard bay, ramp from shelter not accessible to wheelchairs
WB	Presidential Circle	NW quadrant	501	4.8		1		1	50	9-10	
WB	N Circle Dr (W)	W 60	3815	4.8		1		1		11	
WB	44th Ave	W 110	502	11.2	1					12	
											bushes blocking sidewalk from bus stop
WB	46th Ave	W 50	503	9.6	1					13-14	
WB	48th Ave	W 40	504	4.8	1			1		15	
WB	50th Ave	E 50	505	3.2	1			1		16	
WB	52nd Ave	W 80	506	14.4		1		1		17-18	
WB	56th Ave	W 170	338	38.4		1				19	
WB	58th Ave	W 120	339	17.6	1					20	
WB	SR 7	E 120	4621	43.2	2		1	1		21	
WB	SR 7	W 240	340	168.0	1			1		22	another picture Disk 7:6
WB	62nd Ave	W 80	341	36.8	1			1		25	
WB	64th Ave	W 100	342	81.6		1	1				
WB	64th Way	W 370	3928	6.4	1			1		26	
WB	68th Ave	E 550	2448	16.0		1		1		28	
WB	68th Ave	W 20	1537	25.6		1		1		29	
WB	70th Ave	W 20	1538	4.8		1		1		30-31	
WB	72nd Ave	E 300	3929	3.2		1				Disk 3: 3	
WB	BCC/Library	On campus	2449	140.8		1					
WB	74th Terr	E 150	2905	6.4			1	1		4-5	
WB	76th Ave	W 200	3930	4.8			1			6	
WB	77th Way	W 60	1539	9.6	1		1	1		7	
WB	Pines Plaza	In front of Plaza	4576	57.6	1		1	1		8	
WB	University	E 300	5382	N/A	1		1	1		10	
WB	University	W 100	1540	136.5	1		1	1		9	
WB	83rd Ave	E 30	4089	10.8						11	
WB	86th Ave	W 50	2450	13.7	1					13	all grass
WB	Douglas Rd	W 90	3648	36.6	1		1	1	100	14-15	
WB	Douglas Rd	W 400	3649	3.2	1		1			16	all grass
WB	Fire Station Signal	E 300	3038	1.6	1		1			19	all grass
WB	98th Ave	W 40	3650	17.9	1	1	1			20	

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 17. Bus Stop Field Inventory

Traveling westbound, bus stops are on north side of the road. Traveling eastbound, bus stops are on the south side of the road.

	North/South Street	Location	Location ID	Daily Boardings	Benches	Shelter w/Bench	Trash Can	Sidewalk Access	Bus Bay Size	Picture Location in Project Photo Log	Notes
WB	Palm Ave	E 500	3651	9.2	1		1			21	all grass
WB	Palm Ave	W 70	2908	21.3	1	1	1			23-24	no access from sidewalk to shelter, only dirt path
WB	Kmart entrance	W 40	4091	28.0	1	1	1	1		25	bench blocking sidewalk
WB	106th Ave	W 15	3032	9.6	1		1			26	all grass
WB	108th Ave	W 60	3716	1.6	1		1			27	sloped, all grass
WB	Hiatus Rd	W 175	1736	7.6	1					28	all grass
WB	114th Ave	W 160	3699	1.6	1		1			29	bus stop (grass) is 80 ft from bench (sidewalk access)
WB	118th Ave (Mall Entrance)	E 220	4577	2.8	1		1			31	all grass
WB	Pembroke Lakes Mall	Sears	3517	239.6	2		1	1	100	Disk 8: 817	
WB	NW 4 St / Memorial Hosp W	Entrance	4750	43.9							
WB	Flamingo Rd	W 200	4995	9.6	1			1		Disk 4: 5-7	bench not along sidewalk
WB	129th Ave	E 500	4996	0.0	1		1			8	all grass
WB	129th Ave	W 150	4997	16.0	1		1			11	
WB	136th Ave	W 150	4998	1.6	2		1	1		12	bench blocking sidewalk
WB	150th Ave (Grand Palms Dr)	W 200	4999	4.8	1		1	1		13	
WB	Westfork Plaza (Winn Dixie)	W 180	5000	0.0	1		1	1		14	
WB	Dykes Rd	W 200	5001	0.0	1		1	1		15-16	bench blocking sidewalk
WB	163rd Ave	W 170	5002	0.0	1		1	1		17	bench blocking sidewalk
WB	Pembroke Shores Dr (168th Ave)	W 170	5003	1.6	1		1	1		18	bench blocking sidewalk
WB	172nd Ave	W 70	5004	0.0	1		1	1		19	bench blocking sidewalk
WB	178th Ave	W 200	5005	0.0	1		1	1		20	
	180th Ave	E 30			1					21	bench, but no bus stop sign, all grass with no sidewalk
WB	180th Ave	W 210	5006	0.0	1		1	1		22	bench blocking sidewalk
WB	184th Ave	W 70	5007	3.2	1		1	1		23	bench blocking sidewalk
WB	186th Ave	W 100	5008	0.0	1		1	1		24	bench blocking sidewalk
WB	196th Ave	W 150	5009	0.0	1		1			25	all grass
WB	202nd Ave	W 90	5010	0.0	1		1			26	all grass
WB	208th Ave	W 100	5011	4.8	1		1			27	all grass
WB	210th Ave	E 20	5040	6.4							in EB RT lane, no sidewalk
Westbound Totals:				52	16	16	41	43	11		
				73 westbound bus stops							

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 17. Bus Stop Field Inventory

Traveling westbound, bus stops are on north side of the road. Traveling eastbound, bus stops are on the south side of the road.

	North/South Street	Location	Location ID	Daily Boardings	Benches	Shelter w/Bench	Trash Can	Sidewalk Access	Bus Bay Size	Picture Location in Project Photo Log	Notes
EB	US 27	E 600	5041	4.8			1			28	all grass
EB	208th Ave	E 200	5015	27.2	1		1			30	all grass
EB	205th Ave	E 200	5016	11.2	1		1			31	all grass
EB	198th Terr	E 200	5017	3.2	1		1			32	all grass
EB	196th Ave	E 200	5018	8.0	1		1			Disk 5: 5-6	all grass
EB	access rd to Catholic Church	E 100	5019	1.6	1		1			9-10	all grass
EB	186th Ave	E 200	5020	16.0	1		1	1		11	bench blocking sidewalk
EB	184th Ave	E 200	5021	32.0	1		1	1		12	
EB	178th Ave	E 150	5022	40.0	1		1	1		13	bench far from street
EB	172nd Ave	E 120	5023	27.2	1		1	1		14	bench blocking sidewalk
EB	168th Ave	E 150	5024	4.8	1		1	1		15	bench blocking sidewalk
EB	163rd Ave	E 150	5025	6.4	1		1	1		16	bench blocking sidewalk
EB	Dykes Rd	E 80	5026	22.4	1		1			17	all grass
EB	Westfork Plaza (Winn Dixie)	E 120	5027	20.8	1		1			18	all grass
EB	150th Ave	E 80			1		1			20	all grass
	access rd to retail	W 30			1					21	bench only at this location, no bus stop, all grass
	access rd to retail	E 30			1					22	bench only at this location, no bus stop, all grass
EB	136th Ave	E 150	5028	16.0	1		1	1		23	bench blocking sidewalk
EB	129th Ave	E 150	5029	1.6	1		1	1		24	
	Entrance to plaza	W 100			1					25	no bus stop sign, all grass
EB	Flamingo Rd	W 600	5030	3.2	1		1	1		26	bench blocking sidewalk
EB	Flamingo Rd	W 300	5031	1.6	1		1	1	120x13	28	
EB	NW 4 St / Mem Hosp W	Entrance	5032	8.0							
EB	Pembroke Lakes Mall	Sears	3517	291.6	2		1	1	100	Disk 8: 817	
EB	Flamingo Rd	E 200			1		1		100x12	29-30	
EB	118th Ave (Mall Entrance)	E 150	4578	19.2	1		1	1		31	bench blocking sidewalk
EB	114th Ave	E 250	4579	46.4	1		1	1			
EB	Hiatus Rd	W 500	3544	13.9	1	1	1	1		32	
EB	Hiatus Rd	E 120			1	1	1	1	110x13	Disk 6: 2-3	
EB	108th Ave	E 120	3717	20.1	1		1			4	all grass
EB	106th Ave	E 150	3077	5.1	1		1			5-6	main sidewalk doesn't connect to bus stop sidewalk
EB	Palm Ave	W 400	4093	30.5	1	1	1	1		7	sidewalk doesn't reach street
EB	Palm Ave	E 500	2910	34.8	1		1			8	all grass
EB	98th Ave	E 70	2911	12.4	1		1			9	all grass
EB	96th Ave	W 360	3037	9.9	1	1	1	1		10	
EB	Emergency Signal	E 250	3652	2.5	1	1	1	1		11	
EB	Palm Circle E	E 250			1	1	1			12	sidewalk doesn't connect to bus stop
EB	Douglas Rd	E 50	4580	35.7	1		1	1	200	14	bus bay becomes right turn lane
EB	86th Ave	E 120	2724	19.7	1		1			13	all grass
EB	University Mall Entrance	E 10	4581	1.6	1		1	1		15	
EB	University	W 400	4769	75.2	1					16-17	all grass
EB	University	E 450	3075	57.6				1		18	
EB	78th Terr	Opposite	4221	25.6	1		1	1		19	

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 17. Bus Stop Field Inventory

Traveling westbound, bus stops are on north side of the road. Traveling eastbound, bus stops are on the south side of the road.

	North/South Street	Location	Location ID	Daily Boardings	Benches	Shelter w/Bench	Trash Can	Sidewalk Access	Bus Bay Size	Picture Location in Project Photo Log	Notes
EB	77 Way	E 70	3948	9.6	1		1	1		20	
EB	76th Ave	E 500	3076	4.8				1		21	
EB	McArthur Pkwy	W 70	1541	0.0	1			1		22	
EB	BCC / Library	On campus	1542	100.8	1				60		
EB	72nd Ave	E 130	1543	38.4	1		1	1		24	bench far away from sign
EB	71st Ave	W 100			1		1	1		25	
EB	70th Ave	E 50	1544	24.0	1					26	
EB	68th Ave	W 50	1545	9.6				1		27	
EB	67th Ave	W 100	1546	9.6	1					28	
EB	66th Ave	E 200	1547	3.2				1			
EB	64th Way	W 30	3949	9.6	1		1	1		29	
EB	64th Ave	E 45	343	0.0	1			1		30	
EB	62nd Ave	E 100	4582	20.8	1		1	1		31- Disk 7: 2	bench far, but in shade
EB	SR 7	W 75	4583	73.6	2			1		3-5	
EB	SR 7	E 300	344	100.8	2		1	1		8-9	
EB	58th Ave	W 150	345	30.4		1		1		10	
EB	56th Ave	E 75	541	32.0		1		1		11	
EB	52nd Ave	W 50	542	4.8	1			1		12	
EB	50th Ave	W 30	543	0.0	1			1		13	
EB	48th Ave	W 40	544	8.0		1		1		14	
EB	46th Ave	W 50	545	9.6		1		1		15	
EB	S Circle Dr (W)	W 50	546	36.8		1		1		16	
EB	Presidential Circle	SE quadrant of circle	547	1.6		1		1		17	EB RT lane serves as bay
EB	S Circle Dr (E)	E 40	548	22.4		1		1		18	
EB	35th Ave	E 60	549	20.8	1			1	60	19-20	not a standard bus bay
EB	Park Road	W 150	3633	8.0	1			1		21	
EB	Entrada St	W 100	550	56.0		1	1	1	70	22-26	not a standard-width bay
EB	Calle Grande	E 40	551	1.6	1			1		27	
EB	Calle Largo	W 20	552	16.0	1			1		28	
EB	28th Ave	E 40	553	44.8	1		1	1	60x20	29-30	
EB	City Hall Circle	SE quadrant of Circle	498	31.0	1			1		Disk 1: 21	
EB	24th Ave	E 50	470	69.8	1			1		32	
EB	Dixie Hwy	W 100	2362	3.8	1			1		33	
EB	Harrison Street / S 21 Ave	E 60	3016	16.9				1			
EB	Harrison Street / S 19 Ave	E 80	3017	5.6				1			
EB	Young Circle Cinema	E 100 ft of Circle	554	396.2	2		1	1	102x18	Disk 1: 12-13	
Eastbound Totals:				54	14		45	55	10		
				76 eastbound bus stops							

Examples of bus stops with uninhibited sidewalk access are provided in Exhibits 7 and 8.



Exhibit 7. Bus stop (near McArthur High school) has a clear paved path to the street



Exhibit 8. Bus stop with uninhibited sidewalk access

Examples of bus stops with poor access to the sidewalk are provided in Exhibits 9 and 10.



Exhibit 9. At this bus stop, there is no path from the sidewalk to the road



Exhibit 10. The bench is blocking access between the bus stop and the sidewalk

Nine (9) westbound bus stops and seven (7) eastbound bus stops had benches blocking the sidewalk access as shown in Exhibit 10.



Exhibit 11. The eastbound bus stop near North 68th Avenue lacks seating

There are a few locations where benches are provided but there are no bus stop signs. These locations could be confused for bus stops, although the benches actually serve as advertisements for local businesses.



Exhibit 12. Bench without a bus stop sign near SW 180th Avenue

A summary of the bus stop field inventory conducted for the Hollywood/Pines Boulevard Multimodal Corridor Study is provided in Table 18. The data in Table 18 represent the number of bus stops in each direction that contained each type of infrastructure.

Table 18. Summary of Bus Stop Infrastructure

Westbound Bus Stops (73 surveyed)

	<i>Benches</i>	<i>Shelters</i>	<i>Trash Cans</i>	<i>Bus Bays</i>	<i>Uninhibited Sidewalk Access</i>
Number	52	16	41	11	34
Percentage	71%	22%	56%	15%	47%

Note: 9 stops (12%) with sidewalk access had benches blocking the sidewalk.

Eastbound Bus Stops (76 surveyed)

	<i>Benches</i>	<i>Shelters</i>	<i>Trash Cans</i>	<i>Bus Bays</i>	<i>Uninhibited Sidewalk Access</i>
Number	54	14	45	10	48
Percentage	89%	18%	59%	7%	63%

Note: 7 stops (9%) with sidewalk access had benches blocking the sidewalk.

Multimodal

A review of the existing multimodal facilities and major transfer points along Hollywood/Pines Boulevard was conducted. Providing adequate facilities and infrastructure at these transfer locations is important for passenger comfort and an enhanced environment for multimodal travel.

Park-n-Ride

A park-n-ride lot exists at C.B. Smith Park on the corner of Pines Boulevard and Flamingo Road in Pembroke Pines. The Western Express, a peak hour express mini-bus service, travels from the park-n-ride lot to Downtown Fort Lauderdale and the Fort Lauderdale Tri-Rail Station.

Some deficiencies were noted at the park-n-ride lot during the field review. The directional signs to the parking lot from Flamingo Road are confusing, and there are no signs on Pines Boulevard that indicate the presence of the park-n-ride lot. The entrance to the lot from Pines Boulevard was partially blocked by a gate forcing drivers to enter through the exit lane to get into the lot.



Exhibit 13. Entrance to Park-n-Ride Lot, WB on Pines Blvd



Exhibit 14. FDOT Signage

This park-n-ride lot is mentioned on FDOT's South Florida Commuter Services (SFCS) website; however, the facility is not mentioned on the BCT website in the listing of park-n-ride lots. The lot is fenced to provide a sense of security. Although the FDOT signage shown in Exhibit 14 is required for legal purposes, the message does not portray a sense of security for potential users. The nearest bus stop along Pines Boulevard is approximately 130 feet to the west.

Tri-Rail Connection

A Tri-Rail station exists on the north side of Hollywood Boulevard just west of I-95. Buses cannot access the premises of the Hollywood Station because of the narrow entrance. The nearest westbound bus stop to the station along Route 7 is approximately 300 feet west of the station, near North 31st Avenue. The nearest eastbound bus stop to the station along Route 7 is the South 28th Avenue bus stop, which is actually located east of I-95. This stop is listed by BCT as the official Tri-Rail transfer stop. However, some patrons may choose to walk west along Hollywood Boulevard to the Calle Largo bus stop to avoid crossing under I-95. Data show that

daily passenger activity at the South 28th Avenue eastbound bus stop (90 passengers) is approximately twice as high as the Calle Largo bus stop (43 passengers). However, it is not possible from the existing data to determine how much of the passenger activity at these two bus stops are passengers transferring to and from Tri-Rail.

Although bike lanes do not connect to the Hollywood Station, many bikes were parked at the bike rack during field observations. The adjacent section of Hollywood Boulevard was rated by Broward County as “high to extremely high” for bicycle interaction with traffic.



Exhibit 15. Hollywood Tri-Rail Station

Bus Transfer Locations

Table 19 presents bus stops with the twenty highest passenger activities (boardings and alightings) along Hollywood/Pines Boulevard. Also included in Table 19 is a column indicating whether the bus stop is listed by BCT as an official transfer point. Please note that passengers may transfer to other routes at locations not listed as a transfer point.

Table 19. Bus Stop Passenger Activity and Transfer Points

<i>Ranking</i>	<i>Direction</i>	<i>Bus Stop Location</i>	<i>Location ID</i>	<i>Daily Boardings and Alightings</i>	<i>Transfer Point</i>
1	WB	Young Circle Greyhound	608	936	Yes
2	EB	Young Circle Cinema	554	741	Yes
3	WB	Pembroke Lakes Mall	3517	639	Yes
4	EB	Pembroke Lakes Mall	3517	547	Yes
5	WB	BCC / Library	2449	282	
6	WB	Hollywood / U.S. 441 (Far)	340	248	Yes
7	WB	Pines / University Dr (Far)	1540	232	Yes
8	EB	Hollywood / U.S. 441 (Near)	4583	221	Yes
9	WB	Hollywood / U.S. 441 (Near)	4621	205	Yes
10	EB	Hollywood / S 24 Ave	470	182	
11	WB	Hollywood / N 24 Ave	3811	177	
12	WB	Pines Blvd / Pines Plaza	4576	174	
13	EB	BCC / Library	1542	158	
14	EB	Pines / University Dr (Near)	4769	157	
15	EB	Hollywood / U.S. 441 (Far)	344	131	Yes
16	EB	Harrison St / S 19 Ave	3017	102	
17	WB	Tyler St / N 19 Ave	3018	101	
18	WB	NW 4 St / Mem Hosp West	4750	96	
19	WB	Hollywood / N 28 Ave	500	94	
20	EB	Pines / University Dr (Far)	3075	88	Yes

Bus stops around Young Circle receive the highest passenger activity in the corridor. Other major transfer locations according to the data include the Pembroke Lakes Mall, the intersection of Hollywood Boulevard and U.S. 441, and the intersection of Pines Boulevard and University Drive. The Broward Community College (BCC) South Campus receives a high daily activity; however, this bus stop represents a destination only as passengers cannot transfer to another bus route. Therefore the four most significant passenger transfer locations are as follows.

1. Young Circle
2. Pembroke Lakes Mall
3. Hollywood Boulevard / U.S. 441
4. Pines Boulevard / University Drive

Bus stop infrastructure can have a significant impact on the ridership of a bus route, especially at high volume locations such as transfer locations. Benches provide seating for waiting passengers; shelters provide seating and cover from the elements such as rain and sun. Well-maintained trash cans help keep the bus stop, as well as the neighborhood, clean and inviting.

In general, the bus stop infrastructure provided at the Young Circle stops is poor and not indicative of such an important transfer location. Shelters are not provided at the seating around Young Circle. Improvements to the bus stop infrastructure in the vicinity of Young Circle should be a high priority.



Exhibit 16. Passengers waiting near a Young Circle bus stop

The only infrastructure provided near westbound bus stops along Hollywood Boulevard near U.S. 441 are a bench and a trash can. Eastbound bus stops in the vicinity of U.S. 441 exhibit similar infrastructure. Passenger boarding data in the vicinity of this intersection easily exceed the passenger activity criteria for providing enhanced passenger infrastructure.



Exhibit 17. The lack of a shelter at a bus stop by U.S. 441 requires people to stand in the shade and use an umbrella

Three of the four bus stops near University Drive have benches. However, only the westbound bus stops have trash cans. In addition, shelters are not provided at the bus stops along Pines Boulevard near University Drive. Sidewalk access is not provided for the eastbound near side bus stop approaching University Drive.

The primary bus stop within the Pembroke Lakes Mall (located near Sears) provides a bench, a trash can, and a bus bay. Of the two bus stops near Memorial Hospital, only one stop has a bench.

In addition, bus stops near the Tri-Rail Hollywood Station are not ADA-accessible and lack infrastructure and good pedestrian access.

It is also important to note that all BCT buses are equipped to carry bicycles on the racks in front of the buses. This feature represents a multimodal convenience for bicyclists who may choose to ride a bus through congested traffic or for longer distance trips.

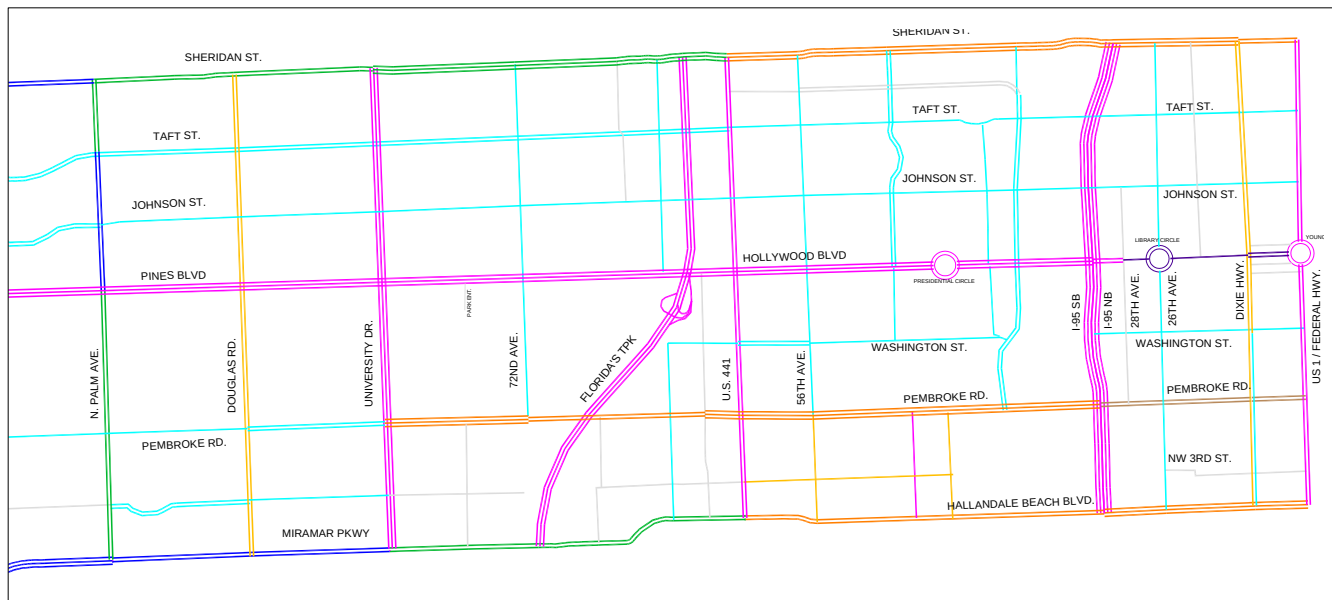
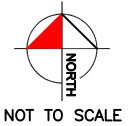
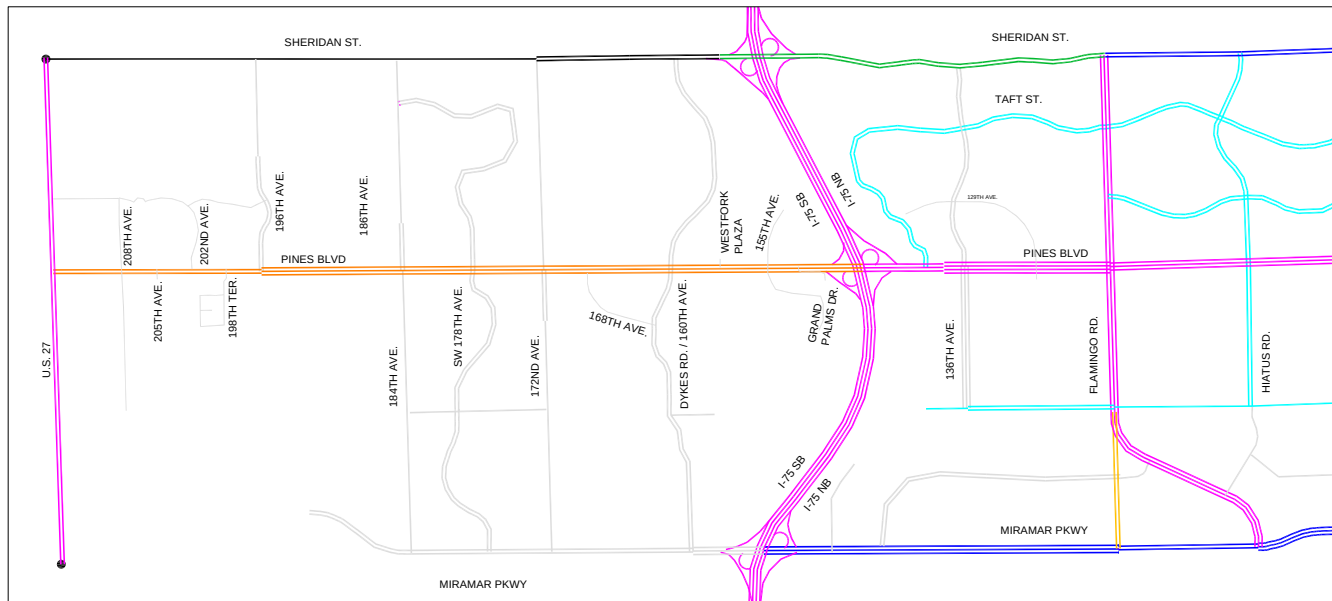
Roadway

Roadway data were examined to accurately describe the existing roadway and traffic conditions along the Hollywood/Pines Boulevard corridor. The roadway assessment included intersection lane assignments, functional classification, approach counts, turning movement counts (TMCs), traffic signal timing, peak hour auto occupancy, crash data, access management, arterial level of service, and intersection level of service.

Roadway Functional Classification

Functional classification for the Hollywood/Pines Boulevard corridor was obtained from the Transportation Systems Planning Section of the Broward County Transportation Planning Division. The functional classification of Hollywood/Pines Boulevard is primarily a state principal arterial. However, there are some sections of the roadway that fall under different categories. From U.S. 27 to I-75, Pines Boulevard is a state minor arterial. Also, the short section of Hollywood Boulevard between N/S 28th Avenue and Young Circle is classified as a city principal arterial.

The functional classification of significant roadway facilities in the extended study area is presented in Figure 10. Hollywood/Pines Boulevard is the only east-west principal arterial within the extended study area. Parallel minor arterials include Hallandale Beach Boulevard / Miramar Parkway, Pembroke Road, and Sheridan Street. Johnson Street and Taft Street are classified as city collectors. Several north-south principal arterials intersect the study corridor including U.S. 27, I-75, Flamingo Road, University Drive, Florida's Turnpike, U.S. 441, I-95, and U.S. 1.



LEGEND

ROADWAY LANEAGE

2-LANES	8-LANES
3-LANES	10-LANES
4-LANES	12-LANES
6-LANES	

FUNCTIONAL CLASSIFICATION

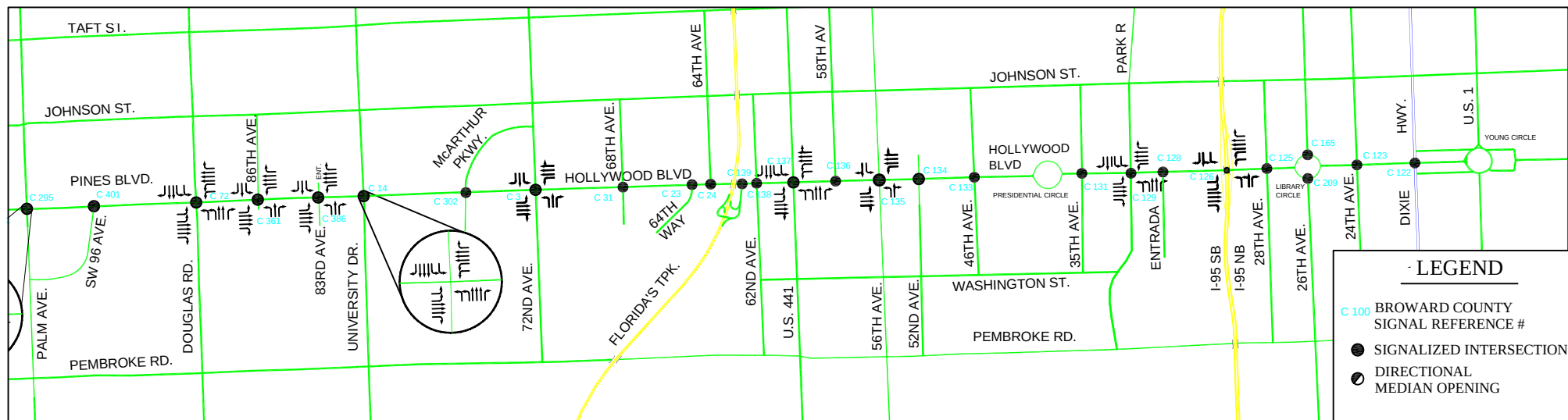
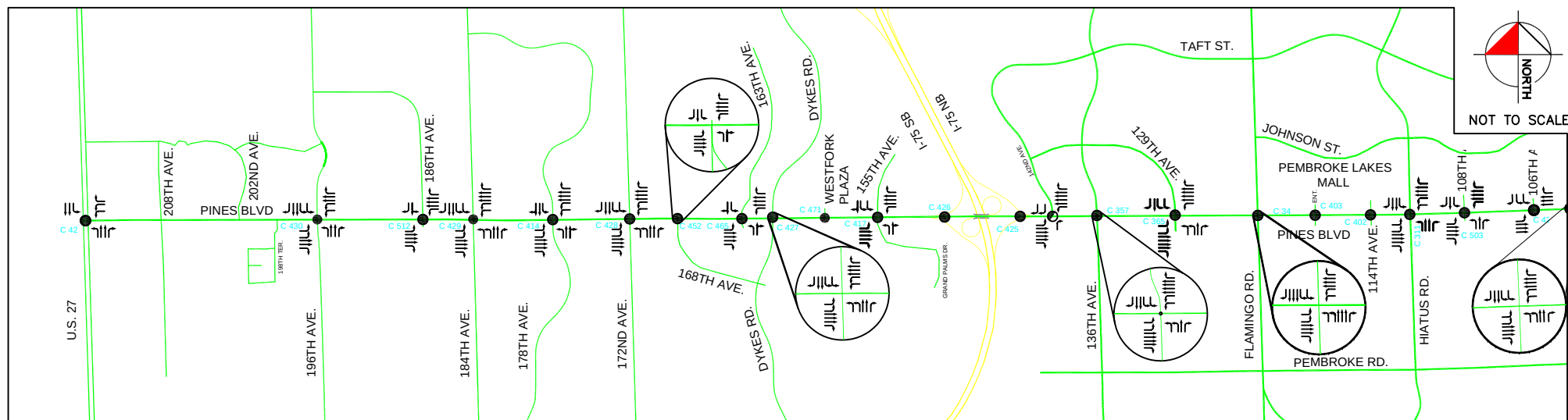
STATE PRINCIPAL ARTERIAL	
STATE MINOR ARTERIAL	
COUNTY PRINCIPAL ARTERIAL	
COUNTY MINOR ARTERIAL	
COUNTY COLLECTOR	
COUNTY UNCLASSIFIED	
CITY PRINCIPAL ARTERIAL	
CITY MINOR ARTERIAL	
CITY COLLECTOR	
CITY UNCLASSIFIED	

Intersection Lane Assignments

Hollywood/Pines Boulevard is primarily a six-lane divided roadway. Exceptions include the following.

- The section of Pines Boulevard between US 27 and NW/SW 196th Avenue is a four-lane facility.
- The section of Pines Boulevard between the east side of I-75 and Flamingo Road is an eight-lane facility.
- The section of Hollywood Boulevard between the N/S 28th Avenue and Dixie Highway is a four-lane facility.
- The section of Hollywood Boulevard between Dixie Highway and Young Circle is a two-lane facility. Harrison Street and Tyler Street form one-way pairs on either side of Hollywood Boulevard in this section.

Along the study corridor there are 48 signalized intersections, including two signals along Hollywood City Hall Circle (N/S 26th Avenue) operating on different controllers. One intersection (NW/SW 208th Avenue) has been identified in the current Transportation Improvement Program (TIP) for Broward County to be signalized during fiscal year 2003/2004. Of the 48 signalized intersections, 26 were examined in detail for this study. Lane assignments for these intersections are illustrated in Figure 11.



- LEGEND**
- C 100 BROWARD COUNTY SIGNAL REFERENCE #
 - SIGNALIZED INTERSECTION
 - DIRECTIONAL MEDIAN OPENING

HOLLYWOOD PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

FIGURE 11.
INTERSECTION LANE ASSIGNMENTS

Approach Counts and Traffic Growth Rate

Annual Average Daily Traffic (AADT) data were evaluated to determine annual average growth rates for the roadway network. The historical data used to determine the growth rates is presented in Table 20. A majority of the corridor has been experiencing positive growth over the past four years. The positive growth along Hollywood/Pines Boulevard demonstrates that capacity improvements may be needed to compensate for increased traffic volumes. Table 20 demonstrates a general trend of higher growth rates along the western portion of Hollywood/Pines Boulevard than along the eastern portion.

As described in the “Data Retrieval and Collection” chapter of this report, growth rates were calculated to apply to turning movement counts (TMCs) collected during 2000, 2001, or 2002, in order to convert the prior year TMCs analyzed in this study to 2003 data. For those intersections where data could not be retrieved or the count was judged to be invalid, new TMCs were collected during 2003. Applying a growth rate to the prior year counts provides consistent data with the new 2003 TMCs collected for this study.

Turning Movement Counts (TMCs)

Turning movement counts (TMCs) were retrieved or collected for 26 of the intersections along the Hollywood/Pines Boulevard corridor. The turning movement counts used in this study were based on AM and PM traffic counts for signalized intersections, which were described in the “Data Retrieval and Collection” chapter of this report. Peak season conversion factors (PSCFs) were obtained from FDOT to convert the TMCs to peak season traffic volumes. Tables 21 and 22 outline the AM and PM peak TMCs as well as the approach volumes for significant intersections.

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Table 20. Historical Traffic Counts and Growth Rates

Intersection	Approach	Station #	ID	ADT				Average Approach Growth Rate	Intersection Growth Rate
				1999	2000	2001	2002		
U.S. 27 @ Pines	North	83	C 42		13800	13300	16600	10.594	11.470%
	South	437	C 42	6900	7600	7900	8500	7.229	
	East	5312	C 42	14500	19900	17100	20300	13.961	
196th Ave. @ Pines	North	9480	C 430		4692	5109	4226	-4.198	6.997%
	East	85	C 430	17100	20500	20000	22000	9.148	
184th Ave. @ Pines	North	9305	C 429	11600	10626	9778	12343	3.285	12.334%
	South	9247	C 429	27900	32092	32212	32500	5.431	
	East	9486	C 429		6152	7810	12004	40.325	
178th Ave. @ Pines	North	9487	C 414		4417	5035	5686	13.460	5.924%
	South	9488	C 414		14522	13035	15178	3.100	
172nd Ave. @ Pines	North	9490	C 428		10231	10934	8152	-9.286	-0.875%
	South	87	C 428	53500	57000	50500	51500	-0.960	
	East	9357	C 428	9300	10024	11550	10908	5.817	
Dykes Rd. @ Pines	North	9369	C 427	9900	12668	14821	15864	17.331	7.290%
	South	9492	C 427		11653	15758	13165	9.386	
	West	88	C 427	56000	60500	64000	63500	4.347	
136th Ave. @ Pines	West	35		58500	62500	61500	69500	6.082	4.406%
	North	9645	C 357			7164	6115	-14.643	
Flamingo Rd. @ Pines	North	37	C 34	38000	40500	42000	44500	5.412	7.650%
	West	433	C 34	51500	58000	57000	66000	8.896	
	East	356	C 34	47000	51000	52500	59000	7.944	
Hiatus Rd. @ Pines	North	7655	C 311	17100	21141	20663	22459	10.021	9.840%
	East	7660	C 311	49700	53331	61739	65605	9.778	
Palm Ave. @ Pines	South	9129	C 295	30100	26430	28789	26856	-3.327	9.413%
	East	7716	C 295	38600	44598	50139	59000	15.212	
Douglas Rd. @ Pines	South	7198	C 72	17400	19669	23804	31129	17.032	17.032%
University Dr. @ Pines	North	40	C 14	56000	54500	54500	56500	0.330	0.576%
	South	444	C 14	50000	47500	46000	49000	-0.545	
	West	130	C 14	55000	52500	57000	56000	0.757	
	East	132	C 14	48500	47500	49500	51000	1.726	
72nd Ave. @ Hollywood	South	7973	C 3	12300	12509	14639	12912	2.310	2.310%
64th Ave. @ Hollywood	North	7313	C 23	8100	8728	10793	9487	6.437	3.344%
	West	9195	C 23	43700	45415	43538	47184	2.722	
U.S. 441 @ Hollywood	North	64	C 137	41000	41000	46000	42000	1.166	4.461%
	West	353	C 137	42000	43500	47500	53000	8.115	
	East	247	C 137	37500	37500	41000	41000	3.111	
56th Ave. @ Hollywood	North	8120	C 135	11000	9660	9834	11093	0.807	0.103%
	South	8118	C 135	11000	10678	10782	10792	-0.620	
46th Ave. @ Hollywood	East	9321	C 133	30600	30692	31313	38000	7.893	7.893%
Park Rd. @ Hollywood	North	9622	C 129			15730	14988	-4.717	-4.717%
I-95 @ Hollywood	West	5046	C 126	50500	49000	47000	50000	-0.223	1.144%
	East	248	C 126	45000	46000	46000	48500	2.552	
26th Ave. @ Hollywood	South	7311	C 209	2200	1950	2317	1722	-6.074	-6.074%
Dixie Hwy @ Hollywood	South	8148	C 122	6200	6116	5895	6274	-2.484	1.384%
	West	8205	C 122	20300	19203	20746	21756	2.500	

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 21. AM Peak Traffic Counts

Intersection		Turning Movement Counts												Approach Counts			
Name	#	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	North	South	East	West
U.S. 27	c42	0	352	105	146	838	0	0	0	0	912	0	230	984	457	1142	0
184th Avenue	c429	200	173	217	314	271	101	69	1098	167	212	908	212	686	590	1332	1334
178th Avenue	c414	305	137	508	150	103	55	21	1737	132	304	1310	121	308	950	1735	1890
172nd Avenue	c428	71	101	168	291	116	274	272	1831	87	90	975	99	681	340	1164	2190
Dykes Road	c427	119	179	325	169	189	135	101	1787	128	303	886	66	493	623	1255	2016
155th Avenue	c417	77	47	353	675	27	96	101	2779	23	99	1351	186	798	1179	1636	2903
136th Avenue	c357	176	23	179	139	19	143	106	2397	138	113	1639	11	301	378	1763	2641
129th Avenue	c365	175	38	22	260	43	149	214	2110	215	30	1447	130	452	538	1607	2539
Flamingo Road	c34	628	1049	126	152	1040	296	876	1526	895	267	1183	139	1488	1803	1589	3297
118th Avenue (Mall)	c403	95	6	22	12	3	16	47	1786	27	36	1516	56	31	123	1608	1860
114th Avenue	c402	73	25	128	32	11	14	49	1890	35	29	1191	56	57	226	1276	1974
Hiatus Road	c311	217	335	339	269	495	79	123	2300	158	287	1400	108	843	891	1795	2581
Palm Avenue	c295	241	577	241	362	977	181	263	2126	237	334	1306	188	1520	1059	1828	2626
Douglas Road	c72	201	223	170	99	246	72	86	1629	315	162	981	32	417	594	1175	2030
University Drive	c14	322	1025	187	399	1144	227	370	1093	287	313	882	180	1770	1534	1375	1750
72nd Avenue	c3	219	150	107	113	107	97	61	1354	124	45	1071	46	317	476	1162	1539
64th Way	c23	24	0	126	0	0	0	0	1499	11	65	1332	0	0	150	1397	1510
64th Avenue	c21	0	0	0	211	0	48	55	1552	4	3	1232	52	258	0	1288	1611
Florida's Turnpike	c139	491	0	1017	0	0	0	0	1146	1290	783	888	0	0	1508	1671	2436
62nd Avenue	c138	409	151	26	33	101	72	23	1784	218	17	1355	25	206	585	1397	2025
U.S. 441 (S.R. 7)	c137	382	977	140	389	1044	177	320	1563	170	155	906	162	1610	1499	1223	2053
56th Avenue	c135	111	152	95	100	169	48	57	1630	82	93	893	58	317	358	1044	1769
Park Road	c129	110	462	523	266	284	93	186	1288	59	327	1056	253	643	1095	1636	1533
I-95 SB Ramps	c126	0	0	0	742	1	773	0	1688	515	562	1258	0	1516	0	1820	2203
I-95 NB Ramps	c126	564	0	399	0	0	0	968	1446	0	0	1252	960	0	963	2212	2414
24th Avenue	c123	119	88	34	48	83	33	81	625	19	14	505	36	163	241	556	724
Dixie Highway SB	c122	0	0	0	60	345	287	0	424	186	24	370	0	692	0	394	611
Dixie Highway NB	c122	153	200	19	0	0	0	193	299	0	3	174	6	0	372	183	492

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 22. PM Peak Traffic Counts

Intersection		Turning Movement Counts												Approach Counts			
<i>Name</i>	#	<i>NBL</i>	<i>NBT</i>	<i>NBR</i>	<i>SBL</i>	<i>SBT</i>	<i>SBR</i>	<i>EBL</i>	<i>EBT</i>	<i>EBR</i>	<i>WBL</i>	<i>WBT</i>	<i>WBR</i>	<i>North</i>	<i>South</i>	<i>East</i>	<i>West</i>
U.S. 27	c42	0	555	490	72	386	0	0	0	0	119	0	125	458	1045	244	0
184th Avenue	c429	240	175	119	318	199	138	90	710	116	220	1103	219	655	534	1542	916
178th Avenue	c414	157	29	235	152	41	45	15	1038	203	444	1534	151	238	420	2129	1256
172nd Avenue	c428	89	173	122	168	118	232	150	1083	85	167	1554	236	518	384	1957	1318
Dykes Road	c427	230	201	249	165	219	275	158	1331	141	359	1951	118	659	680	2428	1630
155th Avenue	c417	91	10	188	177	6	90	173	1924	131	293	2576	486	273	472	3355	2228
136th Avenue	c357	255	35	200	139	49	145	270	2540	166	329	3048	114	333	490	3491	2976
129th Avenue	c365	530	135	39	194	38	100	336	2697	169	69	2063	187	332	936	2319	3202
Flamingo Road	c34	991	1559	612	331	1018	841	1032	2120	581	502	1735	275	2190	3162	2512	3733
118th Avenue (Mall)	c403	98	48	143	144	59	314	466	1911	71	223	1908	138	517	289	2269	2448
114th Avenue	c402	198	71	198	204	72	82	155	2406	52	170	1548	160	358	467	1878	2613
Hiatus Road	c311	337	565	215	304	425	159	239	2238	253	359	2052	289	888	1117	2700	2730
Palm Avenue	c295	412	894	273	401	634	247	387	2162	229	248	2088	275	1282	1579	2611	2778
Douglas Road	c72	609	476	208	159	378	175	215	2184	315	442	2428	136	712	1293	3006	2714
University Drive	c14	652	1273	263	475	1075	425	496	1262	288	364	1461	366	1975	2188	2191	2046
72nd Avenue	c3	305	250	64	130	203	157	109	1399	282	84	1901	86	490	619	2071	1790
64th Way	c23	50	0	91	0	0	0	0	1167	40	196	2372	0	0	141	2568	1207
64th Avenue	c21	0	0	0	199	0	106	99	1376	1	13	2312	217	306	0	2542	1476
Florida's Turnpike	c139	1083	0	902	0	0	0	0	1326	717	756	1970	0	0	1985	2726	2043
62nd Avenue	c138	309	205	38	51	146	67	90	1599	354	27	2067	35	265	552	2129	2042
U.S. 441 (S.R. 7)	c137	494	1165	139	176	981	273	385	1244	247	307	1270	153	1430	1798	1730	1876
56th Avenue	c135	112	245	85	97	252	52	105	1239	137	161	1648	104	401	442	1913	1481
Park Road	c129	134	411	364	298	413	233	260	1229	101	369	1663	329	944	909	2361	1590
I-95 SB Ramps	c126	0	0	0	851	3	755	0	1462	612	480	1502	0	1609	0	1982	2074
I-95 NB Ramps	c126	689	0	522	0	0	0	762	1556	0	0	1281	725	0	1211	2006	2318
24th Avenue	c123	115	121	26	39	101	54	121	718	22	66	618	51	195	262	735	861
Dixie Highway SB	c122	0	0	0	86	362	346	0	637	136	59	446	0	794	0	505	773
Dixie Highway NB	c122	220	349	34	0	0	0	228	401	0	2	331	24	0	603	357	629

Peak Hour Vehicle Occupancy Survey

Vehicle occupancy counts were obtained for the AM peak (7:30 AM to 8:30 AM) and PM peak (5:00 PM to 6:00 PM) along Hollywood/Pines Boulevard. These counts were obtained to accurately determine the average occupancy of vehicles traveling along Hollywood/Pines Boulevard. Capacity and environmental problems may be exacerbated where the majority of vehicles are single occupant vehicles.

The evaluation broke the corridor into the following segments:

- Young Circle to NW/SW 64th Avenue
- NW/SW 64th Avenue to University Drive
- University Drive to Flamingo Road
- Flamingo Road to U.S. 27

Table 23 presents the results from the occupancy survey. Table 23 demonstrates that the corridor has average vehicle occupancies between 1.11 and 1.27 during both peak periods. Occupancy rates were slightly higher during the PM peak period. Traffic during the morning peak is primarily comprised of persons commuting to work, while afternoon traffic is more of a mix of commuters and other types of trips. This trend of higher occupancy during the PM peak is fairly uniform throughout the Hollywood/Pines Boulevard corridor.

Table 23. Average Vehicle Occupancy (AVO)

<i>Segment</i>		<i>AM/PM Peak</i>	<i>Eastbound Average Vehicle Occupancy</i>	<i>Westbound Average Vehicle Occupancy</i>
1	Young Circle to NW/SW 64th Ave.	AM Peak	1.11	1.13
		PM Peak	1.21	1.26
2	NW/SW 64th Ave. to University Dr.	AM Peak	1.14	1.15
		PM Peak	1.15	1.17
3	University Dr. to Flamingo Rd.	AM Peak	1.11	1.13
		PM Peak	1.17	1.22
4	Flamingo Rd. to US 27	AM Peak	1.27	1.15
		PM Peak	1.18	1.22

Crash Data

Crash data were obtained for Hollywood/Pines Boulevard from the Florida Department of Transportation (FDOT) for the years 1997 through 2001. The three most recent years available (1999-2001) were analyzed in this study. Table 24 shows the total number of crashes and severity for each year from 1999-2001. There were a total of 1,081 crashes in 1999, 819 crashes in 2000, and 858 crashes in 2001. These crashes resulted in 12 fatalities.

Table 24. Crash Severity

<i>Crash Severity</i>	<i>Year</i>			<i>Total</i>
	<i>1999</i>	<i>2000</i>	<i>2001</i>	
Property Damage Only	679	387	405	1471
Injury Crash	398	430	447	1275
Fatal Crash	4	2	6	12
Total	1081	819	858	2758

There were an extensive number of rear-end crashes along Hollywood/Pines Boulevard (53.5 percent), which could be associated with a high degree of roadway congestion. Slower moving vehicles are approached by faster moving vehicles upstream due to problems with traffic flow such as congested intersections, a high density of traffic signals, or access spacing that deviates from guidelines. Crash rates were calculated for several segments in the corridor and are listed in Table 25. The crash rate units are crashes per million vehicle miles traveled.

Table 25. Crash Rates by Section

<i>Roadway Segment</i>	<i>Beginning MilePoint</i>	<i>Ending MilePoint</i>	<i>Crash Rates</i>		
			<i>1999</i>	<i>2000</i>	<i>2001</i>
U.S. 27 to NW/SW 196 th Avenue	0	1.523	3.27	3.39	4.73
NW/SW 196 th Avenue to Dykes Road	1.523	4.453	1.52	1.10	0.97
Dykes Road to Flamingo Road	4.453	7.558	4.05	2.41	2.48
Flamingo Road to University Drive	7.558	11.536	5.12	3.12	3.11
University Drive to North 64 th Avenue	11.536	13.550	3.97	2.04	2.23
North 64 th Avenue to North 28 th Avenue	13.550	16.826	4.25	5.23	5.86

Access Management

Access management standards for state highways in Florida are maintained and enforced by the Florida Department of Transportation (FDOT). There is a constant balance between adequate development access, while preserving the flow of traffic. Common methods in Florida for managing access include the regulated spacing of median openings and adequate spacing of traffic signals.

Throughout the portions of Hollywood/Pines Boulevard that are separated by a raised median, there are a total of 83 median openings: 10 single directional, 17 two-way directional, 9 full, and 47 full-signalized. The standards followed by FDOT are outlined in FDOT Administrative Rule 14-97. Hollywood/Pines Boulevard is divided into several classifications including 3, 5, and 6. Table 26 provides the FDOT access spacing requirements for these categories.

Table 27 lists the access management assessment for median openings and provides a summary by portion of the roadway. Along Hollywood/Pines Boulevard, 60 of the 83 median openings (73 percent) do not comply with spacing standards. The majority of the corridor falls under the “medium” compliance category (between 20 and 40 percent average deviation from median opening spacing standards). A notable exception is the section between SW 63rd Terrace and U.S. 441 (State Road 7). In this segment, which is approximately 0.411 miles long, there are three signalized intersections and two full median openings. Due to the proximity of median openings, traffic flow is impeded in this segment.

Table 26. FDOT Controlled Access Spacing Standards

<i>Access Class</i>	<i>Median Opening Spacing</i>		<i>Signal Spacing (ft)</i>
	<i>Directional (ft)</i>	<i>Full (ft)</i>	
3	1320	2640	2640
5	660	1320	1320
6	N/A	N/A	1320

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Table 27. Access Management Assessment (Page 1 of 3)

	Opening	MP	Spacing (ft)	Signal Spacing (ft)	Existing Median Opening Type	Deviation from Standard (%)	Signal Deviation (%)
Class 3							
1	SR 25/US 27		---	---	Full (Signalized)	---	---
2	NW 209th AVE	0.283	1494	---	Full	43%	---
3	NW 208th AVE	0.482	1051	2545	Full (Signalized)	60%	4%
4	SW 205th AVE	0.746	1394	---	Directional (WBD)	---	---
5	NW 202nd AVE	0.992	1299	2693	Full (Signalized)	2%	---
6		1.174	961	---	Full	64%	---
7	NW 198th TER	1.229	290	---	Directional (WBD)	78%	---
8	NW 195th AVE	1.473	1288	2539	Full (Signalized)	2%	4%
9	St Edward Catholic Church	1.873	2112	---	Directional (TWD)	---	---
10	NW 186th AVE	2.163	1531	3643	Full (Signalized)	---	---
11	Chapel Trail Plaza	2.317	813	---	Directional (EBD)	69%	---
12	NW 184th AVE	2.486	892	1705	Full (Signalized)	32%	35%
13		2.675	998	---	Directional (TWD)	24%	---
14	NW 180th AVE	2.843	887	---	Full	33%	---
15	NW 178th AVE	2.995	803	2688	Full (Signalized)	70%	---
16		3.299	1605	---	Full	39%	---
17	172ND AVE-NW 172ND AVE	3.488	998	2603	Full (Signalized)	62%	1%
18	PEMBROKE SHORES	3.795	1621	1621	Full (Signalized)	39%	39%
19	NW 163RD AVE	4.206	2170	2170	Full (Signalized)	18%	18%
20	160TH AVE-DYKES RD	4.403	1040	1040	Full (Signalized)	61%	61%
21	155TH AVE-GRAND PALMS DR-150TH	5.078	3564	3564	Full (Signalized)	---	---
22	SW 148TH AVE	5.296	1151	---	Full	56%	---
23	WB EXIT TO SB SR 93- I 75	5.508	1119	2270	Full (Signalized)	58%	14%
24	EB EXIT TO NB SR 93- I 75	5.984	2513	2513	Full (Signalized)	5%	5%
25	NW 142ND AVENUE	6.268	1500	---	Directional (TWD)	---	---
26	PEMBROKE FALLS (SHOPPING CENTER)	6.364	507	---	Directional (TWD)	62%	---
27	SW 136TH AVE-(CENTURY VILLAGE)	6.483	628	2635	Full (Signalized)	52%	---
28	FLAMINGO WEST ROAD	6.858	1980	1980	Full (Signalized)	25%	25%
29	ENTRANCE TO SHOPPING CENTER	6.996	729	---	Directional (TWD)	45%	---
30	FLAMINGO ROAD	7.374	1996	---	Directional (TWD)	---	---
31	820-PINES BLVD/SR 823-FLAMINGO	7.508	708	3432	Full (Signalized)	46%	---
	Average:		741	1402		35%	10%

Class	Rule Compliance ⁽¹⁾	No. of Median Openings in Violation	Average Deviation
3	Medium	21 out of 31 (68%)	35%

	Opening	MP	Spacing (ft)	Signal Spacing (ft)	Existing Median Opening Type	Deviation from Standard (%)	Signal Deviation (%)
Class 3							
1	SHOPPING PLAZA	7.798	1531	1531	Full (Signalized)	42%	42%
2	ENTRANCE TO MALL	8.080	1489	1489	Full (Signalized)	44%	44%
3	HIATUS RD	8.490	2165	2165	Full (Signalized)	18%	18%
4	NW 108TH AVE	8.762	1436	1436	Full (Signalized)	46%	46%
5	NW 106TH AVE	9.048	1510	---	Full	43%	---
6	PLAZA	9.282	1236	2746	Full (Signalized)	53%	---
7	PALM AVE-NW 101ST	9.514	1225	1225	Full (Signalized)	54%	54%
8	BOULEVARD PLAZA	9.650	718	---	Directional (TWD)	46%	---
9	98TH AVE-NW 98TH AVE	9.797	776	---	Directional (TWD)	41%	---
10	96TH AVE-NW 96TH AVE	9.907	581	2075	Full (Signalized)	56%	21%
11	NW 92ND TERR (DUMMY)	10.178	1431	---	Directional (WBD)	---	---
12	S HOLLYBROOK TERR	10.382	1077	---	Directional (EBD)	18%	---
13	DOUGLAS RD	10.509	671	3179	Full (Signalized)	49%	---
14	SHOPPING PLAZA	10.661	803	---	Directional (TWD)	39%	---
15	NW 86TH AVE	10.871	1109	1911	Full (Signalized)	16%	28%
16	UNKNOWN	11.005	708	---	Directional (TWD)	46%	---
17	UNKNOWN	11.150	766	1473	Full (Signalized)	42%	44%
18	UNIV MARKET PLACE-UNIV MALL	11.347	1040	---	Directional (TWD)	21%	---
19	820-PINE/SR 817-UNIVERSITY	11.486	734	1774	Full (Signalized)	44%	33%
	Average:		1106	1909		38%	30%

Class	Rule Compliance ⁽¹⁾	No. of Median Openings in Violation	Average Deviation
3	Medium	18 out of 19 (95%)	38%

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Table 27. Access Management Assessment (Page 2 of 3)

	Opening	MP	Spacing (ft)	Signal Spacing (ft)	Existing Median Opening Type	Deviation from Standard (%)	Signal Deviation (%)
Class 5							
1	SHOPPING PLAZA	11.597	586	---	Directional (TWD)	11%	---
2	SHOPPING PLAZA	11.673	401	---	Directional (EBD)	39%	---
3	NW 77TH AVE-ENT AIRPORT	11.708	185	---	Directional (TWD)	72%	---
4	NW 76TH AVE	12.010	1595	---	Full	---	---
5	UNKNOWN	12.086	401	---	Directional (WBD)	39%	---
6	MCARTHUR PKWY	12.259	913	4081	Full (Signalized)	---	---
7	BROWARD COMMUNITY COLLEGE	12.358	523	---	Directional (TWD)	21%	---
8	72ND AVE-NW 72ND AVE	12.509	797	1320	Full (Signalized)	---	---
9	SW 71ST AVE	12.661	803	---	Directional (WBD)	---	---
10	70TH AVE-NW 70TH AVE	12.758	512	---	Directional (TWD)	22%	---
11	68TH AVE-NW 68TH AVE	13.037	1473	2788	Full (Signalized)	---	---
12	67TH AVE	13.156	628	---	Directional (WBD)	5%	---
13	SW 64TH WAY	13.416	1373	2001	Full (Signalized)	---	---
14	N 64TH AVE-S 64TH AVE	13.500	444	444	Full (Signalized)	66%	66%
	Average:		760	2127		20%	13%

Class	Rule Compliance ⁽¹⁾	No. of Median Openings in Violation	Average Deviation
5	High	7 out of 14 (50%)	20%

	Opening	MP	Spacing (ft)	Signal Spacing (ft)	Existing Median Opening Type	Deviation from Standard (%)	Signal Deviation (%)
Class 5							
1	SW 63RD TERR	13.586	454	---	Full	66%	---
2	EXIT TO-ENT FROM SR 91-FL TPK	13.679	491	945	Full (Signalized)	63%	28%
3	S 62ND AVE-N 62ND AVE	13.748	364	364	Full (Signalized)	72%	72%
4	L N 61ST AVE	13.844	507	---	Full	62%	---
5	SR 820-HOLLYWOOD/SR 7-N 60TH	13.997	808	1315	Full (Signalized)	39%	---
	Average:		525	875		60%	34%

Class	Rule Compliance ⁽¹⁾	No. of Median Openings in Violation	Average Deviation
5	Low	5 out of 5 (100%)	60%

	Opening	MP	Spacing (ft)	Signal Spacing (ft)	Existing Median Opening Type	Deviation from Standard (%)	Signal Deviation (%)
Class 6							
1	L N 58TH AVE	14.248	1325	1325	Full (Signalized)	---	---
2	S 56TH AVE-N 56TH AVE	14.504	1352	1352	Full (Signalized)	---	---
3	S 52ND AVE-N 52ND AVE	14.737	1230	1230	Full (Signalized)	7%	7%
4	S 46TH AVE-N 46TH AVE	15.121	2028	2028	Full (Signalized)	---	---
5	S 35TH AVE-N 35TH AVE	15.873	3971	3971	Full (Signalized)	---	---
6	FIRE STATION	15.951	412	412	Full (Signalized)	69%	69%
7	S PARK RD-N PARK RD	16.060	576	576	Full (Signalized)	56%	56%
	Average:		1556	1556		19%	19%

Class	Rule Compliance ⁽¹⁾	No. of Median Openings in Violation	Average Deviation
6	High	3 out of 7 (42%)	19%

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Table 27. Access Management Assessment (Page 3 of 3)

	Opening	MP	Spacing (ft)	Signal Spacing (ft)	Existing Median Opening Type	Deviation from Standard (%)	Signal Deviation (%)
<i>Class 5</i>							
1	ENTRADA ST-HOLLYWOOD MALL	16.198	729	729	Full (Signalized)	45%	45%
2	N 32ND AVE-CALLE GRANDE	16.299	533	---	Directional (TWD)	19%	
3	TRI-RAIL	16.510	1114	---	Directional (EBD)	---	
4	R EB EXIT TO SB SR 9- 195	16.565	290	1938	Full (Signalized)	56%	
5	L WB EXIT TO NE SR 9- 195	16.675	581	581	Full (Signalized)	56%	56%
6	N 28TH AVE-S 28TH AVE-BEGIN EXC	16.826	797	797	Full (Signalized)	40%	40%
7	UNKNOWN	16.904	412	---	Directional (TWD)	38%	
	<i>Average:</i>		<i>637</i>	<i>1011</i>		<i>36%</i>	<i>35%</i>

Class	Rule Compliance ⁽¹⁾	No. of Median Openings in Violation	Average Deviation
5	Medium	6 out of 7 (86%)	36%

⁽¹⁾ = Rule Compliance Scale	
% of Deviations	Ranking
20%	High
21%-40%	Medium
More than 41%	Low

WBD = Westbound Directional
TWD = Two-Way Directional
EBD = Eastbound Directional

	Opening	MP	Spacing (ft)	Signal Spacing (ft)	Existing Median Opening Type	Deviation from Standard (%)	Signal Deviation (%)
SECTION MAINTAINED BY THE CITY OF HOLLYWOOD							
1	N 24TH AVE	17.351	2360	2360	Full (Signalized)	N/A	N/A
2	SB DIXIE HWY	17.671	1690	1690	Full (Signalized)	N/A	N/A
3	NB DIXIE HWY	17.700	153	153	Full (Signalized)	N/A	N/A
4	N 20TH AVE	17.817	618	618	Full (Signalized)	N/A	N/A
5	N 19TH AVE	17.939	644	644	Full (Signalized)	N/A	N/A

Roadway Level of Service

The existing arterial level of service (LOS) was determined for Hollywood/Pines Boulevard based on travel time runs collected for this study. AM and PM peak period travel time runs were completed to determine the travel speed and delay for the eastbound and westbound directions. A total of ten runs per direction were completed; five runs during the AM peak and five runs during the PM peak. Average travel times and average travel speeds were then computed between consecutive intersections. Tabular results for each AM and PM peak travel time run are provided in Appendix C.

Arterial level of service was computed based on Table 4-7 from FDOT's *2002 Quality/Level of Service Handbook*. According to the FDOT level of service methodology, state two-way arterials are classified based on the average number of signalized intersections per mile. Most of Hollywood/Pines Boulevard is classified as Class II (2.0 to 4.5 signalized intersections per mile). Travel speed thresholds are provided for each level of service grade (A through F).

The arterial level of service was determined for 33 segments of Hollywood/Pines Boulevard. Tables 28 through 31 show level of service and average travel speeds along Hollywood/Pines Boulevard by segment between intersections. Appendix D graphically depicts the average travel speed for various segments along the roadway. Areas of low average travel speed in the westbound direction include:

- Young Circle to the I-95 ramps during the AM and PM peaks
- North 56th Avenue to North 64th Avenue during the AM peak
- North 56th Avenue to U.S. 441 during the PM peak
- NW 108th Avenue to Hiatus Road during the PM peak

Areas of low average travel speed in the eastbound direction include:

- Dykes Road to NW 155th Avenue during the AM peak
- Hiatus Road to Palm Avenue during the AM peak
- Park Road to the I-95 ramps during the AM peak
- SW 64th Way to U.S. 441 during the PM peak

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Table 28. Eastbound AM Peak Travel Time and Level of Service

EASTBOUND PEAK AM								
SEGMENT NUMBER	ROADWAY SEGMENT	MILES	AVG TRAVEL TIME (SEC)	AVG TRAVEL SPEED (MPH)	NUMBER OF SIGNALS	SIGNALS PER MILE	CLASS	LOS
1	FROM US 27 TO SW 196TH AVENUE	1.400	0:01:57	42.9	1	0.71	I	A
2	FROM SW 196TH AVENUE TO SW 186TH AVENUE	0.700	0:00:48	52.9	1	1.43	I	A
3	FROM SW 186TH AVENUE TO SW 184TH AVENUE	0.300	0:00:35	31.0	1	3.33	II	B
4	FROM SW 184TH AVENUE TO SW 178TH AVENUE	0.500	0:01:01	29.4	1	2.00	II	B
5	FROM SW 178TH AVENUE TO SW 172ND AVENUE	0.500	0:01:08	26.5	1	2.00	II	C
6	FROM SW 172ND AVENUE TO DYKES ROAD	0.800	0:02:23	20.2	3	3.75	II	D
7	FROM DYKES ROAD TO NW 155TH AVENUE / GRAND PALMS DRIVE	0.800	0:03:15	14.8	2	2.50	II	E
8	FROM NW 155TH AVENUE / GRAND PALMS DRIVE TO SB I-75 RAMP	0.400	0:00:41	35.1	1	2.50	II	A
9	FROM SB I-75 RAMP TO NB I-75 RAMP	0.500	0:00:50	35.7	1	2.00	II	A
10	FROM NB I-75 RAMP TO NW 136TH AVENUE	0.500	0:00:51	35.6	1	2.00	II	A
11	FROM NW 136TH AVENUE TO NW 129TH AVENUE	0.400	0:00:53	27.0	1	2.50	II	C
12	FROM NW 129TH AVENUE TO FLAMINGO ROAD	0.500	0:01:12	24.9	1	2.00	II	C
13	FROM FLAMINGO ROAD TO SW 118TH AVENUE	0.400	0:01:03	22.9	1	2.50	II	C
14	FROM SW 118TH AVENUE TO HIATUS ROAD	0.600	0:01:10	30.9	2	3.33	II	B
15	FROM HIATUS ROAD TO NW 108TH AVENUE	0.400	0:00:31	47.1	1	2.50	II	A
16	FROM NW 108TH AVENUE TO PALM AVENUE	0.600	0:01:58	18.3	2	3.33	II	D
17	FROM PALM AVENUE TO SW 96TH AVENUE	0.400	0:01:01	23.6	1	2.50	II	C
18	FROM SW 96TH AVENUE TO DOUGLAS ROAD	0.600	0:01:36	22.5	1	1.67	I	D
19	FROM DOUGLAS ROAD TO NW 86TH AVENUE	0.300	0:00:43	25.0	1	3.33	II	C
20	FROM NW 86TH AVENUE TO UNIVERSITY DRIVE	0.600	0:01:03	34.2	2	3.33	II	B
21	FROM UNIVERSITY DRIVE TO NW 72ND AVENUE	1.000	0:02:27	24.5	2	2.00	II	C
22	FROM NW 72ND AVENUE TO SW 64TH WAY	0.900	0:01:25	38.0	2	2.22	II	A
23	FROM SW 64TH WAY TO NW 64TH AVENUE	0.100	0:00:15	23.4	1	10.00	III	C
24	FROM NW 64TH AVENUE TO FLORIDA TURNPIKE	0.300	0:01:09	15.7	1	3.33	II	E
25	FROM FLORIDA TURNPIKE TO NW 62ND AVENUE	0.100	0:00:41	8.7	1	10.00	III	F
26	FROM NW 62ND AVENUE TO SR 7	0.100	0:00:34	10.7	1	10.00	III	E
27	FROM SR 7 TO N 56TH AVENUE	0.500	0:00:50	35.7	2	4.00	II	A
28	FROM N 56TH AVENUE TO PRESIDENTIAL CIRCLE	1.000	0:02:26	24.7	2	2.00	II	C
29	FROM PRESIDENTIAL CIRCLE TO PARK ROAD	0.500	0:01:06	27.1	1	2.00	II	C
30	FROM PARK ROAD TO SB I-95 RAMP	0.500	0:02:20	12.9	2	4.00	II	F
31	FROM SB I-95 RAMP TO NB I-95 RAMP	0.100	0:01:21	4.4	1	10.00	III	F
32	FROM NB I-95 RAMP TO LIBRARY CIRCLE	0.400	0:01:36	15.0	2	5.00	III	D
33	FROM LIBRARY CIRCLE TO YOUNG CIRCLE	1.100	0:04:42	14.1	4	3.64	II	E

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Table 29. Eastbound PM Peak Travel Time and Level of Service

EASTBOUND PEAK PM								
SEGMENT NUMBER	ROADWAY SEGMENT	MILES	AVG TRAVEL TIME (SEC)	AVG TRAVEL SPEED (MPH)	NUMBER OF SIGNALS	SIGNALS PER MILE	CLASS	LOS
1	FROM US 27 TO SW 196TH AVENUE	1.400	0:02:14	37.7	1	0.71	1	B
2	FROM SW 196TH AVENUE TO SW 186TH AVENUE	0.700	0:00:50	50.4	1	1.43	1	A
3	FROM SW 186TH AVENUE TO SW 184TH AVENUE	0.300	0:00:31	34.8	1	3.33	2	B
4	FROM SW 184TH AVENUE TO SW 178TH AVENUE	0.500	0:01:38	18.4	1	2.00	2	D
5	FROM SW 178TH AVENUE TO SW 172ND AVENUE	0.500	0:01:34	19.1	1	2.00	2	D
6	FROM SW 172ND AVENUE TO DYKES ROAD	0.800	0:02:06	22.8	3	3.75	2	C
7	FROM DYKES ROAD TO NW 155TH AVENUE / GRAND PALMS DRIVE	0.800	0:02:33	18.9	2	2.50	2	D
8	GRAND PALMS DRIVE TO SB I-75 RAMP	0.400	0:01:02	23.3	1	2.50	2	C
9	FROM SB I-75 RAMP TO NB I-75 RAMP	0.500	0:00:48	37.3	1	2.00	2	A
10	FROM NB I-75 RAMP TO NW 136TH AVENUE	0.500	0:01:25	21.2	1	2.00	2	D
11	FROM NW 136TH AVENUE TO NW 129TH AVENUE	0.400	0:01:18	18.4	1	2.50	2	D
12	FROM NW 129TH AVENUE TO FLAMINGO ROAD	0.500	0:01:42	17.7	1	2.00	2	D
13	FROM FLAMINGO ROAD TO SW 118TH AVENUE	0.400	0:01:08	21.2	1	2.50	2	D
14	FROM SW 118TH AVENUE TO HIATUS ROAD	0.600	0:01:19	27.3	2	3.33	2	C
15	FROM HIATUS ROAD TO NW 108TH AVENUE	0.400	0:00:50	28.6	1	2.50	2	B
16	FROM NW 108TH AVENUE TO PALM AVENUE	0.600	0:01:51	19.4	2	3.33	2	D
17	FROM PALM AVENUE TO SW 96TH AVENUE	0.400	0:00:54	26.6	1	2.50	2	C
18	FROM SW 96TH AVENUE TO DOUGLAS ROAD	0.600	0:02:11	16.5	1	1.67	1	E
19	FROM DOUGLAS ROAD TO NW 86TH AVENUE	0.300	0:00:36	29.7	1	3.33	2	B
20	FROM NW 86TH AVENUE TO UNIVERSITY DRIVE	0.600	0:01:19	27.4	2	3.33	2	C
21	FROM UNIVERSITY DRIVE TO NW 72ND AVENUE	1.000	0:01:36	37.3	2	2.00	2	A
22	FROM NW 72ND AVENUE TO SW 64TH WAY	0.900	0:01:55	28.1	2	2.22	2	B
23	FROM SW 64TH WAY TO NW 64TH AVENUE	0.100	0:00:25	14.5	1	10.00	3	D
24	FROM NW 64TH AVENUE TO FLORIDA TURNPIKE	0.300	0:00:44	24.4	1	3.33	2	C
25	FROM FLORIDA TURNPIKE TO NW 62ND AVENUE	0.100	0:00:33	11.0	1	10.00	3	E
26	FROM NW 62ND AVENUE TO SR 7	0.100	0:01:34	3.8	1	10.00	3	F
27	FROM SR 7 TO N 56TH AVENUE	0.500	0:01:15	24.1	2	4.00	2	C
28	FROM N 56TH AVENUE TO PRESIDENTIAL CIRCLE	1.000	0:02:35	23.3	2	2.00	2	C
29	FROM PRESIDENTIAL CIRCLE TO PARK ROAD	0.500	0:01:31	19.8	1	2.00	2	D
30	FROM PARK ROAD TO SB I-95 RAMP	0.500	0:02:08	14.1	2	4.00	2	E
31	FROM SB I-95 RAMP TO NB I-95 RAMP	0.100	0:00:22	16.7	1	10.00	3	D
32	FROM NB I-95 RAMP TO LIBRARY CIRCLE	0.400	0:01:39	14.6	2	5.00	3	D
33	FROM LIBRARY CIRCLE TO YOUNG CIRCLE	1.100	0:05:27	12.1	4	3.64	2	F

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Table 30. Westbound AM Peak Travel Time and Level of Service

WESTBOUND PEAK AM								
SEGMENT NUMBER	ROADWAY SEGMENT	MILES	AVG TRAVEL TIME (SEC)	AVG TRAVEL SPEED (MPH)	NUMBER OF SIGNALS	SIGNALS PER MILE	CLASS	LOS
1	FROM US 1 AND YOUNG CIR TO LIBRARY CIRCLE	1.100	0:04:07	16.0	4	3.64	II	E
2	FROM LIBRARY CIRCLE TO NB I-95 RAMP	0.500	0:03:15	9.2	2	4.00	III	F
3	FROM NB I-95 RAMP TO SB I-95 RAMP	0.100	0:00:11	34.0	1	10.00	III	A
4	FROM SB I-95 RAMP TO PARK ROAD	0.400	0:01:15	19.3	2	5.00	II	D
5	FROM PARK ROAD TO PRESIDENTIAL CIRCLE	0.500	0:01:02	28.9	1	2.00	II	B
6	FROM PRESIDENTIAL CIRCLE TO N 56TH AVENUE	1.100	0:02:37	25.2	2	1.82	II	C
7	FROM N 56TH AVENUE TO STATE ROUTE 7	0.400	0:01:26	16.7	2	5.00	II	E
8	FROM STATE ROUTE 7 TO NW 62ND AVENUE	0.200	0:01:04	11.3	1	5.00	III	E
9	FROM NW 62ND AVENUE TO FLORIDA TURNPIKE	0.100	0:00:30	12.1	1	10.00	III	E
10	FROM FLORIDA TURNPIKE TO NW 64TH AVENUE	0.200	0:00:50	14.3	1	5.00	II	E
11	FROM NW 64TH AVENUE TO SW 64TH WAY	0.100	0:00:22	16.2	1	10.00	III	D
12	FROM SW 64TH WAY TO NW 72ND AVENUE	0.900	0:02:05	25.9	2	2.22	II	C
13	FROM NW 72ND AVENUE TO UNIVERSITY DRIVE	1.000	0:03:08	19.2	2	2.00	II	D
14	FROM UNIVERSITY DRIVE TO NW 86TH AVENUE	0.600	0:01:10	30.7	2	3.33	II	B
15	FROM NW 86TH AVENUE TO DOUGLAS RD	0.400	0:00:35	41.6	1	2.50	II	A
16	FROM DOUGLAS RD TO SW 96TH AVENUE	0.500	0:00:56	31.9	1	2.00	II	C
17	FROM SW 96TH AVENUE TO PALM AVENUE	0.400	0:01:02	23.1	1	2.50	II	C
18	FROM PALM AVENUE TO NW 108TH AVENUE	0.700	0:01:06	38.1	2	2.86	II	A
19	FROM NW 108TH AVENUE TO HIATUS ROAD	0.300	0:00:34	31.6	1	3.33	II	B
20	FROM HIATUS ROAD TO NW 118TH AVENUE	0.600	0:01:16	28.5	2	3.33	II	B
21	FROM NW 118TH AVENUE TO FLAMINGO ROAD	0.400	0:00:53	27.4	1	2.50	II	C
22	FROM FLAMINGO ROAD TO NW 129TH AVENUE	0.500	0:01:19	22.7	1	2.00	II	C
23	FROM NW 129TH AVENUE TO NW 136TH AVENUE	0.500	0:00:56	32.4	1	2.00	II	B
24	FROM NW 136TH AVENUE TO NB I-75	0.500	0:00:38	47.6	1	2.00	II	A
25	FROM NB I-75 TO SB I-75	0.400	0:00:38	38.3	1	2.50	II	A
26	FROM SB I-75 TO NW 155TH AVENUE / GRAND PALMS DRIVE	0.500	0:01:12	24.9	1	2.00	II	C
27	FROM NW 155TH AVENUE / GRAND PALMS DRIVE TO DYKES ROAD	0.600	0:01:24	25.8	2	3.33	II	C
28	FROM DYKES ROAD TO SW 172ND AVENUE	0.900	0:01:35	34.1	3	3.33	II	B
29	FROM SW 172ND AVENUE TO SW 178TH AVENUE	0.500	0:00:56	32.4	1	2.00	II	B
30	FROM SW 178TH AVENUE TO SW 184TH AVENUE	0.500	0:01:22	21.8	1	2.00	II	D
31	FROM SW 184TH AVENUE TO SW 186TH AVENUE	0.300	0:00:27	40.0	1	3.33	II	A
32	FROM SW 186TH AVENUE TO SW 196TH AVENUE	0.700	0:00:55	46.2	1	1.43	I	A
33	FROM SW 196TH AVENUE TO US 27	1.400	0:02:29	33.9	1	0.71	I	C

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Table 31. Westbound PM Peak Travel Time and Level of Service

WESTBOUND PEAK PM								
SEGMENT NUMBER	ROADWAY SEGMENT	MILES	AVG TRAVEL TIME (SEC)	AVG TRAVEL SPEED (MPH)	NUMBER OF SIGNALS	SIGNALS PER MILE	CLASS	LOS
1	FROM US 1 AND YOUNG CIR TO LIBRARY CIRCLE	1.100	0:03:42	17.8	4	3.64	2	D
2	FROM LIBRARY CIRCLE TO NB I-95 RAMP	0.500	0:01:48	16.6	2	4.00	3	D
3	FROM NB I-95 RAMP TO SB I-95 RAMP	0.100	0:00:30	12.2	1	10.00	3	E
4	FROM SB I-95 RAMP TO PARK ROAD	0.400	0:01:26	16.8	2	5.00	2	E
5	FROM PARK ROAD TO PRESIDENTIAL CIRCLE	0.500	0:01:32	19.5	1	2.00	2	D
6	FROM PRESIDENTIAL CIRCLE TO N 56TH AVENUE	1.100	0:02:32	26.1	2	1.82	2	C
7	FROM N 56TH AVENUE TO STATE ROUTE 7	0.400	0:02:03	11.7	2	5.00	2	F
8	FROM STATE ROUTE 7 TO NW 62ND AVENUE	0.200	0:00:42	17.0	1	5.00	3	D
9	FROM NW 62ND AVENUE TO FLORIDA TURNPIKE	0.100	0:00:16	23.1	1	10.00	3	C
10	FROM FLORIDA TURNPIKE TO NW 64TH AVENUE	0.200	0:00:38	19.1	1	5.00	2	D
11	FROM NW 64TH AVENUE TO SW 64TH WAY	0.100	0:00:24	15.0	1	10.00	3	D
12	FROM SW 64TH WAY TO NW 72ND AVENUE	0.900	0:01:59	27.3	2	2.22	2	C
13	FROM NW 72ND AVENUE TO UNIVERSITY DRIVE	1.000	0:02:09	28.0	2	2.00	2	C
14	FROM UNIVERSITY DRIVE TO NW 86TH AVENUE	0.600	0:01:04	33.6	2	3.33	2	B
15	FROM NW 86TH AVENUE TO DOUGLAS RD	0.400	0:01:13	19.8	1	2.50	2	D
16	FROM DOUGLAS RD TO SW 96TH AVENUE	0.500	0:01:07	27.0	1	2.00	1	C
17	FROM SW 96TH AVENUE TO PALM AVENUE	0.400	0:00:52	27.7	1	2.50	2	C
18	FROM PALM AVENUE TO NW 108TH AVENUE	0.700	0:01:04	39.5	2	2.86	2	A
19	FROM NW 108TH AVENUE TO HIATUS ROAD	0.300	0:01:17	14.1	1	3.33	2	E
20	FROM HIATUS ROAD TO NW 118TH AVENUE	0.600	0:02:05	17.2	2	3.33	2	D
21	FROM NW 118TH AVENUE TO FLAMINGO ROAD	0.400	0:00:45	31.7	1	2.50	2	B
22	FROM FLAMINGO ROAD TO NW 129TH AVENUE	0.500	0:01:13	24.7	1	2.00	2	C
23	FROM NW 129TH AVENUE TO NW 136TH AVENUE	0.500	0:00:45	40.2	1	2.00	2	A
24	FROM NW 136TH AVENUE TO NB I-75	0.500	0:00:52	34.7	1	2.00	2	B
25	FROM NB I-75 TO SB I-75	0.400	0:00:44	32.4	1	2.50	2	B
26	FROM SB I-75 TO NW 155TH AVENUE / GRAND PALMS DRIVE	0.500	0:00:45	39.6	1	2.00	2	A
27	FROM NW 155TH AVENUE / GRAND PALMS DRIVE TO DYKES ROAD	0.600	0:00:55	39.1	2	3.33	2	A
28	FROM DYKES ROAD TO SW 172ND AVENUE	0.900	0:02:23	22.6	3	3.33	2	C
29	FROM SW 172ND AVENUE TO SW 178TH AVENUE	0.500	0:00:53	33.8	1	2.00	2	B
30	FROM SW 178TH AVENUE TO SW 184TH AVENUE	0.500	0:00:38	47.4	1	2.00	2	A
31	FROM SW 184TH AVENUE TO SW 186TH AVENUE	0.300	0:00:28	39.1	1	3.33	2	A
32	FROM SW 186TH AVENUE TO SW 196TH AVENUE	0.700	0:01:04	39.1	1	1.43	1	B
33	FROM SW 196TH AVENUE TO US 27	1.400	0:02:08	39.4	1	0.71	1	B

There are some discrepancies that exist when comparing level of service based on volume thresholds with level of service based on travel times. Level of service based on volume thresholds from FDOT's *2002 Quality/Level of Service Handbook* assumes that all signal cycles are 120 seconds with an effective green ratio of 0.44. Using this method of calculating level of service is effective for quick examination of a roadway. However, level of service with respect to travel times is more detailed and can more accurately depict the locations where the level of service is unacceptable. Level of service using travel times show where the delays occur and provide a more accurate determination of progression breakdown.

Intersection Level of Service

Intersection level of service analysis was performed for the signalized intersections for which turning movement counts (TMCs) were retrieved or collected. The TMCs for the AM and PM peak periods were presented in Tables 21 and 22. The intersection capacity analyses were performed using *Synchro*, which is a software package developed based on the methodology included in the *2000 Highway Capacity Manual*.

Intersection capacity analysis was performed for a total of 26 intersections. The results of the intersection capacity analysis are provided in Table 32. Appendix E includes the intersection level of service by lane group for the intersections analyzed during both the AM peak and PM peak.

Based on the intersection capacity analysis, 8 of the 26 intersections (30.8 percent) perform at LOS E or F during the AM peak period. However, 15 of the 26 intersections (57.7 percent) perform at LOS E or F during the PM peak period. During the AM peak period, the highest volume-to-capacity ratio is observed at the Florida's Turnpike intersection. During the PM peak period, the highest volume-to-capacity ratio is observed at the Flamingo Road intersection. During the PM peak period, the intersections analyzed between NW/SW 129th Avenue and NW/SW 72nd Avenue all perform at LOS E or F.

Table 32. Intersection Level of Service Summary

<i>Intersection</i>	<i>AM Peak</i>		<i>PM Peak</i>	
	<i>LOS</i>	<i>Delay (seconds)</i>	<i>LOS</i>	<i>Delay (seconds)</i>
U.S. 27	D	35.2	B	19.4
NW/SW 184 th Avenue	D	40.1	D	40.8
NW/SW 172 nd Avenue	D	38.5	C	31.3
Dykes Road	D	47.3	E	59.3
NW/SW 155 th Avenue	F	174.6	D	48.6
NW/SW 136 th Avenue	C	26.1	D	40.0
NW/SW 129 th Avenue	D	46.3	E	65.7
Flamingo Road	F	120.2	F	251.9
NW/SW 118 th Avenue	B	10.5	F	80.8
Hiatus Road	E	70.3	F	93.6
Palm Avenue	F	89.7	F	114.5
Douglas Road	D	35.1	F	161.9
University Drive	E	59.7	F	106.0
NW/SW 72 nd Avenue	D	47.4	E	66.6
SW 64 th Way	D	40.8	C	30.4
NW/SW 64 th Avenue	B	14.6	C	20.9
Florida's Turnpike	F	278.8	F	135.6
N/S 62 nd Avenue	D	51.2	D	46.2
U.S. 441	F	115.9	F	125.1
N/S 56 th Avenue	D	42.4	F	120.3
Park Road	E	56.3	E	55.8
I-95 SB	D	46.5	F	100.8
I-95 NB	C	28.7	D	46.2
N/S 24 th Avenue	C	28.9	C	28.0
Dixie Highway SB	D	45.1	F	217.6
Dixie Highway NB	C	20.0	D	43.3

Parallel Corridor Level of Service

The existing level of service was determined using annual average daily traffic (AADTs) for other roadways within the extended study boundary including Miramar Parkway / Hallandale Beach Boulevard, Pembroke Road, Johnson Street, Taft Street, and Sheridan Street. The AADTs used for alternative corridors were collected from the Broward County Transportation Planning Division, as described in the “Data Retrieval and Collection” chapter of this report. Level of service was based on volume thresholds, as well as the number of signalized intersections per mile, through use of tables in FDOT’s 2002 *Quality/Level of Service Handbook*. Table 33 presents the level of service for parallel roadways within the extended study boundary.

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Table 33. Parallel Roadway Level of Service

Miramar Parkway / Hallandale Beach Boulevard								
<i>ID</i>	<i>Count Location</i>	<i>Classification</i>	<i>Divided/Undivided</i>	<i>AADT 2003</i>	<i>Number of Lanes</i>	<i>Signals Per Mile</i>	<i>Capacity</i>	<i>LOS</i>
9646	MIRAMAR PKWY W OF SW 178 AVE	City Unclassified	Divided	30135	4	--	32900	D
9457	MIRAMAR PKWY W OF SW 172 AVE	City Unclassified	Divided	30903	4	--	32900	D
9688	MIRAMAR PKWY W OF SW 160 AV	City Unclassified	Divided	42867	4	--	32900	F
5323	MIRAMAR PKWY W OF I-75	City Unclassified	Divided	42923	4	--	32900	F
5322	MIRAMAR PKWY E OF I-75	City Minor Arterial	Divided	36180	6	--	49300	D
7326	MIRAMAR PKWY W OF FLAMINGO RD	City Minor Arterial	Divided	37191	6	--	49300	D
8227	MIRAMAR PKWY E OF FLAMINGO RD	City Minor Arterial	Divided	25477	6	--	49300	C
9281	MIRAMAR PKWY W OF PALM AVE	City Minor Arterial	Divided	30529	6	--	49300	C
7350	MIRAMAR PKWY E OF PALM AVE	City Minor Arterial	Divided	33409	4	--	32900	F
7138	MIRAMAR PKWY W OF UNIVERSITY DR	City Minor Arterial	Divided	32946	4	--	32900	F
7139	MIRAMAR PKWY E OF UNIVERSITY DR	County Minor Arterial	Divided	34501	4	--	32900	F
7260	MIRAMAR PKWY W OF FTPK	County Minor Arterial	Divided	35382	4	--	32900	F
7005	MIRAMAR PKWY W OF SR 7	County Minor Arterial	Divided	34992	4	--	32900	F
452	HALLANDALE BCH BLVD E OF US 441	State Minor Arterial	Divided	33668	4	2.29	34500	D
5303	HALLANDALE BCH BLVD E OF SW 56 AVE	State Minor Arterial	Divided	34761	4	2.29	34500	F
297	HALLANDALE BCH BLVD W OF I-95	State Minor Arterial	Divided	50230	4	2.29	34500	F
150	HALLANDALE BCH BLVD E OF I-95	State Minor Arterial	Divided	61641	6	4.00	51800	F
590	HALLANDALE BCH BLVD W OF US 1	State Minor Arterial	Divided	44327	6	4.00	51800	D

Pembroke Road								
<i>ID</i>	<i>Count Location</i>	<i>Classification</i>	<i>Divided/Undivided</i>	<i>AADT 2003</i>	<i>Number of Lanes</i>	<i>Signals Per Mile</i>	<i>Capacity</i>	<i>LOS</i>
9644	PEMBROKE RD W OF FLAMINGO RD	City Collector	Divided	21059	4	--	32900	C
7345	PEMBROKE RD E OF FLAMINGO RD	City Collector	Undivided	21552	2	--	15600	F
9289	PEMBROKE RD W OF PALM AVE	City Collector	Undivided	28138	2	--	15600	F
7011	PEMBROKE RD E OF PALM AVE	City Collector	Undivided	23297	2	--	15600	F
7009	PEMBROKE RD W OF UNIVERSITY DR	City Collector	Divided	31472	4	--	32900	E
36	PEMBROKE RD E OF UNIVERSITY DR	State Minor Arterial	Divided	36870	6	3.43	51800	C
205	PEMBROKE RD E OF SW 69 AVE	State Minor Arterial	Divided	47491	6 to 4	3.43	34500	F
7007	PEMBROKE RD W OF SR 7	State Minor Arterial	Divided	41354	4 to 6	3.43	34500	F
98	PEMBROKE RD E OF US 441	State Minor Arterial	Divided	34825	6	2.29	51800	C
117	PEMBROKE RD E OF S 56 AVE	State Minor Arterial	Divided	40222	6	2.29	51800	C
78	PEMBROKE RD W OF I-95	State Minor Arterial	Divided	49976	6	2.29	51800	E
5181	PEMBROKE RD E OF I-95	State Collector	Divided	39794	4	3.33	34500	F
5093	PEMBROKE RD W OF US 1	State Collector	Divided	25589	4	3.33	34500	C

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Table 33. Parallel Roadway Level of Service (continued)

Johnson Street								
<i>ID</i>	<i>Count Location</i>	<i>Classification</i>	<i>Divided/Undivided</i>	<i>AADT 2003</i>	<i>Number of Lanes</i>	<i>Signals Per Mile</i>	<i>Capacity</i>	<i>LOS</i>
9197	JOHNSON ST E OF FLAMINGO RD	City Collector	Divided	13259	4	--	32900	C
9482	JOHNSON ST, W OF PALM AVE	City Collector	Divided	16996	4	--	32900	C
9375	JOHNSON ST E OF PALM AVE	City Collector	Undivided	16370	2	--	15600	F
8012	JOHNSON ST W OF UNIVERSITY DR	City Collector	Undivided	15125	2	--	15600	E
8013	JOHNSON ST E OF UNIVERSITY DR	City Collector	Undivided	16431	2	--	15600	F
8011	JOHNSON ST W OF FTPK	City Collector	Undivided	17693	2	--	15600	F
8010	JOHNSON ST E OF SR 7	City Collector	Undivided	18209	2	--	15600	F
8023	JOHNSON ST E OF N 46 AVE	City Collector	Undivided	17605	2	--	15600	F
8008	JOHNSON ST W OF I-95	City Collector	Undivided	17899	2	--	15600	F
9627	JOHNSON ST W OF DIXIE HWY	City Collector	Undivided	13032	2	--	15600	D
8206	JOHNSON ST E OF NW 21 AVE	City Collector	Undivided	12744	2	--	15600	D

Taft Street								
<i>ID</i>	<i>Count Location</i>	<i>Classification</i>	<i>Divided/Undivided</i>	<i>AADT 2003</i>	<i>Number of Lanes</i>	<i>Signals Per Mile</i>	<i>Capacity</i>	<i>LOS</i>
9481	TAFT ST, W OF FLAMINGO RD	City Collector	Divided	19530	4	--	32900	C
7292	TAFT ST E OF FLAMINGO RD	City Collector	Divided	16566	4	--	32900	C
7222	TAFT ST W OF PALM AVE	City Collector	Divided	20494	4	--	32900	C
9554	TAFT ST W OF DOUGLAS RD	City Collector	Divided	24347	4	--	32900	D
7016	TAFT ST W OF UNIVERSITY DR	City Collector	Divided	19140	4	--	32900	C
7015	TAFT ST E OF UNIVERSITY DR	City Collector	Divided	18342	4	--	32900	C
9381	TAFT ST E OF SW 72 AVE	City Collector	Divided	26380	4	--	32900	D
8016	TAFT ST E OF NW 64 AVE	City Collector	Divided	21442	4	--	32900	D
8015	TAFT ST E OF SR 7	City Collector	Undivided	12246	2	--	15600	D
8014	TAFT ST W OF N 46 AVE	City Collector	Undivided	9461	2	--	15600	D
8215	TAFT ST W OF I-95	City Collector	Undivided	13274	2	--	15600	D
9624	TAFT ST W OF DIXIE HWY	City Collector	Undivided	11995	2	--	15600	D
8207	TAFT ST E OF NW 21 AVE	City Collector	Undivided	11877	2	--	15600	D

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 33. Parallel Roadway Level of Service (continued)

Sheridan Street								
<i>ID</i>	<i>Count Location</i>	<i>Classification</i>	<i>Divided/Undivided</i>	<i>AADT 2003</i>	<i>Number of Lanes</i>	<i>Signals Per Mile</i>	<i>Capacity</i>	<i>LOS</i>
9361	SHERIDAN ST E OF US 27	County Unclassified	Undivided	3355	2	--	15600	C
9686	SHERIDAN ST W OF NW/SW 196 AVE	County Unclassified	Undivided	4179	2	--	15600	C
9475	SHERIDAN ST, W OF SW 185 WAY	County Unclassified	Undivided	15415	2	--	15600	E
9271	SHERIDAN ST W OF SW 172 AVE	County Unclassified	Undivided	20243	2	--	15600	F
9476	SHERIDAN ST, W OF SW 160 AVE	County Unclassified	Divided	36141	4	--	32900	F
5325	SHERIDAN ST W OF I-75	County Minor Arterial	Divided	57271	6	--	49300	F
5324	SHERIDAN ST E OF I-75	County Minor Arterial	Divided	44119	6	--	49300	D
7348	SHERIDAN ST W OF FLAMINGO RD	County Minor Arterial	Divided	47651	4	--	32900	F
7349	SHERIDAN ST E OF FLAMINGO RD	City Minor Arterial	Divided	31276	4	--	32900	E
7658	SHERIDAN ST W OF PALM AVE	City Minor Arterial	Divided	38643	4	--	32900	F
9478	SHERIDAN ST, W OF DOUGLAS RD	County Minor Arterial	Divided	39743	4	--	32900	F
7078	SHERIDAN ST W OF UNIVERSITY DR	County Minor Arterial	Divided	47907	4	--	32900	F
9674	SHERIDAN ST E OF UNIVERSITY DRIVE	County Minor Arterial	Divided	36385	6	--	49300	D
7297	SHERIDAN ST E OF NW 72 AVE	County Minor Arterial	Divided	39299	6	--	49300	D
8218	SHERIDAN ST W OF FTPK	County Minor Arterial	Divided	38224	6	--	49300	D
9142	SHERIDAN ST W OF SR 7	County Minor Arterial	Divided	39844	6	--	49300	D
480	SHERIDAN ST E OF SR 7	State Minor Arterial	Divided	45862	6	2.61	51800	D
116	SHERIDAN ST E OF N 46 AVE	State Minor Arterial	Divided	53681	6	2.61	51800	F
5173	SHERIDAN ST W OF I-95	State Minor Arterial	Divided	50753	6	1.85	53500	C
34	SHERIDAN ST E OF I-95	State Minor Arterial	Divided	45728	6	2.96	51800	D
5172	SHERIDAN ST W OF DIXIE HWY	State Minor Arterial	Divided	40703	6	2.96	51800	D
5300	SHERIDAN ST W OF US1	State Minor Arterial	Divided	28504	6 to 4	2.96	34500	D

Summary of Existing Conditions Analysis

This chapter of the report described the existing conditions analysis for various modes of transportation along Hollywood/Pines Boulevard and within the extended study boundary. Transportation data were analyzed for pedestrian, bicycle, transit, multimodal, and roadway (automobile) modes of transportation. Various transportation deficiencies and needs were determined as a result of the existing conditions analysis. A summary of the existing conditions analysis is presented below. The summary inventories the primary transportation deficiencies and needs along the Hollywood/Pines Boulevard corridor.

Pedestrian

Several sections of discontinuous sidewalks were identified along Hollywood/Pines Boulevard. Sidewalk discontinuities are found between U.S. 27 and SW 184th Street, in the vicinity of the I-75 interchange, and between Douglas Road and Palm Avenue. However, sidewalk coverage along the corridor is generally good with sidewalks provided along 91 percent of the facility length.

The density of pedestrian crashes is highest in the vicinity of the intersection of Hollywood Boulevard and U.S. 441. Enhanced pedestrian crossing features may be appropriate at this location.

Pedestrian level of service is a measure of the environment experienced by pedestrians such as comfort and safety. Pedestrian level of service is D or worse for approximately 50 percent of the facility due to high traffic volumes and minimal lateral separation between pedestrian facilities and the roadway, especially east of University Drive.

Bicycle

No bicycle facilities are provided between U.S. 27 and I-75. Bicycle level of service, a measure of the environment experienced by bicyclists, ranges from D to F due to high traffic volumes and

little separation from travel lanes. However, the bicycle suitability rating in this area is more favorable than in other portions of Hollywood/Pines Boulevard. In addition, the density of driveway connections and intersections is less than in other portions of the corridor, which reduces conflict points for bicyclists. Therefore, the implementation of bicycle lanes may be appropriate to further encourage bicycling in the area and improve the sense of separation between bicyclists and motorized vehicles.

No bicycle facilities are provided between SW 64th Way and I-95. Bicycle level of service E prevails throughout most of this section of roadway and the bicycle suitability rating is moderate to extremely high. This section of Hollywood Boulevard represents a barrier to bicyclists between the bike lane west of North 64th Avenue and the Downtown Hollywood activity center.

No bicycle facilities are provided between City Hall Circle and Young Circle. Hollywood Boulevard is the primary street in the Downtown Hollywood activity center. The mix of land uses along Hollywood Boulevard in this area are typically attractive conditions for bicycling and other alternative modes of transportation.

Between 1999 and 2001, the highest density of bicycle crashes along the facility occurred between 72nd Avenue and 64th Avenue. However, only 2 of the 7 bicycle crashes in this area involved bicycles traveling in the bike lane. Despite the presence of a bike lane in this area, bicycle level of service E prevails due primarily to high traffic volumes and proximity to traffic. Strategies for reducing bicycle and pedestrian crashes in this area are vital due to the occurrence of crashes and the proximity of McArthur High School and West Hollywood Elementary School.

Transit

The average travel time by bus is 76 percent longer than the average travel time by automobile along eastbound Hollywood/Boulevard during the AM peak period. The average travel time by bus is 79 percent longer than the average travel time by automobile along westbound Hollywood/Pines Boulevard during the PM peak period. Due to the long length of the corridor,

transit travel time is inhibited by the frequency of bus stops. An express bus route may be feasible due to the corridor length and travel demand characteristics.

Benches near 16 of the 149 bus stops block the adjacent sidewalk or otherwise inhibit access from the sidewalk to the bus stop. Almost one-half of the bus stops (67 of the 149 bus stops) do not have sidewalk access or have an obstacle blocking the sidewalk access.

No shelters are provided at 119 of the 149 bus stops. Bus shelters are not feasible at every bus stop; however, general guidance indicates that shelters are preferred at bus stops with 25 or more passenger boardings per day. No bus bays are provided at 128 of the 149 bus stops. However, bus bay installations are not feasible at all bus stops due to right-of-way constraints, traffic characteristics, and other roadway geometric parameters. Bus bays are most appropriate at stops with significant passenger activity, stops near primary intersections, and time points for schedule adherence that may increase dwell time.

Multimodal

Signing deficiencies associated with the C.B. Smith park-n-ride lot may hinder accessibility for motorists. An enhanced series of trailblazer signs along Pines Boulevard and Flamingo Road may improve access to the park-n-ride. In addition, information regarding connections to BCT Routes 3, 5, and 7 should be provided within the park-n-ride lot. The nearest bus stop along Pines Boulevard is approximately 130 feet to the west of the lot.

Standard-size buses cannot access the premises of the Hollywood Tri-Rail Station because of the narrow entrance. Passengers who transfer between Tri-Rail and BCT Route 7 must walk 300 feet to the west to access a westbound bus stop. Eastbound passengers must cross Hollywood Boulevard and walk under the I-95 bridge to access the eastbound transfer point. Enhanced pedestrian features in the area would augment the user experience for passengers who transfer at this location.

Bike lanes are not provided adjacent to the Hollywood Tri-Rail Station. Providing pedestrian and bicycle connections to transit facilities is vital for enhancing accessibility.

The Sheridan Street Tri-Rail Station and park-n-ride lot contains bus bays for three BCT routes (3, 12, and 17) that access the station. However, the park-n-ride lot is often underutilized. Boardings and alightings at the Sheridan Street Tri-Rail Station are typically among the lowest in the system. FDOT is planning a joint development project at the Sheridan Street Station that may improve ridership and park-n-ride utilization.

In general, bus stop infrastructure provided at the Young Circle stops is poor and not indicative of such an important transfer location. Enhanced transit infrastructure in the vicinity of Young Circle would provide increased passenger comfort and could attract “choice riders” away from automobiles.

Other primary bus transfer locations with infrastructure deficiencies include the Pembroke Lakes Mall, the U.S. 441 intersection, and the University Drive intersection. In particular, the intersection of Hollywood Boulevard and U.S. 441 should be developed as a primary multimodal transfer location due to the expected increase in transit demand associated with the Transit Bridge project.

Roadway

The existing arterial level of service (LOS) was determined for Hollywood/Pines Boulevard based on travel time runs collected for this study. Travel time runs can be used to calculate average travel speeds between intersections, which provide a detailed measure of corridor mobility for through movements. Roadway level of service differs from pedestrian and bicycle level of service in that roadway level of service is a measure of travel congestion. Level of service E or F conditions were measured along the following segments of the corridor.

Eastbound AM Peak

- Dykes Road to NW 155th Avenue

- North 64th Avenue to Florida's Turnpike
- Florida's Turnpike to North 62nd Avenue
- North 62nd Avenue to U.S. 441 (State Road 7)
- Park Road to Southbound I-95 Ramps
- Southbound I-95 Ramps to Northbound I-95 Ramps
- Hollywood City Hall Circle to Young Circle

Westbound AM Peak

- Young Circle to Hollywood City Hall Circle
- Hollywood City Hall Circle to I-95 Northbound Ramps
- North 56th Avenue to U.S. 441 (State Road 7)
- U.S. 441 (State Road 7) to North 62nd Avenue
- North 62nd Avenue to Florida's Turnpike
- Florida's Turnpike to North 64th Avenue

Eastbound PM Peak

- SW 96th Avenue to Douglas Road
- Florida's Turnpike to North 62nd Avenue
- North 62nd Avenue to U.S. 441 (State Road 7)
- Park Road to Southbound I-95 Ramps
- Hollywood City Hall Circle to Young Circle

Westbound PM Peak

- I-95 Northbound Ramps to I-95 Southbound Ramps
- I-95 Southbound Ramps to Park Road
- North 56th Avenue to U.S. 441 (State Road 7)
- NW 108th Avenue to Hiatus Road

Intersection level of service, which considers all movements at an intersection, was also measured for significant intersections along Hollywood/Pines Boulevard. In general, the intersections listed above for poor corridor level of service also received intersection LOS E or F. The following intersections received intersection LOS E or F based on analysis for this study.

- Dykes Road

- NW/SW 155th Avenue
- NW/SW 129th Avenue
- Flamingo Road
- NW/SW 118th Avenue
- Hiatus Road
- Palm Avenue
- Douglas Road
- University Drive
- NW/SW 72nd Avenue
- Florida's Turnpike
- U.S. 441
- Park Road
- I-95
- Dixie Highway

Along Hollywood/Pines Boulevard, 60 of the 83 median openings (73 percent) do not comply with spacing standards for access management.

Crash rates are highest in the eastern portion of Hollywood/Pines Boulevard between North 64th Avenue and North 28th Avenue. However, the western section of the facility between U.S. 27 and SW 196th Avenue exhibited the next highest crash rate in both 2000 and 2001. This is likely due to a high frequency of crashes at the intersection of Pines Boulevard and U.S. 27.

Corridor level of service was also measured along alternative parallel corridors. The level of service analysis for parallel corridors was based on annual average daily traffic (AADT), whereas the level of service analysis along Hollywood/Pines Boulevard was based on measured travel speed to provide a more detailed analysis. The following corridors exhibited several roadway segments operating at level of service E or F.

- Hallandale Beach Boulevard / Miramar Parkway
- Pembroke Road

- Johnson Street

Taft Street did not exhibit any data location worse than LOS D. Sheridan Street exhibited LOS E and F along the four-lane section west of University Drive. However, along the six-lane section of Sheridan Street east of University Drive, only 1 of 10 data locations graded worse than LOS D. Hollywood/Pines Boulevard exhibits higher traffic volumes in the western portion of the corridor than the western portions of parallel facilities. However, Sheridan Street carries similar traffic volumes east of U.S. 441 as Hollywood Boulevard, and Hallandale Beach Boulevard carries higher traffic volumes east of I-95 than Hollywood Boulevard. Taft Street and Johnson Street are classified as city collector roadways and are generally less appropriate for large volumes of through traffic. Based on the parallel corridor analysis, roadway capacity improvements may be warranted along Sheridan Street between I-75 and University Drive, and along Hallandale Beach Boulevard in the vicinity of I-95.

ANALYSIS OF SHORT RANGE TRANSPORTATION CONDITIONS

This chapter of the report describes the short-range (Year 2008) conditions analysis for various modes of transportation along Hollywood/Pines Boulevard. To complete the short-range conditions analysis, data were gathered from applicable sources of future transportation information as well as transportation programs and plans. Transportation projects programmed for funding in the *Broward County MPO Transportation Improvement Program (TIP)* for fiscal year 2003/2004 to 2007/2008 were included in the analysis. These programmed improvements were assumed to be implemented by Year 2008 and their impacts were incorporated in the short-range analysis. The short-range conditions analysis is presented by mode in the same order as in the Performance Measures and Targets presented in Table 1: pedestrian, bicycle, transit, multimodal, and roadway. The Year 2008 conditions form the basis of subsequent analysis, which outlines the strategies needed to address transportation congestion and improve transportation deficiencies along Hollywood/Pines Boulevard.

Short Range Pedestrian Conditions

A few pedestrian projects within the extended study area are listed in the *Broward County Transportation Improvement Program (TIP)*. One project is along Miramar Parkway from Douglas Road to Palm Avenue and includes the construction of new sidewalks during the 2003/2004 fiscal year. Another project is along Miramar Parkway from U.S. 441 (S.R. 7) to SW 64th Avenue and includes the development of a streetscape during the 2003/2004 fiscal year. Pedestrian signals along Pembroke Road between SW 27th Avenue and SW 26th Avenue are scheduled for relocation during the 2004/2005 fiscal years. The final project listed involves the development of a streetscape at the intersection of Sheridan Street and Ely Boulevard during the 2003/2004 fiscal year.

The only pedestrian improvement project that may affect Hollywood/Pines Boulevard for the short-range conditions according to the Broward County TIP is the citywide construction and repair of sidewalks in Hollywood during the 2003/2004 fiscal year. The improvement is

indicated as citywide; therefore some sidewalks along Hollywood Boulevard may be improved, especially in the section of Hollywood Boulevard maintained by the City. None of the sidewalks along Hollywood Boulevard in the Hollywood area were determined to be discontinuous; however, local problems may exist with the quality of the sidewalks indicating a need for repair.

In summary, the short-term projects identified in current transportation plans and programs are not expected to significantly change pedestrian conditions along Hollywood/Pines Boulevard. An increase in sidewalk coverage along some parallel facilities is planned.

As presented in the Identification of Performance Measures and Targets chapter of this report, pedestrian level of service (PLOS) is the measurement technique used to evaluate the pedestrian mobility performance category. PLOS C was identified as the performance target. However, the existing conditions analysis for PLOS presented in Table 11 indicates that pedestrian level of service (PLOS) along several segments of Hollywood/Pines Boulevard is worse than PLOS C. Although no projects were identified in current transportation plans and programs that would have a positive impact on pedestrian level of service, the expected increase in the volume of motorized traffic in many segments of the corridor will have a negative impact on pedestrian level of service.

The following segments of the north side of Hollywood/Pines Boulevard are expected to be performing below the PLOS C target in 2008 based on the short-range analysis of this study.

North Side of Hollywood/Pines Boulevard PLOS D-F (Year 2008 AM Peak)

- Hollywood City Hall Circle to North 35th Avenue
- North 72nd Avenue to McArthur Parkway
- NW 184th Avenue to U.S. 27

North Side of Hollywood/Pines Boulevard PLOS D-F (Year 2008 PM Peak)

- Hollywood City Hall Circle to North Circle Drive (west of Presidential Circle)
- U.S. 441 to Hiatus Road

- NW 136th Avenue to U.S. 27

When comparing the AM peak and the PM peak, a greater length of the north side of Hollywood/Pines Boulevard corridor is expected to perform below the pedestrian level of service target during the PM peak period in 2008 than during the AM peak period. This is primarily due to higher westbound traffic volumes during the PM peak period.

The following segments of the south side of Hollywood/Pines Boulevard are expected to be performing below the PLOS C target in 2008 based on the short-range analysis of this study.

South Side of Hollywood/Pines Boulevard PLOS D-F (Year 2008 AM Peak)

- U.S. 27 to west side of St. Edward Catholic Church access road (east of SW 196th Ave.)
- SW 168th Avenue to SW 136th Avenue
- Hiatus Road to South 58th Avenue
- West of Interstate 95 to Hollywood City Hall Circle

South Side of Hollywood/Pines Boulevard PLOS D-F (Year 2008 PM Peak)

- U.S. 27 to west side of St. Edward Catholic Church access road (east of SW 196th Ave.)
- SW 168th Avenue to SW 129th Avenue
- Flamingo Road to U.S. 441
- South 35th Avenue to FEC Railroad

The pedestrian level of service calculations for the south side of Hollywood/Pines Boulevard show that similar segments are below the PLOS C target during the AM peak as during the PM peak. The primary difference is that the segment from SW 129th Avenue to University Drive operates below the PLOS C target only during the PM peak period. The short-range pedestrian analysis indicates that the majority of the south side of the Hollywood/Pines Boulevard corridor is expected to operate below PLOS C in 2008. The western portion of the corridor exhibits more segments in compliance with the PLOS C target in locations where sidewalks exist, primarily due to sidewalks having greater lateral separation from vehicular traffic in this area.

Figure 12 presents the pedestrian level of service map for the 2008 AM peak conditions along the study corridor. Figure 13 presents the pedestrian level of service map for the 2008 PM peak conditions along the study corridor.

Short Range Bicycle Conditions

As discussed in the Analysis of Existing Transportation Conditions chapter of this report, bicycle lanes exist along only 14 percent of Hollywood/Pines Boulevard. The primary sections of bicycle lanes exist from (1) NW 83rd Avenue to SW 64th Way and (2) North/South 28th Avenue to Hollywood City Hall Circle. Paved shoulders provide some space for bicyclists between NW 142nd Avenue and NW 83rd Avenue, but typically do not provide as much mobility for bicyclists as marked bicycle lanes.

According to the *Broward County Transportation Improvement Program* (TIP), no projects are listed for the short-range improvement of bicycle facilities. However, bike lanes and unmarked curb lanes are often included in design plans for other transportation projects such as the resurfacing of roadways and intersection improvements. Therefore, designed bicycle facilities included in engineering drawings were researched for projects within the extended study boundary. In addition, the *Broward County Greenways Plan* was researched to determine if bicycle facilities are planned for greenways within the extended study boundary.

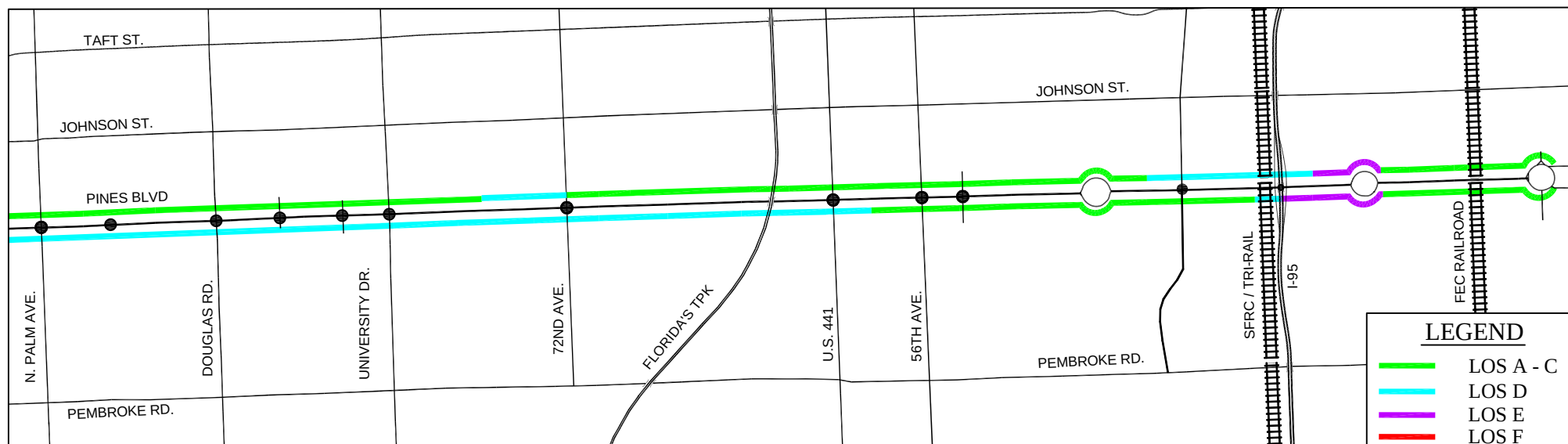
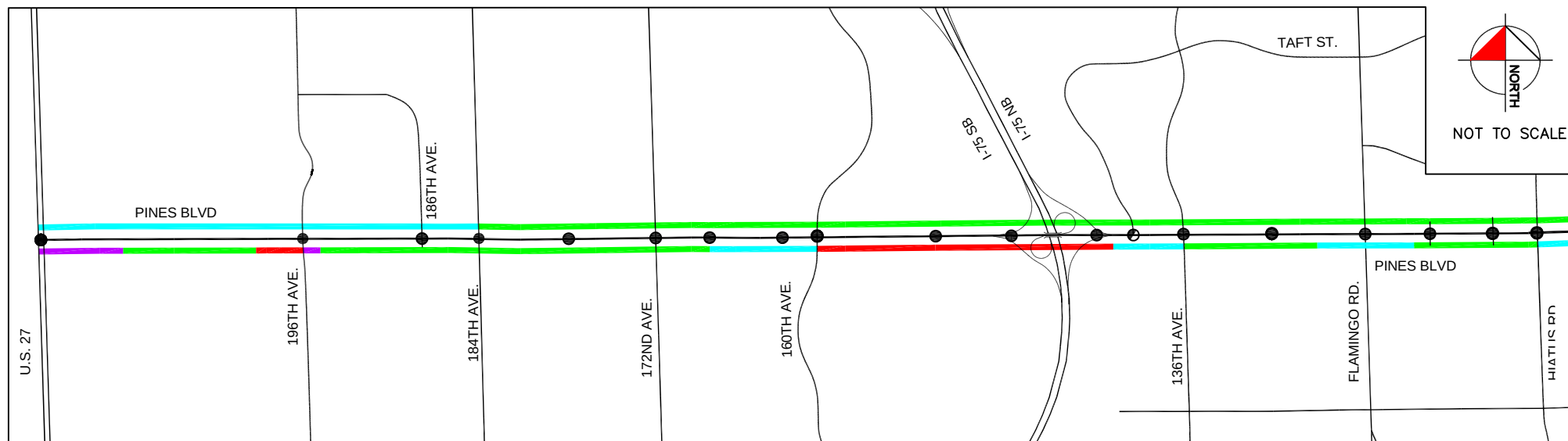
Bicycle facilities designed in current engineering drawings located within the extended study boundary include the following.

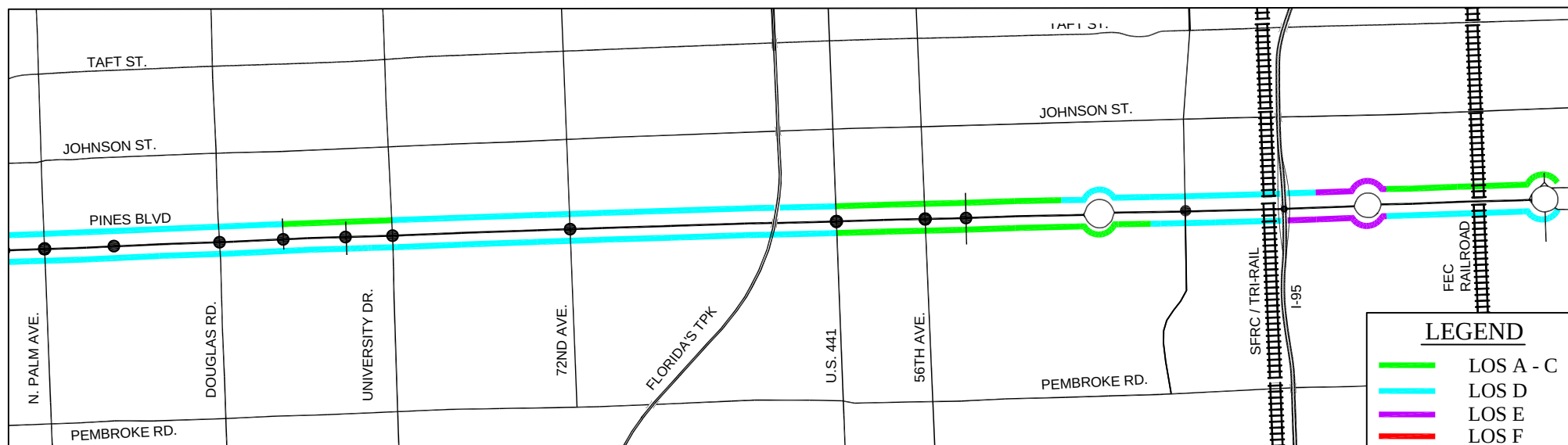
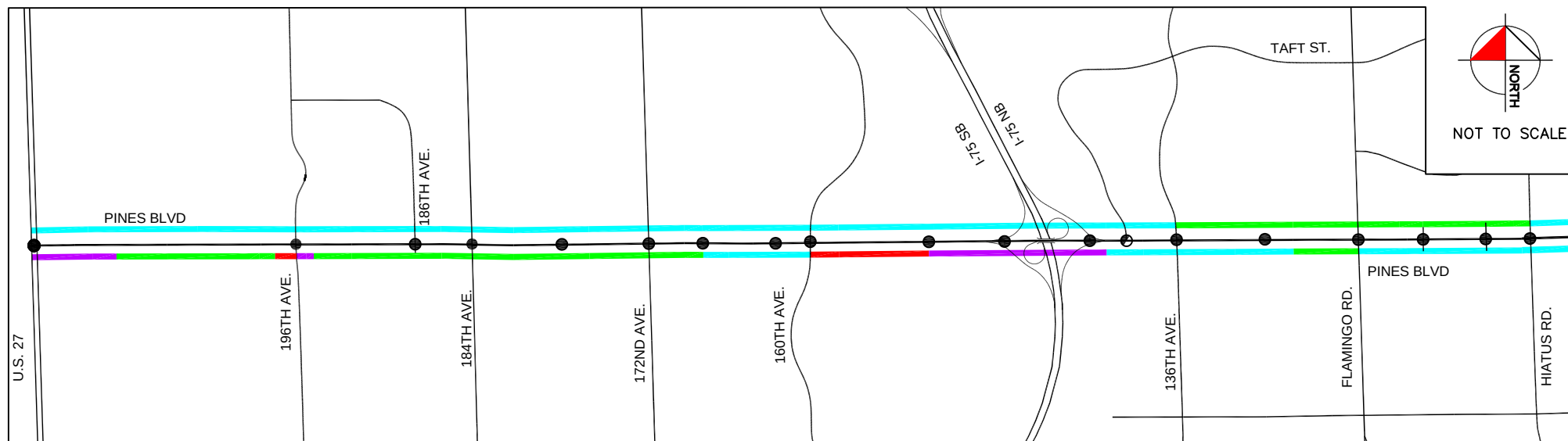
Bicycle Lane

- U.S. 441 (Miami-Dade County Line to Orange Drive)
- Miramar Parkway (SW 184th Avenue to Flamingo Road)

Wide Curb Lane

- NW 184th Avenue (Pines Boulevard to Sheridan Street)





- NW 196th Avenue (Pines Boulevard to Sheridan Street)

Paved Shoulder

- Sheridan Street (NW 172nd Avenue to I-75)

Unmarked Lane

- U.S. 1 (Hallandale Beach Boulevard to Young Circle)
- University Drive (Homestead Extension of Florida's Turnpike to Pines Boulevard)
- Douglas Road (Miami-Dade County Line to Pembroke Road)

No bicycle facilities are currently planned along Hollywood/Pines Boulevard. However, north-south bicycle connectivity to Hollywood/Pines Boulevard is expected to increase as several projects along intersecting north-south roadways are planned to include bicycle facilities such as bicycle lanes, wide curb lanes, and unmarked lanes.

The *Broward County Greenways Plan* was developed to plan a countywide network of safe, clean, bicycle and equestrian paths, nature trails, and waterways. The intent of the Greenways Plan is to connect neighborhoods from the Atlantic Ocean to the Everglades with conservation lands, recreational parks, schools, and business areas. The system is intended to enhance recreation, native vegetation, wildlife habitats, and alternative modes of transportation. This plan was reviewed to determine if any of the priority corridors identified in the Greenways Plan pass through the extended study boundary for this study.

Five corridors were selected as having the highest priority for development. The five “phase one” corridors form a framework that traverses most portions of the County and provide a good representation of different types of trails. The five “phase one” corridors include Dixie Highway, Flamingo-Hiatus, C-14 Canal / Cypress Creek, Conservation Levee, and New River – S.R. 84. Two of the five corridors, Dixie Highway and Flamingo-Hiatus, connect to Hollywood/Pines Boulevard. A third “phase one” corridor, Conservation Levee, passes just west of Pines Boulevard approximately one-half mile west of U.S. 27.

The Dixie Highway Trail traverses the County from Hallandale Beach in the south to Deerfield Beach in the north. Between Bluesten Park in Hallandale Beach and Sheridan Street, the Dixie Highway Trail follows the FEC Railroad corridor. Hollywood's vibrant downtown area offers an important destination adjacent to the Dixie Highway Trail where users may enjoy shopping, dining, and cultural opportunities. The Dixie Highway Trail is expected to connect Downtown Hollywood with many of the other downtowns of Broward County's eastern municipalities.

The Flamingo-Hiatus Trail is expected to follow Flamingo Road from the Snake Creek Canal in the south to the New River – S.R. 84 Greenway in the north. The proposed alignment continues north along Hiatus Road into the communities of Plantation and Sunrise. Between Miramar Parkway and Sheridan Street, the Flamingo-Hiatus Trail is expected to be a semi-rural multi-purpose trail serving bicyclists, equestrians, and hikers. An important destination along the Flamingo-Hiatus Trail is C.B. Smith Park, in the northwest quadrant of the intersection of Pines Boulevard and Flamingo Road. C.B. Smith Park offers a wide variety of recreational activities, trails, a water park, and a park-n-ride lot.

Short Range Transit Conditions

Short-range transit plans are included in the *Broward County Transit Development Plan* (TDP). The TDP serves as a guide for capital and operating improvements of the transit system from fiscal year 2005 through 2009. Several transit service improvements in the TDP are designed to reduce travel times and headways; other improvements are designed to extend the service area of the system.

Headway improvements are planned for Broward County Transit (BCT) Route 7 along Hollywood/Pines Boulevard. The headway is expected to be improved from 30 minutes to 20 minutes for the route during weekdays. This modification will improve the weekday capacity of transit service along the entire corridor by 50 percent. Headway improvements from 40 minutes to 30 minutes are also planned for Route 7 on Sundays.

A weekday headway improvement on Route 5 from 60 minutes to 30 minutes is also planned. Route 5 utilizes Pines Boulevard between Flamingo Road and University Drive. Weekday headway improvements on Routes 5 and 7 will increase transit capacity by 67 percent between Flamingo Road and University Drive.

Other weekday headway improvements identified in the TDP within the extended study boundary include the following.

- Route 1 (15 minutes to 10 minutes) along U.S. 1
- Route 2 (20 minutes to 15 minutes) along University Drive
- Route 3 (60 minutes to 30 minutes) primarily along Taft Street
- Route 12 (40 minutes to 30 minutes) along Sheridan Street
- Route 15 (45 minutes to 30 minutes) primarily along 56th Avenue
- Route 18 (15 minutes to 10 minutes) along U.S. 441

Route extensions and headway improvements are planned for Routes 12 and 88. Route 12 is expected to be extended along Sheridan Street from University Drive to SW 172nd Avenue in 2005. Route 12 will become an east-west trunk line along Sheridan Street from SW 172nd Avenue to the Anne Kolb Nature Center near the Intracoastal Waterway. Route 88 is planned to be extended along Douglas Road from the West Regional Terminal to NW 207th Street in Miami-Dade County in 2008. This will increase the north-south transit connectivity to Pines Boulevard.

Additional significant projects listed in the TDP include neighborhood transit centers, which include the conversion of a bus stop or cluster of bus stops into a shopping/community center intended to increase the sense of place and activity surrounding the bus stop. Neighborhood transit centers will combine connections with BCT routes, neighborhood shuttles, passenger facilities, and access to community services in one location. One neighborhood transit center is identified along Hollywood/Pines Boulevard within the City of Hollywood near the intersection of Hollywood Boulevard and Dixie Highway. Many of the bus transfers that occur near Young Circle are expected to be transferred to this neighborhood transit center. Another neighborhood

transit center within the extended study boundary is planned for the intersection of Red Road and Hiatus Road in Miramar.

Broward County Transit is developing a Master Plan for transit service improvements beyond the five-year planning horizon of the *Transit Development Plan* (TDP). The draft version of the *Broward County Transit Master Plan* includes several projects for which TDP projects are precursors. Although the *Broward County Transit Master Plan* identifies projects beyond the five-year planning horizon of this study, multimodal transportation planning benefits from coordination with long-range planning efforts to promote consistency between short-range and long-range planning. Therefore, a draft version of the *Broward County Transit Master Plan* was reviewed to determine planned transit improvements within the extended study boundary.

Limited stop service along Route 7, the east-west trunk line along Hollywood/Pines Boulevard, is identified in the *Broward County Transit Master Plan*. Limited stop service for Route 7 is attractive because the length of the corridor and the number of bus stops negatively impacts transit travel time, the route serves multiple important transfer facilities, and numerous connections are provided to bus routes that serve trips more local in nature.

The other transit improvements identified in the *Broward County Transit Master Plan* within the extended study boundary include the Broward Transit Bridge along U.S. 441, limited stop service along U.S. 1, and headway improvements on selected routes prioritized for future high-capacity transit service including the Pines Boulevard bus rapid transit (BRT), Sheridan Street BRT, Flamingo Road BRT, and University Drive BRT. BCT has already initiated limited stop bus service along U.S. 441 (Route 18L) as a precursor to the Transit Bridge service. With the exception of the Broward Transit Bridge project, other high-capacity transit projects are expected to be long-range improvements implemented between 2015 and 2025. The Broward Transit Bridge is intended to improve transit service along U.S. 441 from the Golden Glades Interchange in Miami-Dade County to Interstate 595 utilizing various intelligent transportation systems (ITS) improvements, signal prioritization, queue jumpers, environmentally-friendly vehicles, and integration with land use policy.

Short Range Multimodal Conditions

Adequate multimodal connectivity is important for passenger comfort and an enhanced environment for multimodal travel. A review of short-range planned improvements has been completed to determine any improvements to multimodal conditions along Hollywood/Pines Boulevard.

One project that is being planned for improving the multimodal conditions along Hollywood/Pines Boulevard is the addition of a neighborhood transit center in Downtown Hollywood near Dixie Highway. The neighborhood transit center will be achieved through conversion of an existing cluster of bus stops at Young Circle to a shopping/community center, which will enhance the experience of transit users and may encourage development consistent with multimodal travel. The neighborhood transit center project will re-locate the bus transfer facility close to the intersection of Hollywood Boulevard and Dixie Highway, near the FEC Railroad corridor. This will allow the potential for future connections to the proposed Dixie Highway Greenway Trail and possible passenger rail service in the FEC Railroad corridor.

In addition, a need has been identified to develop a multimodal location near the intersection of U.S. 441 and Hollywood Boulevard. As described in the existing conditions analysis chapter of this report, significant transit passenger activity occurs in the vicinity of this intersection. This intersection has also been identified as a station along a potential bus rapid transit (BRT) line in the Broward County MPO Transit Bridge Study. This service would provide north-south connectivity between Broward and Miami-Dade Counties. The BRT service would extend south to Pro Player Stadium and north to Interstate 595, with eventual connections to Palm Beach County a possibility if the service is extended north along U.S. 441 in the future. The bus stations developed from this effort are planned to be off-street with bus bays, passenger shelters, park-n-ride lots, automobile drop-off/pickup facilities, and extensive amenities.

Another identified multimodal improvement along Hollywood/Pines Boulevard is the Tri-Rail Station in Hollywood. Improvements are being made to the Hollywood Boulevard terminal

along with other improvements to the entire Tri-Rail system. The short-term plan is to expand the Hollywood Boulevard terminal to allow for the double track expansion, which will improve convenience for Tri-Rail patrons. In addition, a joint development project is being planned by FDOT at the park-n-ride lot at the Sheridan Street Tri-Rail Station.

Short Range Roadway Conditions

The short-range conditions analysis for roadways was completed by identifying projects included in the *Broward County Transportation Improvement Program* (TIP) scheduled to be implemented between 2004 and 2008, determining 2008 growth factors, and performing intersection capacity analyses for 2008 conditions. Capacity benefits expected to be implemented by 2008 were included in the short-range analysis.

The short-range projects included in the Broward County TIP for the Hollywood/Pines Boulevard corridor consist of the following:

- Pines Boulevard – Installation of traffic signals at NW/SW 208th Avenue during fiscal year 2003/2004
- Pines Boulevard – Installation of traffic signals at NW/SW 186th Avenue, which is currently underway
- Pines Boulevard – Safety project between SW 136th Avenue and Hiatus Road including turn lane modifications at several intersections during fiscal year 2006/2007
- Hollywood Boulevard – Interchange modification at Florida's Turnpike during fiscal year 2006/2007

The short-range roadway projects outlined in the Broward County TIP for the extended study area include the following:

- Johnson Street – Installation of a traffic signal at U.S. 27 during fiscal year 2003/2004
- Miramar Parkway – Add left-turn lanes on Miramar Parkway at Dykes Road during fiscal year 2003/2004

- Miramar Parkway – Add two lanes from Old Flamingo Road to Red Road during fiscal year 2003/2004
- SW 145th Avenue – Construct four new lanes from 1500 feet south of Pembroke Road to the north end of SW 145th Avenue during fiscal year 2003/2004
- Hiatus Road – Add two lanes from Red Road to Pembroke Road during fiscal years 2003/2004
- Pembroke Road – Construction of two new lanes from SW 172nd Avenue to SW 160th Avenue, which is underway
- Pembroke Road – Construct four new lanes from SW 160th Avenue to SW 136th Avenue during fiscal years 2003/2004
- Pembroke Road – Construction of two new lanes from Flamingo Road to Douglas Road, which is underway
- U.S. 441 – Add two lanes from Hallandale Beach Boulevard to just south of Farragut Street during fiscal year 2007/2008
- U.S. 441 – Extend turn lanes and add a traffic separator from Park Road to Farragut Street during fiscal year 2006/2007
- Sheridan Street – Add two lanes from SW 196th Avenue to SW 172nd Avenue during fiscal year 2003/2004

The intersection growth rates that were used to determine the 2003 intersection volumes, described in the Data Retrieval and Collection chapter of this report, were used to project short-range growth factors for 2008 for the Hollywood/Pines corridor. To conduct the short-range (Year 2008) transportation analysis for the roadway mode, five years of expected traffic growth was applied to existing (Year 2003) traffic volumes. Applying historical growth rates from the past four years produces a growth percentage that accounts for recent growth rates, especially for the western portion of the corridor, which has experienced more dynamic traffic growth than the eastern portion.

In the case of Hollywood/Pines Boulevard, the rapid growth that has occurred in the western portion of the corridor is reflected in traffic growth percentages from historical traffic counts.

Applying these growth percentages over the next five years reflects the growth that is believed to continue in the short range (5 years). However, applying a growth rate from the 2025 FSUTMS model produces a linear growth rate that would assume that all growth occurs evenly over a 26-year period. Historical growth rates were used for the intersection approaches with available data and were supplemented with a FSUTMS growth rate only in cases where an historical growth rate is not available or is deemed not applicable through engineering judgment.

The projected 2008 intersection growth factors are presented by approach in Table 34. The average growth factor west of University Drive is 1.04; the average growth factor east of University Drive is 1.02. Therefore, the projected east-west short-range growth factors are generally higher west of University Drive than east of University Drive.

Table 34. 2008 Annual Short-Range Growth Factors by Intersection

Cross Street	AM Growth Factors				PM Growth Factors			
	SB	WB	NB	EB	SB	WB	NB	EB
U.S. 27	1.11	1.14	1.07	N/A	1.11	1.14	1.07	N/A
NW/SW 184 th Ave.	1.03	1.05	1.05	1.05	1.03	1.05	1.05	1.05
NW/SW 172 nd Ave.	1.01	1.01	1.01	1.06	1.01	1.06	1.01	1.01
Dykes Road	1.05	1.01	1.03	1.01	1.05	1.01	1.03	1.01
NW/SW 155 th Ave.	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
NW/SW 136 th Ave.	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
NW/SW 129 th Ave.	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Flamingo Road	1.05	1.05	1.08	1.05	1.08	1.05	1.05	1.05
NW/SW 118 th Ave.	1.01	1.03	1.01	1.03	1.01	1.03	1.01	1.03
Hiatus Road	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Palm Avenue	1.09	1.09	1.01	1.09	1.09	1.09	1.01	1.09
Douglas Road	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
University Drive	1.01	1.02	1.01	1.01	1.01	1.02	1.01	1.01
NW/SW 72 nd Ave.	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
SW 64 th Way	N/A	1.03	1.03	1.03	N/A	1.03	1.03	1.03
NW/SW 64 th Ave.	1.06	1.03	N/A	1.03	1.06	1.03	N/A	1.03
Florida's Turnpike	N/A	1.03	1.03	1.03	N/A	1.03	1.03	1.03
N/S 62 nd Ave.	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
U.S. 441	1.01	1.03	1.04	1.03	1.01	1.03	1.04	1.03
N/S 56 th Ave.	1.01	1.03	1.00	1.03	1.01	1.03	1.00	1.03
Park Road	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
I-95 SB	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.03
I-95 NB	1.00	1.03	1.00	1.01	1.00	1.03	1.00	1.01
N/S 24 th Ave.	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
SB Dixie Hwy.	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
NB Dixie Hwy.	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01

Intersection levels of service were determined for the Hollywood/Pines Boulevard corridor using the software package SYNCHRO, which is based upon the intersection capacity methodology described in the *Highway Capacity Manual*, to assess the short-range levels of service at the studied intersections. The level of service results obtained using SYNCHRO for the AM and PM peak periods are presented in Tables 35 and 36. The tables show the level of service for each intersection approach as well as the overall intersection level of service for both the existing (Year 2003) and short-range (Year 2008) conditions.

Table 35. Comparison of Existing and Short-Range AM Intersection Level of Service

Cross Street	EB		WB		NB		SB		Intersection LOS	
	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008
U.S. 27	N/A	N/A	D	F	B	B	C	D	D	F
NW/SW 184 th Ave.	D	D	D	D	D	D	D	E	D	D
NW/SW 172 nd Ave.	C	C	B	C	E	E	F	F	D	D
Dykes Road	C	C	D	E	F	F	D	E	D	D
NW/SW 155 th Ave.	F	F	D	D	F	F	F	F	F	F
NW/SW 136 th Ave.	C	C	B	B	D	D	F	F	C	C
NW/SW 129 th Ave.	D	D	D	D	E	E	D	D	D	D
Flamingo Road	F	F	E	F	F	F	E	F	F	F
NW/SW 118 th Ave.	A	A	A	A	E	E	D	D	B	B
Hiatus Road	E	F	D	E	F	F	E	F	E	F
Palm Avenue	F	F	D	F	D	D	F	F	F	F
Douglas Road	C	C	C	C	E	F	E	E	D	D
University Drive	E	E	E	E	E	E	D	D	E	E
NW/SW 72 nd Ave.	D	D	D	D	F	F	D	D	D	D
SW 64 th Way	D	D	C	C	C	C	N/A	N/A	D	D
NW/SW 64 th Ave.	A	B	B	B	N/A	N/A	E	E	B	B
Florida's Turnpike	F	F	F	F	F	F	N/A	N/A	F	F
N/S 62 nd Ave.	C	D	B	C	F	F	E	E	D	E
U.S. 441	F	F	D	E	F	F	F	F	F	F
N/S 56 th Ave.	D	D	D	D	D	D	D	D	D	D
Park Road	D	D	C	C	F	F	D	D	E	E
I-95 SB	C	D	A	A	N/A	N/A	F	F	D	D
I-95 NB	A	A	C	D	E	E	N/A	N/A	C	C
N/S 24 th Ave.	C	C	D	D	A	B	B	B	C	C
SB Dixie Hwy.	D	D	A	A	N/A	N/A	E	E	D	D
NB Dixie Hwy.	A	A	C	C	D	D	N/A	N/A	C	C

Table 36. Comparison of Existing and Short-Range PM Intersection Level of Service

Cross Street	EB		WB		NB		SB		Intersection LOS	
	2003	2008	2003	2008	2003	2008	2003	2008	2003	2008
U.S. 27	N/A	N/A	F	F	A	A	B	B	B	D
NW/SW 184 th Ave.	D	D	D	D	D	E	D	E	D	D
NW/SW 172 nd Ave.	C	C	C	C	D	E	E	F	C	D
Dykes Road	C	C	D	E	F	F	F	F	E	E
NW/SW 155 th Ave.	C	C	D	D	F	F	F	F	D	D
NW/SW 136 th Ave.	C	C	D	D	D	D	F	F	D	D
NW/SW 129 th Ave.	E	E	D	D	F	F	E	E	E	E
Flamingo Road	F	F	F	F	F	F	F	F	F	F
NW/SW 118 th Ave.	F	F	C	C	E	E	F	F	F	F
Hiatus Road	D	E	D	F	F	F	F	F	F	F
Palm Avenue	F	F	F	F	F	F	F	F	F	F
Douglas Road	D	F	F	F	F	F	F	F	F	F
University Drive	E	E	F	F	F	F	E	E	F	F
NW/SW 72 nd Ave.	D	D	E	F	F	F	E	E	E	F
SW 64 th Way	C	C	C	C	D	E	N/A	N/A	C	C
NW/SW 64 th Ave.	B	B	B	C	N/A	N/A	E	E	C	C
Florida's Turnpike	F	F	C	D	F	F	N/A	N/A	F	F
N/S 62 nd Ave.	D	F	D	D	D	F	D	E	D	E
U.S. 441	E	F	F	F	F	F	E	E	F	F
N/S 56 th Ave.	F	F	F	F	D	D	D	D	F	F
Park Road	D	D	D	D	E	E	E	E	E	E
I-95 SB	D	D	A	A	N/A	N/A	F	F	F	F
I-95 NB	B	B	F	F	C	C	N/A	N/A	D	E
N/S 24 th Ave.	C	C	D	D	B	B	C	C	C	C
SB Dixie Hwy.	F	F	A	A	N/A	N/A	F	F	F	F
NB Dixie Hwy.	A	A	F	F	D	D	N/A	N/A	D	D

A total of 10 of the 26 study intersections operate below LOS D in the short-range AM peak analysis as compared to 8 for the existing conditions. The intersections that are expected to operate below LOS D for the AM peak period are listed below. Intersections expected to degrade below LOS D conditions between 2003 and 2008 are indicated.

2008 AM Peak Intersection LOS E-F

- U.S. 27 ^(A)
- NW/SW 155th Avenue

- Flamingo Road
- Hiatus Road
- Palm Avenue
- University Drive
- Florida's Turnpike
- N/S 62nd Avenue ^(A)
- U.S. 441
- Park Road

^(A) – Intersection level of service analysis indicates the intersection will degrade below LOS D between 2003 and 2008.

A total of 17 of the 26 study intersections operate below LOS D in the short-range PM peak analysis as compared to 15 for the existing conditions. The intersections that are expected to operate below LOS D for the PM peak period are listed below. Intersections expected to degrade below LOS D conditions between 2003 and 2008 are indicated.

2008 PM Peak Intersection LOS E-F

- Dykes Road
- NW/SW 129th Avenue
- Flamingo Road
- NW/SW 118th Avenue
- Hiatus Road
- Palm Avenue
- Douglas Road
- University Drive
- NW/SW 72nd Avenue
- Florida's Turnpike
- N/S 62nd Avenue ^(A)
- U.S. 441
- N/S 56th Avenue

- Park Road
- I-95 Southbound
- I-95 Northbound ^(A)
- Southbound Dixie Highway

^(A) – Intersection level of service analysis indicates the intersection will degrade below LOS D between 2003 and 2008.

Summary of Short Range Transportation Conditions

According to transportation plans and programs reviewed for this study, no change in sidewalk coverage along Hollywood/Pines Boulevard has been programmed. However, an increase in sidewalk coverage along several parallel facilities has been identified. Some deterioration in pedestrian level of service (PLOS) is expected based on increasing traffic volumes along the Hollywood/Pines Boulevard corridor.

No change to the existing bicycle facilities along Hollywood/Pines Boulevard is currently programmed. However, an increase in bicycle facility connectivity to the corridor is expected as bicycle lanes, wide curb lanes, and unmarked lanes have been identified along several north-south roadways, including NW/SW 196th Avenue, NW/SW 184th Avenue, University Drive, U.S. 441, and U.S. 1. In addition, three “phase one” corridors of the *Broward County Greenways Plan* pass through the extended study area – the Dixie Highway Trail, the Flamingo-Hiatus Trail, and the Conservation Levee Trail. Overall, some deterioration in bicycle level of service (BLOS) is expected based on increasing traffic volumes along the Hollywood/Pines Boulevard corridor.

Short-range transit plans included in the *Broward County Transit Development Plan* (TDP) indicate weekday headway improvements from 30 minutes to 20 minutes are scheduled for Route 7, the primary trunk line along Hollywood/Pines Boulevard. Headway improvements are also planned for Routes 3 and 5 along portions of Pines Boulevard. Transit capacity is expected to increase along the roadway by 50 percent, except between Flamingo Drive and University

Drive where transit capacity is expected to increase by 67 percent. In addition, route extensions are planned along Douglas Road (Route 88) and Sheridan Street, modifying Route 12 into a parallel trunk line. Limited stop service along Route 7, the east-west trunk line along Hollywood/Pines Boulevard, is identified in the *Broward County Transit Master Plan*.

Neighborhood transit centers have been identified in the TDP at two locations – (1) Hollywood Boulevard and Dixie Highway and (2) Red Road and Hiatus Road. Plans are under development to relocate bus transfers from Young Circle to the neighborhood transit center near Dixie Highway. In addition, a need has been identified to develop a multimodal location near the intersection of U.S. 441 and Hollywood Boulevard, a proposed bus rapid transit stop associated with the Broward Transit Bridge project. Short-range improvements are underway for the Hollywood Tri-Rail Station to accommodate the Tri-Rail double-tracking and to improve multimodal connectivity for patrons. Station improvements are also planned for the Sheridan Street Tri-Rail Station.

Short-range roadway projects programmed for the Hollywood/Pines Boulevard corridor include interchange modifications at the Florida's Turnpike interchange and safety improvements between SW 136th Avenue and Hiatus Road. Traffic growth rates at intersections are expected to average 4 percent annually west of University Drive and 2 percent annually east of University Drive. Of the 26 intersections considered in the intersection level of service analysis, 10 intersections (38 percent) are expected to operate at LOS E or F in 2008 during the AM peak period; 17 intersections (65 percent) are expected to operate at LOS E or F in 2008 during the PM peak period.

CONGESTION MANAGEMENT AND MOBILITY ENHANCEMENT STRATEGIES

This chapter of the report outlines the congestion management strategies developed for the Hollywood/Pines Boulevard corridor. Congestion management strategies are intended to improve the efficiency of a transportation corridor through improvements that encourage alternatives to the single occupant automobile and promote better use of existing resources. Congestion management strategies can often be implemented at a lower cost than traditional roadway widening and can include technology-based solutions that increase the efficiency of existing roadway systems.

This chapter begins with a summary of the preliminary strategy list developed for this study. The preliminary strategies were developed to comply with the goals of the congestion management system (CMS) program. Once the preliminary CMS strategies were presented to and approved by the Technical Advisory Committee (TAC), strategies were applied to specific locations along the corridor based on (1) the need for CMS strategies developed in the existing conditions analysis and the short-range analysis and (2) the appropriateness of a particular strategy at the specific location.

The preliminary strategies list developed for this study can be utilized as a “toolbox” for CMS strategies.

Preliminary Strategies

Numerous CMS strategies are available for transportation planners to address travel congestion and transportation deficiencies. However, not all strategies are appropriate for every roadway corridor or region. Therefore, a “toolbox” of conceptual CMS strategies was developed for use in this study. This preliminary list of strategies was produced as a guide for testing applicable strategies at specific locations. Only certain strategies are applicable at each location along the corridor.

Conceptual Pedestrian Strategies

- Construct Missing Sidewalk Links – Greater continuity can be provided for pedestrian trips by ensuring a continuous network of paths that can be utilized to encourage short trips to be made on foot rather than by automobile.
- Provide Intersecting Pedestrian Connections – Opportunity to serve a greater number of trips can be enhanced by ensuring proper north-south connections to the sidewalks along Hollywood/Pines Boulevard.
- Provide Enhanced Connections to Transit Stops – Providing clear, unobstructed pedestrian paths to transit stops is crucial for transit accessibility.
- Install Mid-Block Pedestrian Signals – Where warranted, mid-block pedestrian signals can provide guidance and protection for pedestrians crossing a major roadway and reduce the barrier effect caused by a principal roadway corridor.
- Upgrade Lighting Features – Enhanced lighting can foster a sense of security among pedestrians and may encourage travelers to consider making trips on foot at night as well as during the daylight hours.

Conceptual Bicycle Strategies

- Bicycle Paths – Bike paths are physically separated from vehicular traffic by an open space or a barrier and typically attract recreational riders as well as commuters.
- Bicycle Lanes – Bike lanes are typically provided as the far right lane of a roadway in urban settings and delineated with striping, pavement markings, and signage; bike lanes are not physically separated from motorized traffic.
- Paved Shoulders – Paved shoulders are separated from travel lanes by the striping representing the outside edge of the outermost travel lane and provide space for bicyclists, although the pavement surface is often not as smooth and is sometimes littered with debris.
- Wide Curb Lanes – Wide curb lanes are similar to bike lanes but are not designated by striping or pavement markings.

- Enhanced Bicycle Signage – Enhanced bicycle signage can be provided to serve a variety of functions including alerting motorists to the presence of bicyclists and directing bicyclists to bicycle racks or storage lockers.
- Enhanced Connections to Transit Stops – Ensuring that transit stops are accessible by bicycle lanes encourages travelers to ride a bicycle to the transit stop. Bicycle transport racks are facilities provided on public transit vehicles that allow transit patrons to bring their bicycle along with them and therefore allow the user to bring the bicycle from trip origin to trip destination.
- Greater Continuity for Bicyclists – Constructing missing bicycle facility links along a roadway can provide greater continuity for bicyclists to make longer trips by bicycle along the corridor.
- Enhanced Bicycle Infrastructure – Providing bicycle infrastructure such as bicycle parking racks, bicycle transport racks, lockers, and even workplace showers can encourage commuters to bicycle by meeting their needs for storage, mobility, and maintaining a professional appearance.

Conceptual Transit Strategies

- Provide More Frequent Service – Reducing headways on transit routes can provide more convenient service to transit patrons; convenience of service is a basic need for encouraging travelers to utilize transit.
- Provide Express Bus Service – Express bus service can significantly reduce transit travel times in long corridors with numerous local bus stops.
- Consolidate Bus Stops – Adjacent bus stops located in close proximity in which one or both bus stops experience little usage can often be consolidated, which can have positive impacts on travel time, route scheduling, and bus/traffic operations.
- Expand Community Bus Shuttles – The Broward County Community Bus Program encourages municipalities to offer community transit service that complements the county bus routes by providing connecting bus service to local neighborhoods.

- Far Side Bus Bays – Far side bus bays provide safety benefits by allowing buses to stop without causing other vehicles to stop and potentially block an intersection. Far side bus bays are typically good locations for timed schedule points to allow buses to dwell if necessary to remain on schedule.
- Near Side Queue Jumpers – Near side queue jumpers are typically provided in right-turn lanes where only public transit vehicles are allowed to execute a through movement. Near side queue jumpers are often provided in conjunction with a far side bus bay. Near side queue jumpers are most effective in locations where right-turn volumes are low.
- Modify Bus Stop Infrastructure to Meet ADA Requirements – The Americans With Disabilities Act (ADA) requires that uninhibited access be provided from the sidewalk to the bus stop. However, almost 50 percent of the bus stops surveyed during the existing conditions analysis portion of this study were found to have objects, usually a bench, blocking sidewalk access to the bus stop.
- Provide Benches at all Bus Stops – Benches and trash receptacles are basic infrastructure for bus stops that should be provided at any location where patrons have to wait for a bus.
- Provide Shelters at Bus Stops with Significant Passenger Activity – Shelters provide a location for patrons to wait for a bus with reduced impact from environmental elements such as sunshine, rain, and wind. A typical guideline is to provide shelters at locations with 25 or more passenger boardings per day. Furthermore, locations that serve social service agencies, large employers, and activity centers are good candidates for shelters.
- Implement Lighting Improvements – As discussed in the Conceptual Pedestrian Strategies subsection, enhanced lighting can foster a sense of security for transit patrons who travel outside of daylight hours.
- Develop Transit Marketing Techniques – Transit marketing techniques can be developed for residents and employees along a corridor to describe the services that are available and promote the use of public transit. Marketing techniques are often developed in conjunction with the introduction of a new service such as an express bus route, a local community route, or a significant headway reduction along a route.
- Implement ITS Improvements – Intelligent Transportation Systems (ITS) improvements provide capacity or operational enhancements through technological innovations rather

than physical capacity enhancements. ITS improvements for transit include strategies such as the “next-bus” technology and signal priority for buses. ITS improvements are implemented through computers and modern communications tools.

Conceptual Multimodal Strategies

- Multimodal Hubs – Providing multimodal hubs at important transfer locations increases the sense of activity surrounding these locations and can encourage multimodal travel. Locations such as Downtown Hollywood, the U.S. 441 intersection, and the Pembroke Lakes Mall are primary candidates for developing facilities and infrastructure consistent with multimodal hubs.
- Transportation Demand Management – Transportation demand management (TDM) strategies attempt to address congestion by modifying travel behavior rather than providing physical improvements to the roadway network.
- Transit-Oriented Development – Encouraging high-density, mixed-use redevelopment within close proximity to multimodal hubs is a strategy for addressing the relationship between land use and transportation.
- Bus Schedule Coordination – Coordinating bus schedules to reduce transfer time at multimodal hubs can reduce transit travel time and lessen passenger anxiety while waiting to transfer.
- Park-n-Ride Lots – Identifying locations for additional or expanded park-n-ride lots can provide opportunity for motorists to drive to a multimodal hub and continue their trip through an alternative mode of travel such as transit or ridesharing.
- Information Kiosks – Providing information at multimodal hubs regarding bus transfers and multimodal connections can increase travelers’ knowledge of the multimodal network and reduce passenger anxiety.

Conceptual Roadway Strategies

- Construct Through Travel Lanes – Although not necessarily consistent with the objectives of congestion management system (CMS) strategies due to capital construction costs and potential right-of-way impacts, constructing through travel lanes is one option for addressing congestion in certain localized cases.
- Construct Turn Lane Improvements – Additional turn lanes or turn lane extensions can provide capacity benefits at intersections, which often represent the most severe capacity restrictions in urban environments.
- Construct Turbo Lanes – Right-turn lanes that are physically separated from other traffic movements can operate as free-flow movements not under signal control. However, these improvements can reduce the walkability of an intersection unless pedestrian provisions are made.
- Construct HOV Lanes – High occupancy vehicle (HOV) lanes attempt to maximize the person carrying capacity of a roadway. Constructing new HOV lanes are often the best strategy to implement HOV lanes as converting general purpose lanes to HOV lanes can have negative effects on overall system travel time, congestion, and air pollution, as well as initiate public backlash against alternative modes of travel.
- Optimize Signal Timing – Providing signal timing and phasing improvements is a relatively low cost action that can exact immediate traffic flow improvements. Care should be taken to not significantly degrade traffic operations in intersecting corridors when coordinating traffic signals for a certain direction of flow.
- Reduce Signal Cycle Lengths – Shorter cycle lengths typically provide more efficient signal operations and reduce vehicle delays.
- Roundabouts – Roundabouts, although not common in most portions of the country, have been shown to effectively provide intersection traffic control in some situations.
- Florida “T” Intersections – Florida “T” intersections channelize movements at a three-leg intersection such that one through movement, or a physically-separated lane(s) of that through movement, is free-flow and traffic does not have to stop at the intersection.

- Signing and Marking Enhancements – Proper signage and pavement markings are uniform throughout a jurisdiction. Improvements to signing and marking can provide important information and channelization for motorists leading to increased awareness and safety.
- Frontage Road Networks – A network of frontage roads is a potential strategy for reducing the number of driveway connections or signalized intersections needed along an arterial roadway. However, frontage roads often necessitate having adjacent intersections spaced in close proximity where intersecting arterial roadways cross.
- Far Side Bus Bays – As discussed in the Conceptual Transit Strategies subsection, far side bus bays can improve traffic flow by removing buses from through travel lanes downstream of an intersection, which can reduce the need for vehicles to stop downstream of the intersection and form a queue that blocks the intersection.
- Traffic Calming Techniques – Traffic calming techniques such as traffic circles, enhanced landscaping, and chicanes are typically more applicable for neighborhood streets rather than arterial roadways. However, if traffic congestion continues to increase, a need may exist for volume management techniques on adjacent local roadways as motorists search for alternate routes to avoid traffic congestion.
- Access Management Strategies – Access management techniques provide traffic operations benefits by reducing the number of signalized intersections, median openings, and driveway connections for arterial roadways.

Summary of Preliminary CMS Strategies

Table 37 presents a summary of the preliminary CMS strategies developed for this study. Mobility enhancement strategies will be evaluated at specific locations along the Hollywood/Pines Boulevard corridor based on need and applicability.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 37. Summary of Preliminary CMS Strategies

Pedestrian	Bicycle	Transit	Multimodal	Roadway
Construct Missing Sidewalk Links	Bicycle Paths	Provide More Frequent Service	Multimodal Hubs	Construct Through Travel Lanes
Provide Intersecting Pedestrian Connections	Bicycle Lanes	Provide Express Bus Service	Transportation Demand Management	Construct Turn Lane Improvements
Provide Enhanced Connections to Transit Stops	Paved Shoulders	Consolidate Bus Stops	Transit-Oriented Development	Construct Turbo Lanes
Install Mid-Block Pedestrian Signals	Wide Curb Lanes	Expand Community Bus Shuttles	Bus Schedule Coordination	Construct HOV Lanes
Upgrade Lighting Features	Enhanced Bicycle Signage	Far Side Bus Bays	Park-n-Ride Lots	Optimize Signal Timing
	Enhanced Connections to Transit Stops	Near Side Queue Jumpers	Information Kiosks	Reduce Signal Cycle Lengths
	Greater Continuity for Bicyclists	Modify Bus Stop Infrastructure to Meet ADA Requirements		Roundabouts
	Enhanced Bicycle Infrastructure	Provide Benches at all Bus Stops		Florida "T" Intersections
		Provide Shelters at Bus Stops with Significant Passenger Activity		Signing and Marking Enhancements
		Implement Lighting Improvements		Frontage Road Networks
		Develop Transit Marketing Techniques		Far Side Bus Bays
		Implement ITS Improvements		Traffic Calming Techniques
				Access Management Strategies

Pedestrian Strategies

Pedestrian strategies for the Hollywood/Pines Boulevard corridor have been grouped into the following categories.

- Sidewalk Continuity
- Sidewalk Connections (providing north-south connectivity to the corridor)
- School Crossing Improvements
- Lighting Strategies

Sidewalk Continuity

Both the north and south side of Hollywood/Pines Boulevard were inventoried for sidewalk continuity. Table 9 in the existing conditions analysis chapter provides the results of the sidewalk inventory indicating the areas where the sidewalk system is discontinuous or does not exist. The short-range conditions analysis chapter indicates that no increase in sidewalk coverage is expected from current transportation plans and programs. Therefore, a need exists to increase the sidewalk coverage along Hollywood/Pines Boulevard. The areas of discontinuous or missing sidewalks can be divided into three primary areas as indicated below.

West of Interstate 75 – Many sections of missing sidewalk exist in undeveloped areas, primarily west of SW 186th Avenue. Construction of these missing sidewalk sections is recommended to provide pedestrian mobility for adjacent developed areas and to increase access to bus stops. More detail regarding these projects is provided in the Bicycle Strategies section of this chapter.

Interstate 75 Interchange – No sidewalks are provided through the I-75 interchange. However, students from area schools often walk along the side of Pines Boulevard across the interchange. Construction of a sidewalk along Pines Boulevard across the I-75 interchange is recommended for mobility and safety reasons. As depicted in Exhibit 18, adequate space is available on the approaches to I-75 to construct a sidewalk. However, Exhibit 19 depicts the concrete barrier wall on the bridge deck that may necessitate an

extension to the bridge deck to accommodate a sidewalk. Although sidewalks are recommended on both sides of Pines Boulevard at the I-75 interchange, constructing a sidewalk on the north side of the road is more crucial according to pedestrian patterns and existing roadway geometric characteristics.



Exhibit 18. Westbound approach to the I-75 bridge



Exhibit 19. Concrete barrier wall on westbound I-75 bridge deck

North side of Pines Boulevard between NW 96th Avenue and NW 91st Avenue – No sidewalk is provided between Pines Boulevard and the frontage road that provides access to the Pine Lake Condos. Exhibit 20 depicts a worn path where pedestrians have walked through the grass. It is recommended to construct a sidewalk along the south side of the frontage road between NW 96th Avenue and NW 91st Avenue. The sidewalk should connect to the sections of sidewalk on either side of this discontinuity along the north side of Pines Boulevard (a pedestrian crosswalk at NW 96th Avenue and the sidewalk in front of the shopping center west of Douglas Road). Exhibit 21 presents an aerial photograph illustrating the sidewalk discontinuity.



Exhibit 20. Path worn by pedestrians deviates from sidewalk west of Douglas Road



Exhibit 21. Aerial photograph showing sidewalk discontinuity on north side of roadway

Sidewalk Connections

Sidewalk connections along intersecting roadways were studied for the Hollywood/Pines Boulevard corridor. Ensuring proper sidewalk connections solidifies the sidewalk system and helps serve pedestrian trips from origin to destination, not just along Hollywood/Pines Boulevard corridor. Most north-south intersecting roadways exhibit sidewalks that connect to sidewalks along Hollywood/Pines Boulevard. However, sidewalk construction is recommended along the following roadways to connect to Hollywood/Pines Boulevard and provide connections to adjacent land use.

- Construct a sidewalk along the west side of Palm Avenue (north and south of Pines Boulevard)
- Construct a sidewalk along the west side of Douglas Road (south of Pines Boulevard)
- Construct a sidewalk along the east side of University Drive (north of Pines Boulevard)

School Crossing Improvements

The school zone along Hollywood Boulevard near McArthur High School has been identified as an area of particular safety concern for this study. Several pedestrian and bicycle crashes have been recorded west of North 64th Avenue in the vicinity of the school zone (as discussed in the pedestrian crash data subsection of the existing conditions analysis chapter). Field observations were conducted during the morning school zone period before school commencement to gather qualitative data on pedestrian patterns in the area and to attempt to recognize the potential for pedestrian crashes. Although most students appeared to cross Hollywood Boulevard in the crosswalks at SW 64th Way and North 64th Avenue, some pedestrians were observed to cross Hollywood Boulevard mid-block. Opportunities for mid-block crossings are increased by (1) relatively slow vehicular speeds in the school zone and (2) the grass median of Hollywood Boulevard, which can serve as a pedestrian refuge. Mid-block pedestrian activity is unexpected by motorists and acts to slow vehicular traffic in the school zone even further, which increases congestion in the school zone. Therefore, the installation of median hedges (or a median railing

or fence) is recommended as a strategy to discourage mid-block pedestrian crossings. The median barrier is recommended (1) between SW 64th Way and North 64th Avenue and (2) between North 64th Avenue and North 63rd Avenue.

The school zone at McArthur High School lacks bicycle lanes, despite the presence of a two-mile bicycle lane section to the west of the school zone (west of SW 64th Way). Extending the bicycle lanes through the school zone to provide enhanced connections to McArthur High School is recommended. This improvement is discussed further in the Bicycle Strategies section of this chapter.

Broward County Traffic Engineering Division is planning improvements to Hollywood Boulevard near McArthur High School including closing a full median opening west of SW 64th Way and providing an eastbound directional median opening for a new pick-up/drop-off loop. In addition, a north leg will be added to the SW 64th Way signalized intersection for a new front entrance to the school. However, pedestrian crossing patterns are likely to not change significantly as a result of these improvements since existing traffic signals will remain in place and pedestrian access to McArthur High School will remain largely unchanged. However, it is recommended that pedestrian patterns be re-evaluated following implementation of the planned improvements to determine if further pedestrian crossing improvements are needed. Furthermore, extending the Hollywood Boulevard bicycle lanes to McArthur High School may be possible during the planned improvements to save time and money.

Lighting Strategies

Lighting of the streetscape is an important design consideration for pedestrians based on safety and security. Proper street lighting in an area can foster a sense of activity during non-daylight hours and increase the vitality of a neighborhood. It is important to provide safe opportunities for pedestrians to travel after dark to enhance the modal choice of residents, employees, and visitors. Proper lighting is also an important component for transit patrons waiting for a bus. Therefore, lighting was examined as part of this multimodal corridor study.

Most of the Hollywood/Pines Boulevard corridor has typical street lighting mounted on standard poles. While this lighting is well-suited to serve automobile purposes, it is often out of scale with the type of lighting necessary to serve the needs of pedestrians. Within the Downtown Hollywood area, the streetscape is lit by street lamps that are not as tall and provide more light specifically for pedestrians and transit patrons. It is important to ensure that proper lighting is provided in locations that are known to have increased pedestrian volumes and/or a history of pedestrian crashes after dark.

Another factor to consider regarding pedestrian-scale street lighting is landscaping. Foliage and trees can beautify an area from a landscaping perspective, but can block light emanating from street lamps above. It is important to keep foliage trimmed in the vicinity of street lamps and other lighting sources in pedestrian areas.

It is recommended to enhance the street lighting in two primary areas along the corridor based on existing conditions, pedestrian activity, and pedestrian crash data discussed in the existing conditions analysis chapter.

- The Downtown Hollywood area from Dixie Highway to N/S 28th Avenue already contains several street lamps that are appropriate for pedestrians. These lamps should be augmented with additional lamps in the vicinity of bus stops, especially those located near landscaping features.
- Pedestrian-scale street lamps should be provided along Hollywood Boulevard between N/S 58th Avenue and McArthur High School due to the high pedestrian activity in the area and crash data that indicate this area to have the highest concentration of pedestrian crashes along the entire study corridor. Furthermore, four of the nine pedestrian crashes that occurred along this segment of Hollywood Boulevard during the data retrieval period occurred during dark conditions. A fifth pedestrian crash was coded as unknown lighting conditions. In addition, pedestrian-scale lamps should be provided along U.S. 441 to the north and the south of Hollywood Boulevard to provide north-south pedestrian connectivity for lighting features.

Bicycle Strategies

Bicycle strategies were developed for this study to meet the goal of providing continuous facilities that increase bicycle mobility. The *Broward County Greenways Plan* identified Hollywood/Pines Boulevard as a potential corridor for a bicycle trail or greenway. Although Hollywood/Pines Boulevard was not identified as a “phase one” greenway, the corridor provides an east-west connection between three “phase one” greenways – Conservation Levee, Flamingo-Hiatus, and Dixie Highway.

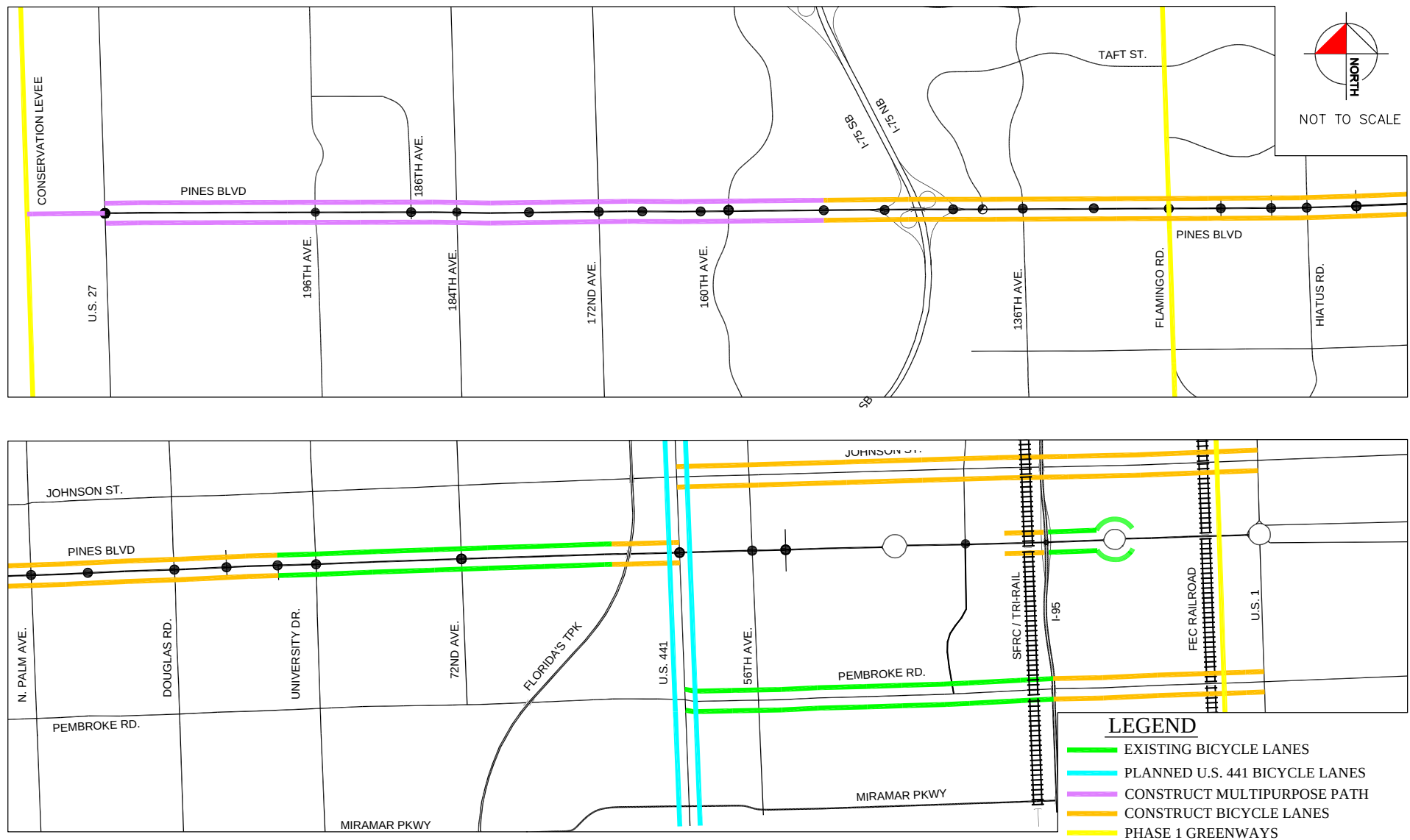
The recommendations provided in this study present a plan for implementing bicycle projects along Hollywood/Pines Boulevard and within the extended study area that would provide continuous mobility through a series of multipurpose paths and bicycle lanes, consistent with the vision of the *Broward County Greenways Plan*. Figure 14 presents the proposed bicycle path alignment within the extended study boundary. The components of the bicycle strategies are discussed in detail below.

Multipurpose Path (U.S. 27 to NW 155th Avenue)

A multipurpose path within the existing right-of-way is recommended along both sides of Hollywood/Pines Boulevard between U.S. 27 and NW 155th Avenue.

Many portions of this segment already contain sidewalks offset from the roadway by 20 to 30 feet. Lateral separation from vehicular travel lanes is desirable for pedestrians and bicyclists utilizing multipurpose paths. In addition, many of the existing sidewalks in this segment were constructed in a meandering fashion winding through various types of landscaping. A slightly meandering path that maintains good visibility is another common design feature of multipurpose paths.

According to the Florida Department of Transportation’s (FDOT) Plans Preparation Manual, the minimum paved width recommended for a shared use (multipurpose) path is 12 feet. However,



the Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (the Florida Greenbook) states that the minimum width for paved paths can be reduced under some circumstances to 10 feet. These circumstances include an unusually low volume of bicycle traffic, good horizontal and vertical alignment with frequent passing opportunities, and the path will not be subjected to maintenance vehicle loading conditions. Since the recommendations of this study are meant to facilitate and encourage bicycle use, a minimum width of 12 feet should be considered as standard for multipurpose paths along Hollywood/Pines Boulevard.



Exhibit 22. Meandering sidewalk offset from westbound Pines Boulevard

The existing sidewalks along Pines Boulevard west of NW 155th Avenue should be upgraded to standards defined for multipurpose paths. For areas where no sidewalks exist, a multipurpose path should be constructed to provide continuity and mobility for pedestrians and bicyclists. A list of locations along Hollywood/Pines Boulevard with incomplete or discontinuous sidewalks is provided in the existing conditions analysis chapter of this study. West of NW 155th Avenue, the following locations exhibit incomplete sidewalks.

- Undeveloped land from U.S. 27 to SW 208th Avenue (both sides)

- Undeveloped land from SW 198th Terrace to west of SW 196th Avenue (south side)
- Undeveloped land from SW 196th Avenue to St. Edward Catholic Church (south side)
- From Dykes Road (near Post Office) to Grand Palms Drive (south side)

Proposed Bicycle Lanes (NW 155th Avenue to NW 83rd Avenue)

Bicycle lanes along both sides of Pines Boulevard are recommended between NW 155th Avenue and NW 83rd Avenue.

This segment of Pines Boulevard currently offers a paved shoulder that varies from two to four feet in width. Paved shoulders provide some space for bicyclists; however, paved shoulders are less desirable than bicycle lanes for several reasons. First, paved shoulders do not provide continuous design features for bicyclists through intersections and driveways, which can create safety hazards for bicyclists and increase conflicts. Second, paved shoulders do not include pavement markings and signage that provide guidance for bicyclists and warn motorists about the potential presence of bicyclists along the corridor. In addition, paved shoulders are often more narrow than bicycle lanes and commonly vary in width along the corridor, which creates unexpected variations for bicyclists traveling along the corridor. Bicycle lanes provide common design features and more of a sense of continuity along the corridor. Finally, the presence of paved shoulders typically reduces the design modifications necessary to convert to bicycle lanes.



Exhibit 23. Paved shoulders do not provide continuity for bicyclists through intersections

A striped lane with no signage or pavement markings is provided on the approach to the Interstate 75 interchange (on both sides of Pines Boulevard). This unmarked lane should be integrated into the bicycle lane corridor for this segment of Pines Boulevard. Signage and pavement markings should be installed during the bicycle lane construction and the unmarked lane should be upgraded to bicycle lane standards by providing continuous design features through the merge and diverge sections of the interchange.



Exhibit 24. Unmarked lane near the Interstate 75 interchange

The recommended bicycle lanes along this segment of Pines Boulevard should connect to the multipurpose path west of NW 155th Avenue to provide continuous bicycle mobility. In addition, the recommended bicycle lanes should connect to the existing bicycle lanes at NW 83rd Avenue. Furthermore, a multimodal design should be accommodated at the intersection of Pines Boulevard and Flamingo Road during the Pines Boulevard at Flamingo Road PD&E Study being conducted by FDOT since this intersection represents a crossing of two greenway trails identified in the *Broward County Greenways Plan*.

Existing Bicycle Lanes (NW 83rd Avenue to SW 64th Way)

Bicycle lanes currently exist from NW 83rd Avenue to SW 64th Way. It is recommended that these bicycle lanes be utilized to join the proposed bicycle projects west of NW 83rd Avenue and the proposed bicycle projects east of SW 64th Way.



Exhibit 25. Existing bike lane along Hollywood Boulevard in the vicinity of 68th Avenue

Proposed Bicycle Lanes (SW 64th Way to U.S. 441)

Bicycle lanes along both sides of Hollywood Boulevard are recommended between SW 64th Way and U.S. 441.

A portion of this segment of the corridor is within the school zone discussed during the pedestrian strategies section of this chapter. Extending the bicycle lanes through the school zone is recommended to provide enhanced connections to McArthur High School and to provide continuity of bicycle facilities along the corridor. Presently, the bicycle lanes terminate west of SW 64th Way.

East of the school zone associated with McArthur High School is the Hollywood Boulevard interchange with Florida's Turnpike. As presented in the data retrieval and collection chapter of this report, the *Broward County MPO Transportation Improvement Program (TIP)* specifies interchange modifications at this interchange during fiscal year 2006/2007. A project development and environment (PD&E) study is currently underway for these modifications. Improvements being considered as part of the PD&E study include new interchange ramps and potentially removing the traffic signal at N/S 62nd Avenue. It is recommended that bicycle lanes

along Hollywood Boulevard be included during both the PD&E and the design phase for the interchange modifications. The Turnpike interchange modification project presents an opportunity to construct bicycle lanes that could connect the proposed bicycle lanes near McArthur High School to the U.S. 441 corridor. When added to other projects already discussed in this section of the chapter, bicycle facilities could potentially exist from U.S. 27 to U.S. 441.

U.S. 441 Bicycle Lanes (North-South)

One option for the Hollywood/Pines Boulevard bicycle trail alignment is to switch to lower volume parallel corridors in the eastern portion of the study area due to factors such as (1) high traffic volumes along Hollywood Boulevard, (2) geometric and right-of-way limitations along Hollywood Boulevard that may increase the cost of constructing bicycle lanes, and (3) parallel parking sections along Hollywood Boulevard east of Interstate 95 that could compromise bicycle safety. Two alternate parallel roadways offer certain advantages as a bicycle corridor east of U.S. 441 – Johnson Street to the north and Pembroke Road to the south. Johnson Street offers two primary advantages as a bicycle corridor – (1) a wide right-of-way that would offer space for bicycle facilities and (2) it does not have an interchange with Interstate 95, which reduces potential conflicts for bicyclists. Pembroke Road already has bicycle lanes from U.S. 441 to Interstate 95, which provides cost saving opportunities to utilize existing facilities for the bicycle trail alignment. Signage should be provided along Hollywood Boulevard that directs bicyclists to the alternate bicycle routes along Johnson Street and Pembroke Road.

A north-south connection is necessary to provide continuity between the Hollywood Boulevard bicycle trail west of U.S. 441 and the proposed Johnson Street corridor to the north and Pembroke Road corridor to the south. The U.S. 441 corridor is recommended to provide this north-south bicycle connection. According to data supplied by the Broward County MPO, bicycle lanes are already planned along U.S. 441 as part of the reconstruction efforts associated with the widening of the roadway and the Broward Transit Bridge project. These planned bicycle lanes are recommended to provide a connection between the proposed Hollywood

Boulevard bicycle lanes and the two alternate bicycle corridors – Johnson Street and Pembroke Road.

Johnson Street Proposed Bicycle Lanes (U.S. 441 to U.S. 1)

Bicycle lanes along both sides of Johnson Street are recommended between U.S. 441 and U.S. 1.

The Johnson Street corridor provides a northern alternative to Hollywood Boulevard as a bicycle corridor through the eastern portion of the extended study area. As mentioned previously, Johnson Street offers several advantages as a bicycle corridor over Hollywood Boulevard including lower traffic volumes, plenty of right-of-way for accommodating desired bicycle facilities and landscaping, and the lack of an interchange with Interstate 95, which reduces conflicts for bicyclists.

The proposed Johnson Street bicycle lanes should connect to the proposed U.S. 441 bicycle lanes in the west and to U.S. 1 in the east. The existing bicycle suitability ratings along Johnson Street indicate a high amount of interaction with traffic. Therefore, the development of a streetscape plan is recommended including bicycle lanes to redevelop the corridor as a bicycle corridor. The presence of BCT Route 9 along the Johnson Street corridor enhances the potential multimodal nature of the corridor.

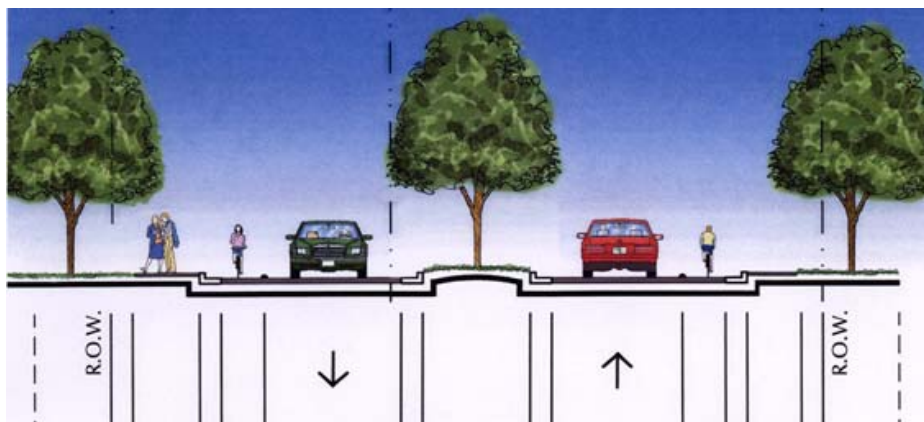


Exhibit 26. Sample cross-section of potential Johnson Street bicycle corridor

Pembroke Road Existing Bicycle Lanes (U.S. 441 to Interstate 95)

Bicycle lanes currently exist along Pembroke Road from U.S. 441 to Interstate 95. It is recommended that these bicycle lanes be utilized as a southern alternative to Hollywood Boulevard as a bicycle corridor through the eastern portion of the extended study area. The primary advantage of the Pembroke Road corridor is that bicycle lanes already exist. Although Pembroke Road has an interchange with Interstate 95, traffic volumes are lower along Pembroke Road than along Hollywood Boulevard.

Pembroke Road Proposed Bicycle Lanes (Interstate 95 to U.S. 1)

Bicycle lanes along both sides of Pembroke Road are recommended between Interstate 95 and U.S. 1.

This segment of bicycle lanes is recommended to connect the existing bicycle lanes along Pembroke Road west of Interstate 95 with U.S. 1. The proposed bicycle lanes along Pembroke Road comprise a southern alternative to Hollywood Boulevard as a bicycle corridor through the eastern portion of the extended study area. Although Pembroke Road has an interchange with Interstate 95, traffic volumes are lower along Pembroke Road than along Hollywood Boulevard.

Bicycle Connections to Downtown Hollywood

The proposed bicycle corridor described above provides continuous bicycle facilities from Conservation Levee west of U.S. 27 in the western portion of the study area to U.S. 1 in the eastern portion of the study area. Downtown Hollywood is the primary activity center in the eastern portion of the study area. Bicycle connections to Downtown Hollywood are desirable from the proposed bicycle trail alignments along Johnson Street and Pembroke Road to link bicyclists with this vibrant activity center. Two choices are available to provide this north-south connection.

- The proposed Dixie Highway “phase one” greenway as identified in the *Broward County Greenways Plan* that follows the FEC Railroad corridor.
- Local streets with low to moderate interaction with traffic including 26th Street, 20th Street, and 19th Street.

Bicycle Continuity East of Downtown Hollywood

Although not within the study area for the Hollywood/Pines Boulevard Multimodal Corridor Study, the segment of Hollywood Boulevard east of Young Circle already features bicycle lanes. When these bicycle lanes are joined with the proposed bicycle trail alignment recommended in this study, continuous bicycle facilities could potentially exist from Conservation Levee in the west to S.R. A1A near the Atlantic Ocean in the east.

Other Recommended Bicycle Projects

No bicycle lanes are currently provided that connect to the Hollywood Tri-Rail Station. However, many bicycles are commonly observed parked at bike racks at the Hollywood Tri-Rail Station. Bicycle lanes exist along Hollywood Boulevard east of Interstate 95; however, these lanes do not provide continuity through the Interstate 95 interchange. To provide bicycle trip continuity and to enhance multimodal connections to the Hollywood Tri-Rail Station, it is recommended that the bicycle lanes east of Interstate 95 be extended west to connect to the Tri-Rail Station. This improvement could potentially be provided during a resurfacing project.

Transit Strategies

Transit strategies for the Hollywood/Pines Boulevard corridor have been grouped into the following categories.

- Bus Benches and Trash Receptacles
- Bus Shelters
- Bus Stop Accessibility

- Far Side Bus Bays
- Proposed Headway Reductions
- Proposed Limited Stop Service

Bus Benches and Trash Receptacles

Bus benches and trash receptacles are basic transit infrastructure that should be provided at all bus stops. Bus benches provide seating for passengers having to wait for a bus to arrive. Bus benches are particularly important in locations where transit headways are greater than ten minutes. Trash receptacles provide an opportunity for bus patrons to dispose of trash properly and help keep an acceptable appearance around the bus stop environment. Maintenance of trash receptacles is important to keep a tidy appearance around the bus stop. Exhibit 27 depicts trash around a bus stop with no trash receptacle.



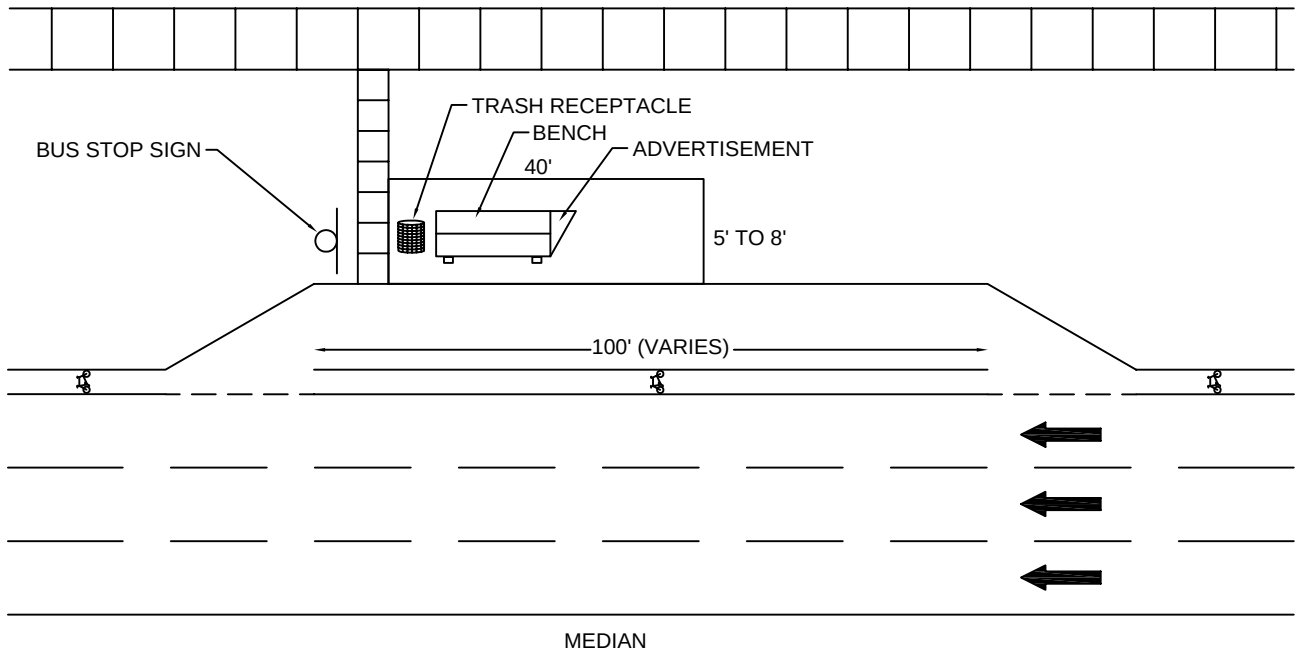
Exhibit 27. Trash around a bus stop with no trash receptacle

Table 38 presents the proposed bus bench and trash receptacle installations recommended for the Hollywood/Pines Boulevard corridor. Most of the bus stops that lack a basic bus bench and/or a trash receptacle are located east of University Drive.

Figure 15 presents a typical bus stop concept that features a concrete landing pad that serves multiple purposes. The concrete pad forms a base for the bench and trash receptacle so they will not need to be moved by maintenance crews mowing the grass in the area. Benches frequently are moved to sidewalks during maintenance. In addition, the concrete pad is as long as a standard bus, allowing passengers to exit the bus from the rear onto the pad instead of into the grass. Also, bus drivers have more space to align the front of the bus for loading purposes.

Table 38. Proposed Bus Bench and Trash Receptacle Installations

Install Bus Benches					
Direction	Loc. ID	Location	Direction	Loc. ID	Location
WB	2905	150 feet east of 74th Terrace	EB	5041	600 feet east of U.S. 27
WB	3930	200 feet west of 76th Avenue			
Install Bus Benches and Trash Receptacles					
Direction	Loc. ID	Location	Direction	Loc. ID	Location
WB	4089	30 feet east of 83rd Avenue (move bench and trash receptacle from west side of intersection)	EB	5032	NW 4 St / Mem Hosp West
			EB	3076	500 feet east of 76th Avenue
			EB	1545	50 feet west of 68th Avenue
WB	5040	20 feet east of 210th Avenue	EB	1547	200 feet east of 66th Avenue
Install Trash Receptacles					
Direction	Loc. ID	Location	Direction	Loc. ID	Location
WB	471	100 feet east of City Hall Circle	EB	4769	400 feet west of University Drive
WB	499	NW quadrant of City Hall Circle	EB	3075	450 feet east of University Drive
WB	500	60 feet west of 28th Avenue	EB	1541	70 feet west of McArthur Parkway
WB	3633	200 feet east of Park Road	EB	1544	50 feet east of 70th Avenue
WB	3634	40 feet west of 33rd Avenue	EB	1546	100 feet west of 67th Avenue
WB	3813	100 feet west of 35th Avenue	EB	343	45 feet east of 64th Avenue
WB	3814	75 feet west of N Circle Drive (E)	EB	4582	100 feet east of 62nd Avenue
WB	501	NW quadrant of Presidential Cir	EB	4583	75 feet west of U.S. 441
WB	3815	60 feet west of N Circle Drive (W)	EB	345	150 feet west of 58th Avenue
WB	502	110 feet west of 44th Avenue	EB	541	75 feet east of 56th Avenue
WB	503	50 feet west of 46th Avenue	EB	542	50 feet west of 52nd Avenue
WB	504	40 feet west of 48th Avenue	EB	543	30 feet west of 50th Avenue
WB	505	50 feet east of 50th Avenue	EB	544	40 feet west of 48th Avenue
WB	506	80 feet west of 52nd Avenue	EB	545	50 feet west of 46th Avenue
WB	338	170 feet west of 56th Avenue	EB	546	50 feet west of S Circle Drive (W)
WB	339	120 feet west of 58th Avenue	EB	547	SE quadrant of Presidential Cir
WB	340	240 feet west of U.S. 441	EB	548	40 feet east of S Circle Drive (E)
WB	341	80 feet west of 62nd Avenue	EB	549	60 feet east of 35th Avenue
WB	3928	370 feet west of 64th Way	EB	3633	150 feet west of Park Road
WB	2448	550 feet east of 68th Avenue	EB	551	40 feet east of Calle Grande
WB	1537	20 feet west of 68th Avenue	EB	552	20 feet west of Calle Largo
WB	1538	20 feet west of 70th Avenue	EB	498	SE quadrant of City Hall Circle
WB	3929	300 feet east of 72nd Avenue	EB	470	50 feet east of 24th Avenue
WB	2450	50 feet west of 86th Avenue	EB	2362	100 feet west of Dixie Highway
WB	1736	175 feet west of Hiatus Road			
WB	4995	200 feet west of Flamingo Road			



SCALE	N.T.S.	 Kimley-Horn and Associates, Inc. © 2004 KIMLEY-HORN AND ASSOCIATES, INC. 5100 NW 33RD AVENUE, SUITE 157, FT. LAUDERDALE, FL 33309 (954) 739-2233 CA 00000696	DATE	FIGURE 15. TYPICAL BUS STOP	DESIGN ENGINEER:	SHEET NUMBER
DESIGNED BY			9/16/04		FLORIDA REGISTRATION NUMBER:	
DRAWN BY			PROJECT NO.			
CHECKED BY			042121000			
						Page-163

Bus Shelters

Bus shelters provide protection to transit patrons from environmental elements such as rain, sun, and wind. Bus shelters are more expensive than simple benches and are thus typically included at bus stops with high passenger activity levels. Bus shelters are recommended at any bus stop with 25 or more daily passenger boardings where no shelter already exists. Table 39 presents the proposed bus shelter installations recommended for the Hollywood/Pines Boulevard corridor.

Table 39. Proposed Bus Shelter Installations

Proposed Bus Shelters					
Direction	Loc. ID	Location	Direction	Loc. ID	Location
WB	608	Young Circle (Greyhound)	EB	5015	200 feet east of 208th Avenue
WB	3019	Tyler Street / N 20 Avenue	EB	5021	200 feet east of 184th Avenue
WB	499	NW quadrant of City Hall Circle	EB	5022	150 feet east of 178th Avenue
WB	500	60 feet west of 28th Avenue	EB	5023	120 feet east of 172nd Avenue
WB	3812	N 31st Ave / Tri-Rail	EB	5026	80 feet east of Dykes Road
WB	3813	100 feet west of 35th Avenue	EB	2910	500 feet east of Palm Avenue
WB	3814	75 feet west of N Circle Drive (E)	EB	4580	50 feet east of Douglas Road
WB	4621	120 feet east of U.S. 441	EB	4769	400 feet west of University Drive
WB	340	240 feet west of U.S. 441	EB	3075	450 feet east of University Drive
WB	341	80 feet west of 62nd Avenue	EB	4221	Opposite of 78th Terrace
WB	4576	In front of Pines Plaza	EB	1542	BCC South / Library
WB	5382	300 feet east of University Drive	EB	1543	130 feet east of 72nd Avenue
WB	1540	100 feet west of University Drive	EB	3949	30 feet west of 64th Way
WB	3648	90 feet west of Douglas Road	EB	4583	75 feet west of U.S. 441
WB	4750	NW 4 Street / Mem Hosp West	EB	344	300 feet east of U.S. 441
			EB	549	60 feet east of 35th Avenue
			EB	553	40 feet east of 28th Avenue
			EB	498	SE quadrant of City Hall Circle
			EB	470	50 feet east of 24th Avenue
			EB	554	Young Circle Cinema

Please note that the *Transit Infrastructure and Quality of Service Report* by the Florida Department of Transportation (September, 2003) includes potential bus shelter installations for other stops located within the extended study boundary for this study.

Bus Stop Accessibility

Of the 73 westbound bus stops inventoried for this study, only 34 bus stops exhibited uninhibited sidewalk access (47 percent). The remaining 53 percent either had no sidewalk access or an object was blocking the sidewalk access to the bus stop. Of the 76 eastbound bus stops inventoried for this study, 48 bus stops exhibited uninhibited sidewalk access (63 percent). The remaining 37 percent either had no sidewalk access or an object was blocking the sidewalk access to the bus stop. It is recommended that bus stops exhibit uninhibited sidewalk access to be functional for bus patrons with disabilities.

Examples of bus stops with poor accessibility are provided in Exhibits 28 and 29.



Exhibit 28. At this bus stop, there is no access path from the sidewalk to the road



Exhibit 29. The bench is blocking access between the bus stop and the sidewalk

The conceptual bus stop design presented in Figure 15 provides a design where an access path provides uninhibited access from the sidewalk to the bus stop. The bus bench is located on a concrete pad instead of in the grass and is thus less likely to be moved onto the access path or sidewalk. It is recommended that the conceptual bus stop design presented in Figure 15 be implemented in locations that lack sidewalk accessibility and where space is available. The design presented in Figure 15 can be modified for locations that do not have the proper available right-of-way for implementation by removing the bus bay and/or shortening the access path to the sidewalk.

Table 40 presents the locations where obstacles (usually benches, although foliage in some locations) blocked the access path from the sidewalk to the roadway during the field inventory of bus stops conducted for this study. The majority of the locations where obstacles blocked bus stop accessibility were in the western portion of the study corridor.

Table 40. Bus stops with obstacles blocking the access path or sidewalk

Remove Obstacles from Access Path or Sidewalk					
Direction	Loc. ID	Location	Direction	Loc. ID	Location
WB	503	50 feet west of 46th Avenue	EB	5020	200 feet east of 186th Avenue
WB	4091	40 feet west of K-Mart entrance	EB	5023	120 feet east of 172nd Avenue
WB	4998	120 feet west of 136th Avenue	EB	5024	150 feet east of 168th Avenue
WB	5001	200 feet west of Dykes Road	EB	5025	150 feet east of 163rd Avenue
WB	5002	170 feet west of 163rd Avenue	EB	5028	150 feet east of 136th Avenue
WB	5003	170 feet west of 168th Avenue	EB	5030	600 feet west of Flamingo Road
WB	5004	70 feet west of 172nd Avenue	EB	4578	150 feet east of 118th Avenue
WB	5006	210 feet west of 180th Avenue			
WB	5007	70 feet west of 184th Avenue			
WB	5008	100 feet west of 186th Avenue			

Table 41 presents the locations where access paths from the sidewalk to the bus stop should be constructed. The majority of the locations where access paths are recommended for bus stop accessibility are located west of University Drive.

Table 41. Bus stops lacking access paths from the sidewalk

Construct Access Paths from the Sidewalk to the Bus Stop					
Direction	Loc. ID	Location	Direction	Loc. ID	Location
WB	2550	60 feet east of 32nd Avenue	EB	5041	600 feet east of U.S. 27
WB	2450	50 feet west of 86th Avenue	EB	5015	200 feet east of 208th Avenue
WB	3649	400 feet west of Douglas Road	EB	5016	200 feet east of 205th Avenue
WB	3038	300 feet east of 96th Avenue	EB	5017	200 feet east of 198th Terrace
WB	3651	500 feet east of Palm Avenue	EB	5018	200 feet east of 196th Avenue
WB	2908	70 feet west of Palm Avenue	EB	5019	100 feet east of Catholic Church
WB	3032	15 feet west of 106th Avenue	EB	5026	80 feet east of Dykes Road
WB	1736	175 feet west of Hiatus Road	EB	5027	120 feet east of Westfork Plaza
WB	4577	220 feet east of 118th Avenue	EB	3717	120 feet east of 108th Avenue
WB	4996	500 feet east of 129th Avenue	EB	3077	150 feet east of 106th Avenue
WB	5009	150 feet west of 196th Avenue	EB	2910	500 feet east of Palm Avenue
WB	5010	90 feet west of 202nd Avenue	EB	2911	70 feet east of 98th Avenue
WB	5011	100 feet west of 208th Avenue	EB	2724	120 feet east of 86th Avenue
			EB	4769	400 feet west of University Drive

Far Side Bus Bays

Far side bus bays are ideal for timed points along a bus route where the potential for dwell times exist. In addition, bus bays on the far side of an intersection allow a bus to stop outside of the traffic flow. This reduces the likelihood of queuing in an intersection caused by a bus serving a far side bus stop. Far side bus bays are often used as a CMS strategy to reduce congestion at an overcapacity intersection when other roadway improvements are deemed to costly or are geometrically restricted. Far side bus bays are recommended at the following locations along Hollywood/Pines Boulevard.

- University Drive (both sides – would likely require right-of-way)
- Palm Avenue (westbound)
- Hiatus Road (westbound)
- Flamingo Road (westbound)
- SW 172nd Avenue (eastbound)
- SW 210th Avenue (both sides)

On six-lane roadways, FDOT discourages “open” design of far side bus bays in which the bus bay can be accessed directly from the intersection. However, an “open” design allows the bus stop to be located closer to the intersection, which can reduce pedestrian conflicts associated with crossing the primary roadway by channelizing pedestrians closer to the crosswalk. In addition, an “open” design (1) allows a bus more maneuverability in accessing the bus bay and (2) allows the bus to decelerate as it moves through the intersection rather than in the through travel lane downstream of the intersection, which minimizes automobile travel delay associated with the decelerating bus. Finally, “open” bus bay designs allow for the possibility of bus queue jumper installations utilizing the right-turn lane of the intersection. Therefore, it is recommended that FDOT and Broward County give strong consideration to providing “open” designs for far side bus bays at the locations listed above. Even if “open” designs are not provided, far side bus bays are recommended at the above locations to remove the bus from the travel lane during loading, unloading, and dwelling. Bus bays in general allow passengers to board and alight outside of travel lanes.

Headway Reductions

The *Broward County Transit Development Plan* (TDP) lists three headway reductions for routes that serve Hollywood/Pines Boulevard for significant distances. These improvements are expected to be in place before 2009, although funding shortfalls may cause some improvements to be delayed or re-prioritized. The three headway reductions listed for Hollywood/Pines are:

- Route 3 (60 to 30 minutes) – 2005
- Route 5 (60 to 30 minutes) – 2008
- Route 7 (30 to 20 minutes) – 2009

It is recommended that the Route 7 headway improvement be advanced in the funding table for several reasons.

- To coordinate with the Tri-Rail double-tracking improvements in which peak period commuter train headways are scheduled to be reduced to 20 minutes by 2006. Unlike Route 5, Route 7 serves passengers transferring to and from Tri-Rail at the Hollywood Station.
- To coordinate with the 2008 planning horizon of this CMS study.
- Route 7 is the primary trunk line for Hollywood/Pines Boulevard, which is currently an overcapacity roadway in some locations.
- Despite already having more frequent headways, Route 7 currently has a higher load factor than Route 5.

Route 7 Limited Stop (7L)

The *Broward County Transit Master Plan* identifies limited stop service along Route 7 as a precursor to the Pines Boulevard Bus Rapid Transit (BRT). It is recommended that BCT continue to prioritize limited stop service along Hollywood/Pines Boulevard.

The performance measures and targets developed for this study include reducing transit travel time to no more than 50 percent greater than the travel time by automobile. Currently, the transit

travel time is approximately 75 to 80 percent greater than the time by automobile, when measured only along the Hollywood/Pines Boulevard corridor. It is anticipated that to meet the travel time performance target developed for this study, limited stop or express service is necessary along the corridor. Additional advantages of limited stop service along the corridor include mitigating the long length of the corridor, bypassing the frequent local bus stops, and the potential to serve commuters who may switch modes to Tri-Rail following the implementation of double-track improvements and headway reductions.

Although more costly than less frequent headways, 20-minute peak headways are desirable along the potential Route 7 limited stop to match the proposed headways for the local Route 7 buses and to provide a coordinated transfer schedule with improved Tri-Rail service to 20-minute peak period headways. Increased incentive to use the limited stop service would be generated if the headways were similar to the local Route 7 service. It is anticipated that 7 buses would be needed on Route 7L to operate at 20-minute headways between U.S. 27 and Young Circle, assuming approximately 9 stops.

In order to lessen the potential costs of Route 7L, one possible option is to implement limited stop service only over a portion of the route where ridership is highest, such as the Pembroke Lakes Mall to the proposed Downtown Hollywood Neighborhood Transit Center. This option is anticipated to require 4 to 5 buses and potential stops along the route may include the following.

- Pembroke Lakes Mall
- Palm Avenue
- University Drive
- BCC South
- U.S. 441
- Tri-Rail
- Downtown Hollywood Neighborhood Transit Center

The proposed stop at Palm Avenue could be moved to Douglas Road if the proposed Route 88 is implemented before the Route 7 limited stop service.

Multimodal Strategies

Improved multimodal conditions are vital to increase ease of connections between alternative modes of travel, such as walking, bicycling, transit, and ridesharing. Multimodal strategies should focus on providing features that meet the needs of the “human environment” associated with alternative travel modes including the following.

- Safety
- Efficiency
- Comfort

The proposed strategy is to develop several multimodal hubs to serve as a connection between pedestrians, bicyclists, carpoolers, community bus service, BCT routes, and Tri-Rail. Some of the multimodal locations are existing facilities for which upgraded features and amenities are recommended. Other multimodal locations have been proposed as such but do not function as multimodal locations today. The network of multimodal locations includes the following sites, which are depicted in Figure 16.

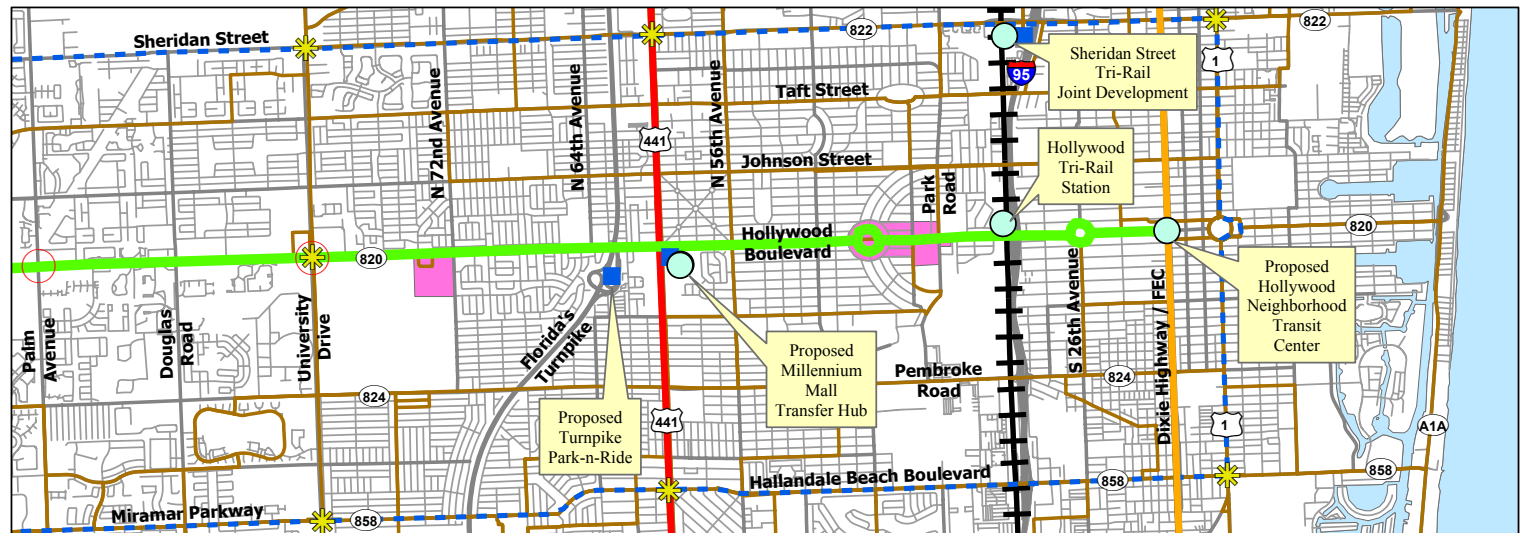
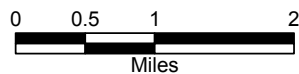
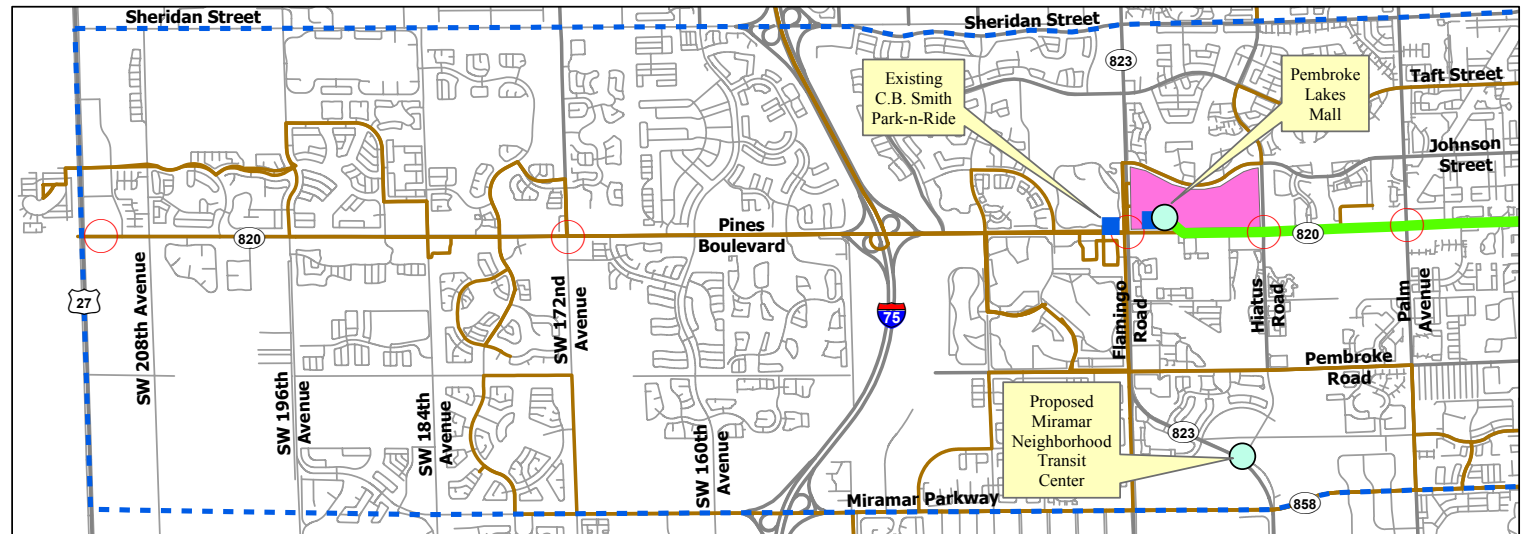
- Downtown Hollywood Neighborhood Transit Center
- Miramar Neighborhood Transit Center
- Hollywood Tri-Rail Station
- Sheridan Street Tri-Rail Station
- Southeast corner of Hollywood Boulevard & U.S. 441 (Millennium Mall)
- Pembroke Lakes Mall
- C.B. Smith Park-n-Ride

Downtown Hollywood Neighborhood Transit Center

The current bus transfer activity that happens at Young Circle is proposed to be relocated to the Neighborhood Transit Center, which will be positioned along the Dixie Highway / FEC Railroad corridor near the Hollywood Boulevard intersection. Moving the transfer station to the FEC Railroad corridor will allow connections to future multimodal corridors such as the Dixie

Legend

- Limited Stop Route (7L)
- Multimodal Hubs
- ✱ Other Major Transfer Stop
- Park-n-Ride
- Far Side Bus Bays
- Transit Bridge BRT
- + Tri-Rail
- FEC Corridor
- TDM Strategies
- Existing Bus Route
- Major Roadways
- Local Streets
- - - Extended Study Area Boundary



This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kinley-Horn and Associates, Inc. shall be without liability to Kinley-Horn and Associates, Inc.

BROWARD COUNTY MPO
Hollywood / Pines Boulevard Multimodal Corridor Study

Figure 16. Multimodal Corridor Improvements

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Highway “phase one” greenway identified in the *Broward County Greenways Plan* and potential passenger rail service in the FEC Corridor. The following recommendations are provided for the Downtown Hollywood Neighborhood Transit Center to enhance the integration of the multimodal hub into the Hollywood/Pines CMS corridor.

- Provide bus bays for specific routes that access the Neighborhood Transit Center.
- Provide “enhanced” benches and shelters, as described below.
- Provide bicycle parking, including bike racks and bike lockers for added security.
- Provide transportation information kiosks to reduce passenger anxiety while waiting, including advanced traveler information systems (ATIS) improvements.
- Provide efficient pedestrian paths from Downtown Hollywood, both east and west of the FEC Corridor to increase the sense of unification.
- Install trailblazer signage for guidance.
- Provide other infrastructure such as vending huts and water fountains.
- Ensure compatible adjacent land use characteristics.
- Proposed eastern terminus for Route 7 Limited Stop.

Advanced traveler information system (ATIS) infrastructure is important for inclusion at the Hollywood Neighborhood Transit Center as it is a primary component of regional ITS initiatives. Advanced strategies such as real-time traveler information and the “next-bus” technology may be more effective at influencing non-traditional transit users to switch to alternative travel modes. As regional ITS systems, such as the Southeast Florida ATIS, become more advanced, it is important to ensure that critical transit hubs are equipped with the proper infrastructure to integrate into the system. The Downtown Hollywood Neighborhood Transit Center may be a good candidate to receive “demonstration” projects that provide funding for various ITS improvements and monitor the effect of the improvements.

In addition, trailblazer (guidance) signage that directs travelers to the Neighborhood Transit Center is critical for several reasons. The trailblazer signs should be unique and allow travelers to quickly identify the Hollywood Neighborhood Transit Center. The signs should be placed in a manner that indicates the most efficient path to the hub.

“Enhanced” Benches and Shelters

Multimodal hubs should feature “enhanced” benches and shelters to increase the sense of place and foster a positive attitude about transit infrastructure. The enhanced benches are designed for patrons to wait for their bus in comfort away from the elements. Since the goal of multimodal hubs is to provide quality transit service, the benches may be designed for shorter wait periods while handling a higher volume of patrons. Printing the name of the hub, or “station,” on the enhanced shelter can often help the public identify the hub and its purpose. Exhibit 30 presents an aesthetic sample shelter design located in Orlando.



Exhibit 30. Sample Bench and Shelter Design

Young Circle

Although the bus transfer facility is proposed to be moved to the Neighborhood Transit Center, Young Circle will still be served by the local trunk routes – Route 1 and Route 7. Significant passenger activity is still projected for transit routes serving Young Circle based on the surrounding land use.



Exhibit 31. Passengers waiting near a Young Circle bus stop

Therefore, this study recommends upgrading the existing transit infrastructure at Young Circle with “enhanced” benches and shelters. A sample “enhanced” bench and shelter design was presented in Exhibit 30. The existing bus stop conditions at Young Circle are shown in Exhibit 31.

Miramar Neighborhood Transit Center

The Miramar Neighborhood Transit Center is identified by the *Broward County Transit Development Plan* (TDP) at the intersection of Hiatus Road and Red Road. An important component of the Miramar Neighborhood Transit Center is anticipated to be connections to community bus routes from Miramar and Pembroke Pines. Other features of the Miramar Neighborhood Transit Center are expected to be similar to the Hollywood Neighborhood Transit Center, with the exception of connections to an existing rail corridor.

Hollywood Tri-Rail Station

The Hollywood Tri-Rail Station is currently being upgraded as part of Tri-Rail’s Double Track Improvement Project. Peak period commuter rail headways are anticipated to be 20 minutes following completion of the double tracking in 2006. It is recommended to upgrade existing bus transit service along Hollywood/Pines Boulevard to 20-minute headways to coordinate with planned Tri-Rail schedules. In addition, expanded bicycle parking may be necessary at the Hollywood Tri-Rail Station as field reviews conducted for this study observed many bicycles parked in the bike racks.

Sheridan Street Tri-Rail Station

The Florida Department of Transportation (FDOT) is currently investigating a joint development project for the Sheridan Street Tri-Rail Station. A park-n-ride lot with approximately 850 parking spaces is located at this Tri-Rail Station. Bus bays serving three BCT routes are located close to the commuter train terminal. Planned modifications at the Sheridan Street Tri-Rail

Station include removing the Tri-Rail bus shuttle and replacing it with increased frequency on BCT Route 12, which serves the Sheridan Street Station. Recommended strategies for the Sheridan Street Tri-Rail Station include working with the South Florida Commuter Services (SFCS) to develop a marketing plan for achieving better utilization of the park-n-ride lot, which has a direct access ramp to southbound Interstate 95. In addition, information kiosks and advanced traveler information system (ATIS) improvements in conjunction with compatible land use redevelopment may increase the usage of both the Tri-Rail Station and the park-n-ride lot.

Southeast Corner of Hollywood Boulevard & U.S. 441 (Millennium Mall)

The Millennium Mall property in the southeast corner of the Hollywood Boulevard and U.S. 441 intersection has been identified as a multimodal hub serving north-south trips along U.S. 441 (Broward Transit Bridge corridor) and east-west trips along Hollywood/Pines Boulevard. Based on pedestrian, transit, and traffic analysis performed as part of this CMS study, this location is well-positioned to become a primary multimodal hub. The area already has a high volume of pedestrians, Route 18 along U.S. 441 is one of the best performing routes in BCT's system, and a limited stop service has already been implemented along U.S. 441 as a precursor to bus rapid transit (BRT) service. In addition, this station should be developed into one of the stops along the proposed Route 7 Limited Stop service. Providing an off-road station for bus transfers at this location should improve transit and roadway conditions along Hollywood Boulevard, where there is restricted opportunity for providing on-street bus bays near the U.S. 441 intersection due to existing development. Other infrastructure recommended at this location are listed below.

- Dedicated parking spaces for a park-n-ride lot
- Well-coordinated timed transfers between Routes 7 and 18
- Information kiosks with ATIS improvements
- Covered bicycle parking
- Trailblazer signage
- Bus bays
- Vending hut
- Clearly marked pedestrian walkways from Hollywood Boulevard and U.S. 441

Pembroke Lakes Mall

The Pembroke Lakes Mall is an important transfer location in the southwestern region of Broward County. The Mall is currently the second-highest utilized bus stop along Hollywood/Pines Boulevard, after Young Circle. The Mall is the southern terminus of Route 23 and handles numerous transfers between four BCT routes and community buses from Pembroke Pines and Miramar. Recommendations include coordinating with Mall management to install “enhanced” benches and shelters at the location. Currently, only benches are provided as shown in Exhibit 32. Community bus connections to the Pembroke Lakes Mall should be marketed to residents in the service area in an attempt to reduce vehicular traffic in the area.



Exhibit 32. Pembroke Lakes Mall Bus Stop

C.B. Smith Park-n-Ride

The park-n-ride lot in the southeast corner of C.B. Smith Park has convenient access from Pines Boulevard. However, only minimal signage exists to advertise the park-n-ride lot and direct motorists to the lot. It is recommended that trailblazer signage be added along both Pines Boulevard and Flamingo Road to direct motorists to the park-n-ride lot.

In addition, connections to BCT Routes 7 and 3 should be advertised within the park-n-ride lot with signage and a map display. BCT buses do not currently enter the premises of the park-n-ride lot. While there is not enough capacity or demand at the park-n-ride lot to warrant diverting full-size BCT buses into the park-n-ride lot, a sidewalk could be constructed between the eastern end of the park-n-ride lot and the BCT bus stop along Pines Boulevard west of Flamingo Road. A gate would need to be provided along this proposed sidewalk at the fence that currently forms

a barrier between the parking area and Pines Boulevard. This sidewalk and gate would significantly shorten the walking time between the parking area and the nearest bus stop and would enhance multimodal connections. As mentioned in the Transit Strategies section of this chapter, a far side bus bay is recommended at the westbound bus stop west of the Pines/Flamingo intersection. The construction of the bus bay could be combined in the same project as the construction of the sidewalk leading to the park-n-ride lot. In addition, patrons could use the crosswalk at the intersection of Pines Boulevard and Flamingo Road to access eastbound bus stops along the south side of Pines Boulevard.

The Western Express, a peak hour express mini-bus service, travels from the C.B. Smith Park-n-Ride lot to Downtown Fort Lauderdale and the Fort Lauderdale Tri-Rail Station. BCT and the South Florida Commuter Services (SFCS) should continue to market the Western Express to residents in the area who may travel to Downtown Fort Lauderdale during peak traffic hours. The Western Express service should be monitored to determine if additional mini-bus service at the park-n-ride lot may be warranted. Although the Western Express service is advertised on BCT's website, the C.B. Smith Park-n-Ride is not listed in the park-n-ride section of the Commuter Services page. BCT should consider adding the C.B. Smith Park-n-Ride to this list.

Transportation Demand Management (TDM)

Transportation demand management (TDM) strategies attempt to address congestion by modifying travel behavior rather than providing physical improvements to the roadway network. TDM strategies are common CMS improvements because of their relatively low cost and minimal disruption to existing infrastructure. TDM strategies are commonly applied in large employment centers because of the opportunities to implement many traditional TDM strategies such as carpooling and alternative work schedules, which reduce demand for roadways during peak travel hours.

Opportunities for TDM strategies to have a significant impact on traffic congestion along Hollywood/Pines Boulevard appear somewhat limited because of the lack of major employment

centers, commerce parks, or factories along the corridor. Major employers include Memorial Hospital West, the Pembroke Lakes Mall, Broward Community College (BCC) South Campus, and the corporate parks between Presidential Circle and Park Road. However, hospitals and malls typically have naturally staggered working hours. Shift changes normally do not occur during the peak hours of travel demand.

The TDM recommendation for this study is to coordinate with the South Florida Commuter Services (SFCS), an agency of FDOT, to promote TDM strategies along the Hollywood/Pines Boulevard corridor in conjunction with the CMS strategies. Because of its size, Memorial Hospital West should be a primary candidate for TDM strategies such as carpooling and commuter tax benefits. In addition, SFCS promotes transit use; a BCT bus stop is located directly adjacent to Memorial Hospital West on the Pembroke Lakes Mall west access roadway. The corporate parks between Presidential Circle and Park Road are also good candidates to target for TDM strategies. A description of various TDM strategies is presented below.

Carpooling – Carpooling is an arrangement in which two or more people share the use and cost of privately-owned vehicles while traveling together to and from prearranged destinations.

Vanpooling – Vanpooling is typically a more structured form of carpooling that involves more people and thus, higher capacity vehicles. Vanpooling is most practical when a number of employees working in the same office or industrial park have longer distance commutes and also live near each other or can meet at a park-n-ride lot. One member of the vanpool volunteers to drive (and typically rides free), while the others share the cost of operating the van. Vanpools can be (1) owned and operated by an individual, (2) owned by an employer, or (3) provided through a third-party leasing arrangement. Sharing the cost of fuel and maintenance can lead to significant cost reductions for commuters.

Commuter Tax Benefit – Federal tax law stipulates that employers can subsidize their employees' vanpool or transit commutes. An employer can give its employees up to

\$100 per month tax-free to commute on transit or in a qualified vanpool. The employer can deduct the cost of this assistance as a business expense.

Compressed Work Week – A compressed work week is an alternative work schedule in which employees work longer hours each day but fewer days per week. Compressed work weeks typically allow employees to travel to and from work outside of traditional peak hours of travel.

Congestion Pricing – Market-based pricing strategies can be designed to encourage a shift of peak period trips to off-peak periods or to route traffic away from congested facilities during peak demand periods. Congestion pricing can also be used to encourage transit and carpooling by giving preferential treatment to high-occupancy vehicles. For example, on February 17, 2003, the City of London, U.K., began charging a fee for driving an automobile in its central area during weekdays as a way to reduce traffic congestion and raise revenues to fund transportation improvements.

Flex-Time – Flex-time is an alternative work schedule in which employees choose their own work schedule within a set standard number of hours. Employees can choose a schedule that allows them to travel outside of the traditional peak hours of travel. Organizations with a large number of employees will likely experience a broad range of working hours, thereby reducing the strain on the transportation system caused by many employees arriving and departing within a small window of time.

Parking Management – Parking management strategies utilize a variety of factors to balance the availability of parking with the availability of modal alternatives. Numerous strategies are included in parking management including parking pricing, shared use parking, and time restrictions. One common strategy is preferential parking locations, or discounted parking, provided by employers for carpools to encourage ridesharing.

Park-n-Ride Lots – These parking facilities allow a transfer from low occupancy vehicles to carpools, vanpools, or transit services. These facilities are often located in the vicinity of a transit hub.

Staggered Work Hours – Staggered work hours is an alternative work schedule in which different groups of employees arrive and depart at different times to offset the employment center's congestion impacts on the surrounding roadway network.

Telecommuting – Telecommuting is a work arrangement in which employees work at home or another location outside of a central facility on one or more days per week. These off-site employees often use technology-based applications such as e-mail and teleconferencing to communicate with fellow employees.

Transportation Management Organization/Coordinator – A public or private organization or professional staff can help provide information and guidance for TDM programs to businesses and individuals leading to increased awareness and participation in these programs. In addition, employers can appoint their own employee transportation coordinators (ETC) who can help coordinate transportation options.

Transportation Management Association (TMA) – A TMA is formed to help solve transportation issues within a specific area, such as a town, a central business district, or a university campus. A TMA is incorporated to combine business resources and expertise with government efforts to solve local transportation problems. Funding typically comes from both public and private sectors including government grants, dues paid by member companies, and tax deductible in-kind contributions. TMAs often serve as operators for transit circulator systems.

Roadway Strategies

Roadway strategies were developed for the Hollywood/Pines Boulevard Multimodal Corridor Study based on roadway congestion, safety, and access management. The short-range roadway conditions analysis developed a list of intersections that are expected to operate at LOS E or F conditions by the Year 2008, the planning horizon for this study. These intersections that are expected to operate at or above capacity during the peak periods of travel were examined to determine if roadway improvements could be made to reduce travel delay at these intersections. This section of the report describes roadway improvements developed as part of this study.

Pines Boulevard @ U.S. 27

Improvements developed at this intersection include the following.

- Intersection geometric improvements including converting the intersection into a Florida “T” intersection.
- Westbound dual left-turn lanes cross northbound lanes then utilize wide median to merge into southbound lanes.
- One southbound through lane is not under signal control.

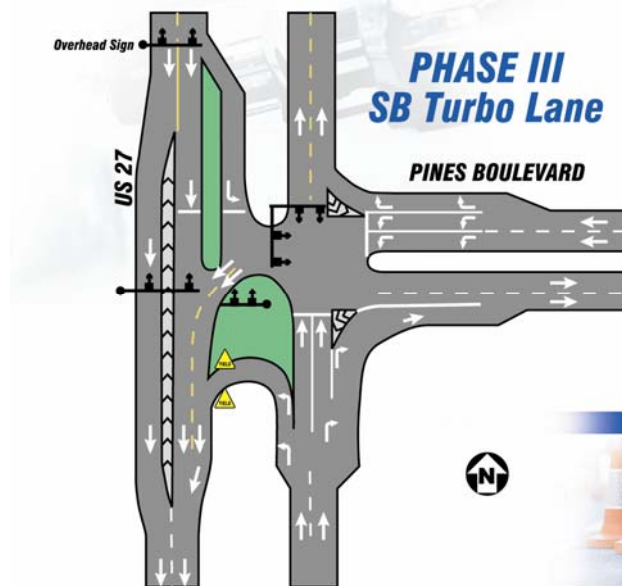


Table 42 presents the level of service (LOS) and travel delay (seconds per vehicle) comparison between the 2008 “No Build” condition and the 2008 proposed CMS project. The intersection capacity analysis was performed using SYNCHRO, a software package based on the *Highway Capacity Manual*.

Table 42. Pines Boulevard @ U.S. 27 Roadway Strategy Comparison

	Intersection Peak Hour LOS	
	Pines Boulevard @ U.S. 27	
	2008 "No Build"	2008 Proposed CMS
LOS	F	D
Delay	169.4	49.1

The proposed project is expected to bring the intersection into compliance with the performance target of LOS D set for this CMS study.

Pines Boulevard @ NW 155th Avenue

Improvements developed at this intersection include the following.

- Construct northbound right-turn turbo lane. The proposed lane continues eastbound to Interstate 75.
- Construct westbound dual left-turn lanes.
- Modify signal phasing to include north/south split phasing.
- Restripe southbound lanes to create dual southbound left-turn lanes and a shared through+left-turn lane.
- Relocate eastbound bus stop from east side to west side of intersection.

Table 43 presents the level of service (LOS) and travel delay (seconds per vehicle) comparison between the 2008 “No Build” condition and the 2008 proposed CMS project. The intersection capacity analysis was performed using SYNCHRO, a software package based on the *Highway Capacity Manual*.

Table 43. Pines Boulevard @ NW 155th Avenue Roadway Strategy Comparison

	Intersection Peak Hour LOS	
	Pines Blvd @ NW 155th Avenue	
	2008 "No Build"	2008 Proposed CMS
LOS	F	D
Delay	187.4	52.4

The proposed project is expected to bring the intersection into compliance with the performance target of LOS D set for this CMS study.

Pines Boulevard @ Hiatus Road

Improvements developed at this intersection include the following.

- Construct southbound dual left-turn lanes.
- Construct northbound dual left-turn lanes.

Table 44 presents the level of service (LOS) and travel delay (seconds per vehicle) comparison between the 2008 “No Build” condition and the 2008 proposed CMS project. The intersection capacity analysis was performed using SYNCHRO, a software package based on the *Highway Capacity Manual*.

Table 44. Pines Boulevard @ Hiatus Road Roadway Strategy Comparison

	Intersection Peak Hour LOS	
	Pines Blvd @ Hiatus Road	
	2008 "No Build"	2008 Proposed CMS
LOS	F	F
Delay	152.2	95.6

The proposed project is not expected to bring the intersection into compliance with the performance target of LOS D set for this CMS study. The traffic analysis demonstrates that although the intersection would continue to perform at LOS F after the proposed improvement, the delay would be reduced by approximately 37 percent.

Pines Boulevard @ Palm Avenue

Improvements developed at this intersection include the following.

- Construct southbound through lane.
- Southbound through lane will extend from just north of the shopping center entrance (approximately 1200 feet north of Pines Boulevard) to just south of the Pembroke Pines City Hall entrance (approximately 1200 feet south of Pines Boulevard).
- Will require retaining wall along canal on the west side of the road.
- Construct a sidewalk along the west side of Palm Avenue.

Table 45 presents the level of service (LOS) and travel delay (seconds per vehicle) comparison between the 2008 “No Build” condition and the 2008 proposed CMS project. The intersection capacity analysis was performed using SYNCHRO, a software package based on the *Highway Capacity Manual*.

Table 45. Pines Boulevard @ Palm Avenue Roadway Strategy Comparison

	Intersection Peak Hour LOS	
	Pines Blvd @ Palm Avenue	
	2008 "No Build"	2008 Proposed CMS
LOS	F	F
Delay	167.7	109.2

The proposed project is not expected to bring the intersection into compliance with the performance target of LOS D set for this CMS study. The traffic analysis demonstrates that although the intersection would continue to perform at LOS F after the proposed improvement, the delay would be reduced by approximately 35 percent.

Hollywood Boulevard @ Park Road

Improvements developed at this intersection include the following.

- Provide northbound right-turn overlap phase.

Table 46 presents the level of service (LOS) and travel delay (seconds per vehicle) comparison between the 2008 “No Build” condition and the 2008 proposed CMS project. The intersection capacity analysis was performed using SYNCHRO, a software package based on the *Highway Capacity Manual*.

Table 46. Hollywood Boulevard @ Park Road Roadway Strategy Comparison

	Intersection Peak Hour LOS	
	Pines Blvd @ Park Road	
	2008 "No Build"	2008 Proposed CMS
LOS	E	D
Delay	56.3	51.7

The proposed project is expected to bring the intersection into compliance with the performance target of LOS D set for this CMS study.

Pines Boulevard @ NW 118th Avenue

A safety analysis was performed at this intersection due to the high occurrence of crashes. NW 118th Avenue is also known as the Pembroke Lakes Mall entrance. The intersection has experienced an abnormally high number of rear end crashes. During peak travel periods and peak shopping periods, the queue in the left-turn lanes often blocks through travel lanes.

The recommended improvements at this intersection include the following.

- Extend eastbound left-turn lane storage length.
- Extend westbound left-turn lane storage length.

This improvement can be accommodated in the existing grass median of Pines Boulevard. Rear-end crash reduction from this improvement is expected to be approximately forty percent.

Access Management Improvements

Four access management improvements were developed as part of the Hollywood/Pines Boulevard CMS study.

- Convert the full median opening at SW 63rd Terrace to a westbound directional median opening.
- Remove the N/S 62nd Avenue traffic signal and close the median opening.
- Convert the full median opening at North 61st Avenue to an eastbound directional median opening.
- Add a raised median along Hollywood Boulevard from U.S. 441 to Presidential Circle and conduct an access management study to determine locations for median openings.

The intersection of Hollywood/Pines Boulevard and SW 63rd Terrace is a “T” intersection that provides access to a neighborhood located on the south side of Hollywood/Pines Boulevard. The crash data indicate that the predominant types of crashes at this intersection are angle crashes, rear-end crashes, and sideswipe crashes. Converting this full median opening to a westbound

directional median opening will continue providing access to the neighborhood while improving the safety and operations on Hollywood/Pines Boulevard.

The intersection of Hollywood/Pines Boulevard and Florida's Turnpike is signalized. Field observations indicate that the queue of left-turning vehicles on the westbound approach to the intersection extends and blocks the adjacent through traffic lane. To provide more storage for the left-turn lane on the westbound approach to the intersection, the closing of the intersection of Hollywood/Pines Boulevard and North 62nd Avenue would be required. Although the intersection of Hollywood/Pines Boulevard and Florida's Turnpike presents a deviation from the access management standards of 63 percent, no changes are recommended.

The traffic signal at N/S 62nd Avenue represents the most severe deviation from FDOT signal spacing guidelines anywhere along the corridor. The signal is located just 350 feet from the entrance to Florida's Turnpike. In addition, the segment of Hollywood Boulevard between Florida's Turnpike and U.S. 441 is the highest crash segment of the entire corridor. Removing the N/S 62nd Avenue traffic signal is expected to reduce the number of crashes in the corridor caused by traffic congestion. Traffic flow along Hollywood Boulevard is expected to improve if the traffic signal at N/S 62nd Avenue is removed.

Closing the intersection of Hollywood/Pines Boulevard and North 62nd Avenue will divert traffic from the neighborhoods located on both the north and south sides of Hollywood/Pines Boulevard. Southbound motorists that currently turn left onto eastbound Hollywood/Pines Boulevard will be diverted to U.S. 441 through internal circulation. Northbound motorists that turn left onto Hollywood/Pines Boulevard to continue west or turn at the Florida's Turnpike intersection will have two options: (1) turn right onto eastbound Hollywood/Pines Boulevard and make a U-turn movement at the proposed eastbound directional median opening at North 61st Avenue, or (2) turn right onto eastbound Hollywood/Pines Boulevard and make a U-turn at the intersection of Hollywood/Pines Boulevard and U.S. 441. The crash data show that the predominant types of crashes at the Hollywood/Pines Boulevard / North 62nd Avenue

intersection are angle crashes, rear-end crashes, and left-turn crashes. By closing the intersection, it is expected that the number of crashes will be reduced.

The intersection of Hollywood/Pines Boulevard and North 61st Avenue is unsignalized and allows all movements (i.e., a full median opening). It is proposed to convert this full median opening to an eastbound directional median opening. The eastbound directional median opening will provide access to abutting businesses and to the neighborhood located on the north side of Hollywood/Pines Boulevard. In addition, the eastbound directional median opening will allow motorists coming from South 62nd Avenue to perform a U-turn maneuver to access westbound Hollywood/Pines Boulevard.

The proposed modifications to the median openings will not only improve traffic operations and safety, but also the compliance with access management standards will be improved. The deviation from access management standards would be reduced from 60 percent to 11 percent.

East of U.S. 441 to Presidential Circle, Hollywood Boulevard is a seven-lane roadway with the center lane being a two-way left-turn lane. In general, this condition creates numerous conflicting movements and little access control or channelization. The CMS strategy for this location is to install a raised median and to perform an access management study to determine locations for median openings.

Other Intersections Under Study

A few intersections that are expected to operate at LOS E or F in the Year 2008 short-range conditions are currently under study in other planning efforts. Most of these studies are examining long-term solutions for these severely overcapacity intersections. The intersection of Pines Boulevard and Flamingo Road is currently being studied through a Project Development & Environment (PD&E) study. The long-term solution being examined at this intersection is grade-separation with Pines Boulevard aligning over Flamingo Road. In addition, the *Broward County 2025 Long Range Transportation Plan* (LRTP) identified the intersection of Pines

Boulevard and University Drive for a long-term solution of grade separation. A study is currently underway to plan for the reconstruction of the Hollywood/Pines Boulevard interchange with Florida's Turnpike. Ramp connection options are being evaluated for the Turnpike interchange. It is recommended that the removal of the N/S 62nd Avenue traffic signal and the closure of the median opening be studied further as part of the Turnpike interchange project. Furthermore, the Turnpike interchange study should consider accommodating a park-n-ride lot within the interchange similar to others provided at various Turnpike interchanges. Finally, the U.S. 441 corridor is under study for a reconstruction project as part of the Broward Transit Bridge corridor.

Summary of Mobility Enhancement Strategies

This chapter of the report outlined congestion management strategies developed for the Hollywood/Pines Boulevard corridor. The congestion management strategies are intended to improve the efficiency of a transportation corridor through improvements that can be implemented quicker and at a lower cost than traditional roadway widening through better use of existing resources.

This chapter began with a summary of the preliminary strategy list developed for this study, which can be used as a "toolbox" for CMS strategies relevant to the Hollywood/Pines Boulevard corridor. The remainder of the chapter applied CMS strategies to specific locations along the corridor based on (1) the need for CMS strategies developed in the existing conditions analysis and the short-range analysis and (2) the appropriateness of a particular strategy at the specific location. A summary of the recommended strategies developed in this study is presented in Table 47.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 47. Summary of CMS Strategies

Mode	Strategy	Description
Pedestrian	Sidewalk Continuity	West of Interstate 75 - Complete sidewalk network (see Bicycle strategies)
		Interstate 75 - Construct sidewalk along Pines Boulevard across I-75
		Construct new sidewalk - between NW 96th Avenue and NW 91st Avenue (north side)
	Sidewalk Connections	Construct new sidewalk - west side of Palm Avenue
		Construct new sidewalk - west side of Douglas Road (south of Pines Blvd)
		Construct new sidewalk - both sides of University Drive (north of Pines Blvd)
	School Crossing Improvements	McArthur High School - Extend bicycle lanes (see Bicycle strategies)
		McArthur High School - Median hedges between SW 64th Way and North 63rd Avenue
	Improved Pedestrian Crossing	Presidential Circle
	Lighting Strategies	Downtown Hollywood from Dixie Highway to N/S 28th Avenue
		Hollywood Blvd from N/S 58th Avenue to McArthur High School
Bicycle	Multipurpose Shared Use Path	U.S. 27 to NW 155th Avenue
	Proposed Bicycle Lanes	NW 155th Avenue to NW 83rd Avenue
		SW 64th Way to Florida's Turnpike
		Florida's Turnpike to U.S. 441 (add to Turnpike PD&E project)
	Transit Bridge	Bicycle lanes along U.S. 441 already planned
	Proposed Bicycle Lanes	Johnson Street - U.S. 441 to U.S. 1 (potential streetscaping improvements too)
		Pembroke Road - Interstate 95 to U.S. 1 (bike lanes already exist to the west)
	Bicycle Parking	Provide covered bicycle parking at multimodal locations and bike lockers where appropriate
Transit	Bus Benches and Trash Receptacles	9 Recommended Benches and 56 Trash Receptacles, See Table 38 of Report for Locations
	Bus Shelters	35 Recommended Bus Shelters, See Table 39 of Report for Locations
	Bus Stop Accessibility	Remove Obstacles from Access Path (17 Locations), See Table 40 of Report for Locations
		Construct Access Path (27 Locations), See Table 41 of Report for Locations
	Far Side Bus Bay	SW 210th Avenue (both sides)
		SW 172nd Avenue (eastbound)
		Flamingo Road (westbound)
		Hiatus Road (westbound)
		Palm Avenue (westbound)
		University Drive (both sides - would likely require right-of-way)
	Headway Reductions	Route 3 (60 to 30 minutes)
		Route 5 (60 to 30 minutes)
		Route 7 (30 to 20 minutes)
	Express Bus Service	Route 7 Limited Stop from Pembroke Lakes Mall to Downtown Hollywood NTC
Multimodal	Neighborhood Transit Centers	Young Circle (relocate existing)
		Red Road & Hiatus Road (proposed in TDP)
	Multimodal Hub	Hollywood Tri-Rail Station (upgrade)
		Sheridan Street Tri-Rail Station (upgrade)
		Hollywood Fashion Center (Transit Bridge)
		Pembroke Lakes Mall (upgrade)
		C.B. Smith Park park-n-ride lot
	"Enhanced" Benches and Shelters	At NTCs, multimodal hubs, and Young Circle
	TDM Strategies	Work with SFCS, especially at Memorial Hospital, Pembroke Lakes Mall, BCC South
	ITS Strategies	ATIS improvements and passenger information kiosks
		Trailblazer signage for guidance and awareness of facility
	Roadway	Pines Blvd @ U.S. 27 - Florida "T" Intersection
		Pines Blvd @ NW 155th Avenue - NB right-turbo, WB dual lefts, SB lane restriping for shared
		Pines Blvd @ NW 118th Avenue - Extend EB and WB left-turn storage
		Pines Blvd @ Hiatus Road - NB and SB dual lefts
		Pines Blvd @ Palm Avenue - Construct SB through lane
		Hollywood Blvd @ Florida's Turnpike - Access ramp reconstruction
		Hollywood Blvd @ Park Road - NB right-turn overlap phase
		Hollywood Blvd @ SW 63rd Terrace - convert to westbound directional median opening
		Hollywood Blvd @ N/S 62nd Avenue - remove traffic signal and close the median opening
		Hollywood Blvd @ N 61st Avenue - convert to eastbound directional median opening
	Long-Term Solutions	Hollywood Blvd from U.S. 441 to Presidential Circle - raised median and access mgmnt study
		Pines Boulevard @ Flamingo Road
		Pines Boulevard @ University Drive
	ITS Strategies	Enhance to fiber-optic communications network to allow signal-system upgrade, detectors
		to monitor vehicle flow, enhanced signal timing, and dynamic message sign

FINANCIAL ANALYSIS

This chapter of the report presents the financial analysis performed for the recommended strategies developed for the Hollywood/Pines Boulevard corridor. Congestion management system (CMS) strategies were evaluated and presented by mode of transportation in the previous chapter. The Financial Analysis chapter consists of three primary sections.

- Benefit-Cost Analysis
- Potential Funding Sources
- Proposed Funding Strategy

Benefit-Cost Analysis

A review of various studies was undertaken to select an adequate methodology for evaluating the benefits and costs of implementing the recommended strategies. After examining alternative methodologies, it was determined that the evaluation methodology used in previous CMS corridor studies, such as Atlantic Boulevard and Sunrise Boulevard, was a consistent and equitable evaluation process for analyzing recommended strategies.

Evaluation Criteria Development

The benefit-cost evaluation procedure consists of five criteria and considers the performance measure targets regarding accessibility, mobility, and congestion; Broward County Congestion Management System (CMS) goals, federal mandates; and community concerns and impacts. Table 48 presents the evaluation criteria and the weighting percentages assigned to the criteria. The evaluation criteria and weighting were discussed and approved by the Technical Advisory Committee (TAC) prior to performing the benefit-cost analysis. A description of the evaluation criteria follows Table 48.

Table 48. Evaluation Criteria

Evaluation Criteria	Weighting
Impact on Performance Measure Targets - Ability to Meet Target	35%
Safety of Subject Mode	20%
Safety of Other Modes	5%
Cost	15%
Implementation	15%
Economic/Community Impact	10%

Potential Impact of the Strategies on the Performance Measure Targets

The performance measure targets address several performance categories including accessibility, mobility, and congestion for the transportation modes studied. These criteria measure the goals of the congestion management study for the Hollywood/Pines Boulevard corridor. The primary goal of the strategy selection was the ability of the strategy to meet the performance targets, preferably through direct data or quantitative analysis procedures. A range of benefit categories, ranging from poor to excellent, are presented in Table 49. The benefit categories described in Table 49 were used to provide a score for each strategy within the five modes of transportation for the Impact on Performance Measure Targets criterion.

Table 49. Benefit Categories

Benefit Categories	Ability to Meet Standards	Score	Score Percentage
Excellent	Exceeds Standard	1	100%
Very Good	Meets Standard	2	75%
Good	Improves Conditions, May Not Meet Standard	3	50%
Fair	May Not Improve Conditions	4	25%
Poor	Does Not Improve Conditions	5	5%

Safety of Subject Mode

This criterion consists of determining the impact of the preliminary strategies on safety for the subject mode. For instance, pedestrian strategies were evaluated based on their positive impact

on pedestrian safety; bicycle strategies were evaluated based on their positive impact on bicycle safety, etc.

Safety of Other Modes

This criterion consists of determining the impact of the preliminary strategies on safety for other modes of transportation. For instance, transit strategies were assessed based on their impacts on pedestrians, bicyclists, and automobiles.

Cost of Strategy Implementation

This criterion consists of performing a cost analysis of the preliminary strategies. The cost analysis includes order of magnitude rankings of costs based on preliminary cost estimates for the proposed improvements, which include construction, operation costs (if applicable), right-of-way, maintenance, and/or capital costs. Table 50 presents the range of costs and the corresponding score associated with each cost. This score percentage was utilized in the strategy cost evaluation.

Table 50. Range of Costs and Cost Scores

Cost Ranking	Range of Costs	Score Percentage
1	\$0 - \$9,999	100%
2	\$10,000 - \$49,999	95%
3	\$50,000 - \$99,999	90%
4	\$100,000 - \$249,999	80%
5	\$250,000 - \$499,000	70%
6	\$500,000 - \$749,000	60%
7	\$750,000 - \$999,999	50%
8	\$1,000,000 - \$4,999,999	35%
9	\$5,000,000 - \$9,999,999	25%
10	> \$10,000,000	0%

The cost analysis for the strategy evaluation was calculated utilizing a range of costs. Costs were developed based on information from FDOT and Broward County. The cost estimates are

intended to be conceptual (planning level cost estimates) based on average cost data from similar projects and should be considered preliminary until detailed estimates are prepared prior to construction. A summary of cost estimates for the strategies developed in this study are presented by mode in Table 51.

Strategy Feasibility (Ease of Implementation)

This criterion is evaluated based on the perceived ease of implementation associated with a particular strategy. Intergovernmental coordination and community cooperation with regard to the implementation of a strategy can have a powerful impact on the potential of a project to be implemented. High rankings (1 – Excellent) are assigned to strategies that are easy to implement and low rankings (5 – Poor) are assigned to strategies that are difficult to implement based on a scale similar to the benefit categories presented in Table 49.

Economic and Community Impact of the Strategy

This criterion is evaluated qualitatively from 1 – Excellent to 5 – Poor as to the impact the strategy may have on commercial economics and community perceptions.

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Table 51. Congestion Management Strategies Cost Estimates

Pedestrian Strategies							
Mode	Strategy	Strategy Number	Description	Units ^(A)	Cost per Unit (\$) ^(B)	Quantity	Cost (\$)
Pedestrian	Sidewalk Continuity	P1	West of Interstate 75 - Complete sidewalk network (see Bicycle strategies)	See Bicycle Strategy B1			
		P2	Interstate 75 - Construct sidewalk along Pines Boulevard across I-75 (north side)	SF LM	150 60,000	5400 0.45	\$837,000
		P3	Construct new sidewalk - between NW 96th Ave and NW 91st Ave (north side)	LM	60,000	0.43	\$25,800
	Sidewalk Connections	P4	Construct new sidewalk - west side of Palm Avenue	LM	60,000	3.40	\$204,000
		P5	Construct new sidewalk - west side of Douglas Road (south of Pines Blvd)	LM	60,000	1.15	\$69,000
		P6	Construct new sidewalk - east side of University Drive (north of Pines Blvd)	LM	60,000	1.50	\$90,000
	School Crossing Improvements	P7	McArthur High School - Extend bicycle lanes (see Bicycle strategies)	See Bicycle Strategy B3			
		P8	McArthur High School - Median hedges or railing between SW 64th Way and North 63rd Ave	LF	20	925	\$18,500
	Lighting Strategies	P9	Downtown Hollywood from Dixie Highway to N/S 28th Avenue	EA	3,000	12	\$36,000
		P10	U.S. 441 from Pembroke Road to Johnson Street	EA	3,000	54	\$162,000
		P11	Hollywood Blvd from N/S 58th Avenue to McArthur High School	EA	3,000	40	\$120,000
						TOTAL =	\$1,562,300

Notes:

(A) - Unit abbreviations: SF = square feet; LM = linear miles; LF = linear feet; EA = each

(B) - Unit cost values were obtained FDOT and Broward County. Other opinions of probable cost are based on several sources and the engineering experience and judgment of the project team.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 51. Congestion Management Strategies Cost Estimates

Bicycle Strategies							
Mode	Strategy	Strategy Number	Description	Units ^(A)	Cost per Unit (\$) ^(B)	Quantity	Cost (\$)
Bicycle	Multipurpose Shared Use Path	B1	U.S. 27 to NW 155th Avenue	LM	175,000	10.20	\$1,785,000
	Proposed Bicycle Lanes	B2	NW 155th Avenue to NW 83rd Avenue	LM	189,000	6.15	\$1,162,350
		B3	SW 64th Way to Florida's Turnpike	LM	189,000	0.35	\$66,150
		B4	Florida's Turnpike to U.S. 441 (add to Turnpike PD&E project)	LM	189,000	0.40	\$75,600
	Transit Bridge	B5	Bicycle lanes along U.S. 441 already planned	LM	189,000	3.30	\$623,700
	Proposed Bicycle Lanes	B6	Johnson Street - U.S. 441 to U.S. 1 (potential streetscaping improvements too)	LM	350,000	4.05	\$1,417,500
		B7	Pembroke Road - Interstate 95 to U.S. 1 (bike lanes already exist to the west)	LM	189,000	1.56	\$294,840
	Bicycle Racks and Lockers	B8	At multimodal hubs and other high-activity locations	EA EA	125 1800	25 10	\$21,125
						TOTAL =	\$5,446,265

Notes:

(A) - Unit abbreviations: LM = linear miles; EA = each

(B) - Unit cost values were obtained FDOT and Broward County. Other opinions of probable cost are based on several sources and the engineering experience and judgment of the project team.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 51. Congestion Management Strategies Cost Estimates

Transit Strategies							
Mode	Strategy	Strategy Number	Description	Units ^(A)	Cost per Unit (\$) ^(B)	Quantity	Cost (\$)
Transit	Bus Benches	T1	See Table 38	EA	4,000	9	\$36,000
	Trash Receptacles	T2	See Table 38	EA	150	59	\$8,850
	Bus Shelters	T3	See Table 39	EA	12,000	35	\$420,000
	Bus Stop Accessibility	T4	See Tables 40 and 41	EA	2,500	46	\$115,000
	Far Side Bus Bay	T5	SW 210th Avenue (both sides)	EA	150,000	2	\$300,000
		T6	SW 172nd Avenue (eastbound)	EA	150,000	1	\$150,000
		T7	Flamingo Road (westbound)	EA	150,000	1	\$150,000
		T8	Hiatus Road (westbound)	EA	150,000	1	\$150,000
		T9	Palm Avenue (westbound)	EA	150,000	1	\$150,000
		T10	University Drive (both sides - would likely require right-of-way)	EA	500,000	2	\$1,000,000
	Headway Reductions ^(C)	T11	Route 3 (60 to 30 minutes) Capital Costs	EA	300,000	3	\$900,000
			Operating Costs	EA	198,900	3	\$596,700
		T12	Route 5 (60 to 30 minutes) Capital Costs	EA	300,000	3	\$900,000
			Operating Costs	EA	198,900	3	\$596,700
		T13	Route 7 (30 to 20 minutes) Capital Costs	EA	300,000	3	\$900,000
			Operating Costs	EA	198,900	3	\$596,700
	Express Bus Service	T14	Route 7 Limited Stop from Pembroke Lakes Mall to Downtown Hollywood NTC Capital Costs	EA	300,000	4	\$1,200,000
			Operating Costs	EA	198,900	4	\$795,600
					TOTAL = \$8,965,550		

Notes:

(A) - Unit abbreviation: EA = each

(B) - Several unit cost values were obtained from the 2004 Broward County Transit Development Plan (TDP). Other opinions of probable cost are based on several sources and the engineering experience and judgment of the project team.

(C) - Other headway reductions are listed in the TDP within the extended study boundary, and are outlined on pages 124 and 125 of this report.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 51. Congestion Management Strategies Cost Estimates

Multimodal Strategies							
Mode	Strategy	Strategy Number	Description	Units ^(A)	Cost per Unit (\$) ^(B)	Quantity	Cost (\$)
Multimodal	Neighborhood Transit Centers	M1	Downtown Hollywood (relocate existing) Land	To be determined			
			Terminal Bus Bays	EA	20,000	10	\$200,000
			Enhanced Benches and Shelters	EA	25,000	5	\$125,000
			ITS Kiosks with ATIS Service	EA	100,000	1	\$100,000
			Efficient Pedestrian Paths	To be determined			
			Trailblazer Signage	EA	2,000	6	\$12,000
			Miscellaneous (Vending and Bicycle Racks)	EA	500	12	\$6,000
		M2	Flamingo & Hiatus Road (proposed in TDP)	EA	830,000	1	\$830,000
	Multimodal Hub	M3	Hollywood Tri-Rail Station (upgrade)	EA	400,000	1	\$400,000
		M4	Sheridan Street Tri-Rail Station (upgrade)	To be determined			
		M5	Hollywood Fashion Center (Transit Bridge)				
			Dedicated Parking Supply	EA	200,000	1	\$200,000
			ITS Kiosks with ATIS Service	EA	100,000	1	\$100,000
			Trailblazer Signage	EA	2,000	4	\$8,000
			Terminal Bus Bays	EA	20,000	8	\$160,000
			Efficient Pedestrian Paths	LM	60,000	0.4	\$24,000
			Enhanced Benches and Shelters	EA	25,000	4	\$100,000
			Miscellaneous (Vending and Bicycle Racks)	EA	500	12	\$6,000
		M6	Pembroke Lakes Mall (upgrade)				
			Enhanced Benches and Shelters	EA	25,000	2	\$50,000
			ITS Kiosks with ATIS Service	EA	100,000	1	\$100,000
		M7	C.B. Smith Park park-n-ride lot				
			Trailblazer Signage	EA	2,000	4	\$8,000
			Transit Signage	EA	2,000	4	\$8,000
	Young Circle	M8	Enhanced Benches and Shelters	EA	25,000	8	\$200,000
	TDM Strategies	M9	Work with SFCS, especially at Memorial Hospital, Pembroke Lakes Mall, BCC South	SFCS staff time			
	ITS Strategies	M10	ATIS improvements and passenger information kiosks	EA	100,000	4	\$400,000
		M11	Trailblazer signage for guidance and awareness of various facilities along corridor	EA	2,000	24	\$48,000
						TOTAL =	\$3,085,000

Notes:

(A) - Unit abbreviations: EA = each; LM = linear miles

(B) - Several unit cost values were obtained from the 2004 Broward County Transit Development Plan (TDP). Other opinions of probable cost are based on several sources and the engineering experience and judgment of the project team.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 51. Congestion Management Strategies Cost Estimates

Roadway Strategies				
Mode	Strategy	Strategy Number	Description	Cost (\$) ^(A)
Roadway	Intersection Improvements	R1	Pines Blvd @ U.S. 27 - Florida "T" Intersection	\$1,140,000
		R2	Pines Blvd @ NW 155th Avenue - NB right-turbo, WB dual lefts, SB lane restriping for shared	\$785,000
		R3	Pines Blvd @ NW 118th Avenue - Extend EB and WB left-turn storage	\$240,000
		R4	Pines Blvd @ Hiatus Road - NB and SB dual lefts	\$758,000
		R5	Pines Blvd @ Palm Avenue - Construct SB through lane	\$2,140,000
		R6	Hollywood Blvd @ Park Road - NB right-turn overlap phase	\$8,000
	Access Management	R7	Hollywood Blvd @ SW 63rd Terrace - convert to westbound directional median opening	\$420,000
			Hollywood Blvd @ N/S 62nd Avenue - remove traffic signal and close the median opening	
			Hollywood Blvd @ N 61st Avenue - convert to eastbound directional median opening	
		R8	Hollywood Blvd from U.S. 441 to Presidential Circle - raised median and access mgmnt study	\$1,020,000
	Long-Term Solutions	R9	Pines Boulevard @ Flamingo Road	N/A ^(B)
		R10	Pines Boulevard @ University Drive	N/A ^(B)
	ITS Strategies	R11	Enhancements to fiber-optic communicatons network to allow signal-system upgrade, detectors to monitor vehicle flow, enhanced signal timing, and	N/A ^(B)
			dynamic message signs	
			TOTAL =	\$6,511,000

Notes:

(A) - Costs are calculated from FDOT pay items expected to be needed.

(B) - Costs for long-term solutions are under development in other planning studies.

Strategy Evaluation

Table 52 presents a detailed evaluation matrix of each strategy by mode. Each strategy was ranked for the six evaluation criteria described on pages 192 through 195, based on the benefit categories and cost estimates presented. The weighting assigned to each evaluation criterion was multiplied by the score percentage associated with the score assigned to the strategy for each criterion. The overall score for each strategy was determined by adding the score percentage for the six individual evaluation criteria. The maximum theoretical overall score is 100 percent (since the sum of the weighting percentages for each evaluation criteria is 100 percent). However, most scores ranged from 60 percent to 90 percent.

Ranking of Congestion Management Strategies

The strategies developed for the Hollywood/Pines Boulevard corridor were ranked based on the overall score calculated from the Strategy Evaluation described above. Table 53 presents the rankings of the strategies for the five modes. The rankings can be used to prioritize the strategies developed in this study for implementation purposes and funding decisions.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 52. Evaluation Matrix of Congestion Management Strategies

Pedestrian

Strategy Number	Impact on Performance Measure Targets Weighting = 35%		Safety of Subject Mode Weighting = 20%		Safety of Other Modes Weighting = 5%		Cost Weighting = 15%		Implementation Weighting = 15%		Economic / Community Impact Weighting = 10%		Overall Score
	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	
P1	1	35.00%	1	20.00%	3	2.50%	8	5.25%	3	7.50%	2	7.50%	77.75%
P2	1	35.00%	1	20.00%	4	1.25%	7	7.50%	3	7.50%	1	10.00%	81.25%
P3	1	35.00%	1	20.00%	2	3.75%	2	14.25%	2	11.25%	4	2.50%	86.75%
P4	2	26.25%	1	20.00%	3	2.50%	4	12.00%	2	11.25%	2	7.50%	79.50%
P5	2	26.25%	1	20.00%	3	2.50%	3	13.50%	2	11.25%	3	5.00%	78.50%
P6	2	26.25%	1	20.00%	3	2.50%	3	13.50%	2	11.25%	2	7.50%	81.00%
P7	Evaluation provided in Bicycle Evaluation Section.												
P8	2	26.25%	2	15.00%	2	3.75%	2	14.25%	1	15.00%	3	5.00%	79.25%
P9	2	26.25%	1	20.00%	1	5.00%	2	14.25%	2	11.25%	1	10.00%	86.75%
P10	3	17.50%	1	20.00%	1	5.00%	4	12.00%	2	11.25%	1	10.00%	75.75%
P11	2	26.25%	1	20.00%	1	5.00%	4	12.00%	2	11.25%	1	10.00%	84.50%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 52. Evaluation Matrix of Congestion Management Strategies

Bicycle

Strategy Number	Impact on Performance Measure Targets Weighting = 35%		Safety of Subject Mode Weighting = 20%		Safety of Other Modes Weighting = 5%		Cost Weighting = 15%		Implementation Weighting = 15%		Economic / Community Impact Weighting = 10%		Overall Score
	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	
B1	1	35.00%	1	20.00%	3	2.50%	8	5.25%	3	7.50%	2	7.50%	77.75%
B2	1	35.00%	1	20.00%	3	2.50%	8	5.25%	2	11.25%	3	5.00%	79.00%
B3	2	26.25%	1	20.00%	3	2.50%	3	13.50%	2	11.25%	2	7.50%	81.00%
B4	1	35.00%	1	20.00%	3	2.50%	3	13.50%	1	15.00%	3	5.00%	91.00%
B5	3	17.50%	1	20.00%	3	2.50%	6	9.00%	1	15.00%	2	7.50%	71.50%
B6	2	26.25%	1	20.00%	3	2.50%	8	5.25%	3	7.50%	1	10.00%	71.50%
B7	2	26.25%	1	20.00%	3	2.50%	5	10.50%	2	11.25%	2	7.50%	78.00%
B8	3	17.50%	3	10.00%	3	2.50%	2	14.25%	1	15.00%	2	7.50%	66.75%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 52. Evaluation Matrix of Congestion Management Strategies

Transit

Strategy Number	Impact on Performance Measure Targets Weighting = 35%		Safety of Subject Mode Weighting = 20%		Safety of Other Modes Weighting = 5%		Cost Weighting = 15%		Implementation Weighting = 15%		Economic / Community Impact Weighting = 10%		Overall Score
	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	
T1	3	17.50%	3	10.00%	2	3.75%	2	14.25%	1	15.00%	1	10.00%	70.50%
T2	3	17.50%	3	10.00%	3	2.50%	1	15.00%	1	15.00%	1	10.00%	70.00%
T3	3	17.50%	2	15.00%	2	3.75%	5	10.50%	2	11.25%	1	10.00%	68.00%
T4	1	35.00%	2	15.00%	1	5.00%	4	12.00%	2	11.25%	2	7.50%	85.75%
T5	3	17.50%	1	20.00%	1	5.00%	5	10.50%	4	3.75%	3	5.00%	61.75%
T6	3	17.50%	1	20.00%	1	5.00%	4	12.00%	4	3.75%	3	5.00%	63.25%
T7	3	17.50%	1	20.00%	1	5.00%	4	12.00%	4	3.75%	3	5.00%	63.25%
T8	3	17.50%	1	20.00%	1	5.00%	4	12.00%	4	3.75%	3	5.00%	63.25%
T9	3	17.50%	1	20.00%	1	5.00%	4	12.00%	4	3.75%	3	5.00%	63.25%
T10	3	17.50%	1	20.00%	1	5.00%	8	5.25%	4	3.75%	3	5.00%	56.50%
T11	2	26.25%	3	10.00%	3	2.50%	8	5.25%	2	11.25%	2	7.50%	62.75%
T12	2	26.25%	3	10.00%	3	2.50%	8	5.25%	2	11.25%	2	7.50%	62.75%
T13	1	35.00%	3	10.00%	3	2.50%	8	5.25%	3	7.50%	2	7.50%	67.75%
T14	1	35.00%	2	15.00%	2	3.75%	8	5.25%	3	7.50%	1	10.00%	76.50%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 52. Evaluation Matrix of Congestion Management Strategies

Multimodal

Strategy Number	Impact on Performance Measure Targets Weighting = 35%		Safety of Subject Mode Weighting = 20%		Safety of Other Modes Weighting = 5%		Cost Weighting = 15%		Implementation Weighting = 15%		Economic / Community Impact Weighting = 10%		Overall Score
	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	
M1	2	26.25%	1	20.00%	2	3.75%	5	10.50%	3	7.50%	2	7.50%	75.50%
M2	2	26.25%	1	20.00%	2	3.75%	7	7.50%	2	7.50%	3	5.00%	70.00%
M3	1	35.00%	1	20.00%	2	3.75%	5	10.50%	1	15.00%	2	7.50%	91.75%
M4	1	35.00%	1	20.00%	2	3.75%	6	9.00%	3	7.50%	2	7.50%	82.75%
M5	1	35.00%	1	20.00%	2	3.75%	6	9.00%	2	11.25%	1	10.00%	89.00%
M6	2	26.25%	1	20.00%	3	2.50%	4	12.00%	3	7.50%	2	7.50%	75.75%
M7	3	17.50%	1	20.00%	2	3.75%	2	14.25%	2	11.25%	4	2.50%	69.25%
M8	2	26.25%	1	20.00%	2	3.75%	4	12.00%	3	7.50%	2	7.50%	77.00%
M9	2	26.25%	2	15.00%	2	3.75%	1	15.00%	3	7.50%	3	5.00%	72.50%
M10	2	26.25%	1	20.00%	3	2.50%	5	10.50%	3	7.50%	2	7.50%	74.25%
M11	3	17.50%	1	20.00%	2	3.75%	2	14.25%	2	11.25%	4	2.50%	69.25%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 52. Evaluation Matrix of Congestion Management Strategies

Roadway

Strategy Number	Impact on Performance Measure Targets Weighting = 35%		Safety of Subject Mode Weighting = 20%		Safety of Other Modes Weighting = 5%		Cost Weighting = 15%		Implementation Weighting = 15%		Economic / Community Impact Weighting = 10%		Overall Score
	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	Score	Percentage	
R1	2	26.25%	2	15.00%	5	0.25%	8	5.25%	2	11.25%	3	5.00%	63.00%
R2	2	26.25%	2	15.00%	4	1.25%	7	7.50%	3	7.50%	2	7.50%	65.00%
R3	2	26.25%	1	20.00%	3	2.50%	4	12.00%	1	15.00%	2	7.50%	83.25%
R4	3	17.50%	2	15.00%	3	2.50%	7	7.50%	1	15.00%	2	7.50%	65.00%
R5	3	17.50%	2	15.00%	3	2.50%	8	5.25%	3	7.50%	2	7.50%	55.25%
R6	2	26.25%	3	10.00%	2	3.75%	1	15.00%	1	15.00%	3	5.00%	75.00%
R7	3	17.50%	1	20.00%	3	2.50%	5	10.50%	3	7.50%	3	5.00%	63.00%
R8	2	26.25%	1	20.00%	2	3.75%	8	5.25%	2	11.25%	3	5.00%	71.50%
R9	1	35.00%	2	15.00%	2	3.75%	10	0.00%	3	7.50%	2	7.50%	68.75%
R10	1	35.00%	2	15.00%	2	3.75%	10	0.00%	3	7.50%	2	7.50%	68.75%
R11	2	26.25%	2	15.00%	3	2.50%	10	0.00%	2	11.25%	2	7.50%	62.50%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 53. Ranking of Congestion Management Strategies from Benefit/Cost Analysis

Pedestrian Strategies

Ranking Position	Strategy	Description	Strategy Number	Benefit	Cost	Overall Score
1	Sidewalk Continuity	Construct new sidewalk - between NW 96th Ave and NW 91st Ave (north side)	P3	1	2	86.75%
2	Lighting Strategies	Downtown Hollywood from Dixie Highway to N/S 28th Avenue	P9	2	2	86.75%
3	Lighting Strategies	Hollywood Blvd from N/S 58th Avenue to McArthur High School	P11	2	4	84.50%
4	Sidewalk Continuity	Interstate 75 - Construct sidewalk along Pines Boulevard across I-75 (north side)	P2	1	7	81.25%
5	Sidewalk Connections	Construct new sidewalk - east side of University Drive (north of Pines Blvd)	P6	2	3	81.00%
6	Sidewalk Connections	Construct new sidewalk - west side of Palm Avenue	P4	2	4	79.50%
7	School Crossing Improvements	McArthur High School - Median hedges or railing between SW 64th Way and North 63rd Ave	P8	2	2	79.25%
8	Sidewalk Connections	Construct new sidewalk - west side of Douglas Road (south of Pines Blvd)	P5	2	3	78.50%
9	Sidewalk Continuity	West of Interstate 75 - Complete sidewalk network (see Bicycle strategies)	P1	1	8	77.75%
10	Lighting Strategies	U.S. 441 from Pembroke Road to Johnson Street	P10	3	4	75.75%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 53. Ranking of Congestion Management Strategies from Benefit/Cost Analysis

Bicycle Strategies

Ranking Position	Strategy	Description	Strategy Number	Benefit	Cost	Overall Score
1	Bicycle Lanes	Florida's Turnpike to U.S. 441 (add to Turnpike PD&E project)	B4	1	3	91.00%
2	Bicycle Lanes	SW 64th Way to Florida's Turnpike	B3	2	3	81.00%
3	Bicycle Lanes	NW 155th Avenue to NW 83rd Avenue	B2	1	8	79.00%
4	Bicycle Lanes	Pembroke Road - Interstate 95 to U.S. 1 (bike lanes already exist to the west)	B7	2	5	78.00%
5	Multipurpose Shared Use Path	U.S. 27 to NW 155th Avenue	B1	1	8	77.75%
6	Bicycle Lanes	Johnson Street - U.S. 441 to U.S. 1 (potential streetscaping improvements too)	B6	2	8	71.50%
7	Bicycle Lanes	Bicycle lanes along U.S. 441 already planned (Transit Bridge project)	B5	3	6	71.50%
8	Bicycle Racks and Lockers	At multimodal hubs and other high-activity locations	B8	3	2	66.75%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 53. Ranking of Congestion Management Strategies from Benefit/Cost Analysis

Transit Strategies

Ranking Position	Strategy	Description	Strategy Number	Benefit	Cost	Overall Score
1	Bus Stop Accessibility	See Tables 40 and 41	T4	1	4	85.75%
2	Express Bus Service	Route 7 Limited Stop from Pembroke Lakes Mall to Downtown Hollywood NTC	T14	1	8	76.50%
3	Bus Benches	See Table 38	T1	3	2	70.50%
4	Trash Receptacles	See Table 38	T2	3	1	70.00%
5	Bus Shelters	See Table 39	T3	3	5	68.00%
6	Headway Reductions	Route 7 (30 to 20 minutes)	T13	1	8	67.75%
7	Far Side Bus Bay	SW 172nd Avenue (eastbound)	T6	3	4	63.25%
8	Far Side Bus Bay	Flamingo Road (westbound)	T7	3	4	63.25%
9	Far Side Bus Bay	Hiatus Road (westbound)	T8	3	4	63.25%
10	Far Side Bus Bay	Palm Avenue (westbound)	T9	3	4	63.25%
11	Headway Reductions	Route 3 (60 to 30 minutes)	T11	2	8	62.75%
12	Headway Reductions	Route 5 (60 to 30 minutes)	T12	2	8	62.75%
13	Far Side Bus Bay	SW 210th Avenue	T5	3	5	61.75%
14	Far Side Bus Bay	University Drive (both sides - would likely require right-of-way)	T10	3	8	56.50%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 53. Ranking of Congestion Management Strategies from Benefit/Cost Analysis

Multimodal Strategies

Ranking Position	Strategy	Description	Strategy Number	Benefit	Cost	Overall Score
1	Multimodal Hub	Hollywood Tri-Rail Station (upgrade)	M3	1	5	91.75%
2	Multimodal Hub	Hollywood Millennium Mall (Transit Bridge)	M5	1	6	89.00%
3	Multimodal Hub	Sheridan Street Tri-Rail Station (upgrade)	M4	1	6	82.75%
4	Enhanced Benches and Shelters	Young Circle	M8	2	4	77.00%
5	Multimodal Hub	Pembroke Lakes Mall (upgrade)	M6	2	4	75.75%
6	Neighborhood Transit Centers	Downtown Hollywood (relocate existing)	M1	2	5	75.50%
7	ITS Strategies	ATIS improvements and passenger information kiosks	M10	2	5	74.25%
8	TDM Strategies	Work with SFCS, especially at Memorial Hospital, Pembroke Lakes Mall, BCC South	M9	2	1	72.50%
9	Neighborhood Transit Centers	Flamingo & Hiatus Road (proposed in TDP)	M2	2	7	70.00%
10	Multimodal Hub	C.B. Smith Park park-n-ride lot	M7	3	2	69.25%
11	ITS Strategies	Trailblazer signage for guidance and awareness of various facilities along corridor	M11	3	2	69.25%

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 53. Ranking of Congestion Management Strategies from Benefit/Cost Analysis

Roadway Strategies

Ranking Position	Strategy	Description	Strategy Number	Benefit	Cost	Overall Score
1	Intersection Improvements	Pines Blvd @ NW 118th Avenue - Extend EB and WB left-turn storage	R3	2	4	83.25%
2	Intersection Improvements	Hollywood Blvd @ Park Road - NB right-turn overlap phase	R6	2	1	75.00%
3	Access Management	Hollywood Blvd from U.S. 441 to Presidential Circle - raised median and access mgmnt study	R8	2	8	71.50%
4	Long-Term Solutions	Pines Boulevard @ Flamingo Road	R9	1	10	68.75%
5	Long-Term Solutions	Pines Boulevard @ University Drive	R10	1	10	68.75%
6	Intersection Improvements	Pines Blvd @ NW 155th Avenue - NB right-turbo, WB dual lefts, SB lane restriping for shared	R2	2	7	65.00%
7	Intersection Improvements	Pines Blvd @ Hiatus Road - NB and SB dual lefts	R4	3	7	65.00%
8	Intersection Improvements	Pines Blvd @ U.S. 27 - Florida "T" Intersection	R1	2	8	63.00%
9	Access Management	Hollywood Blvd @ (SW 63rd Terrace, N 62nd Avenue, N 61st Avenue)	R7	3	5	63.00%
10	ITS Strategies	Enhancements to fiber-optic communications network to allow signal-system upgrade, detectors, enhanced signal timing	R11	2	10	62.50%
11	Intersection Improvements	Pines Blvd @ Palm Avenue - Construct SB through lane	R5	3	8	55.25%

Potential Funding Sources

The United States Congress enacted the Transportation Equity Act for the 21st Century (TEA-21) on June 9, 1998. TEA-21 authorized Federal surface transportation spending for roadways, safety and transit for the six-year period between 1998 and 2003. Although the original authorization limit of TEA-21 has expired, Congress has passed updates to TEA-21 in the interim period before reauthorization occurs. The reauthorization of TEA-21 is expected to be entitled the Safe, Accountable, Flexible, and Efficient Transportation Equity Act (SAFETEA), although changes could occur before reauthorization.

SAFETEA will presumably contain a program structure similar to TEA-21. In this context, the following potential funding sources should be pursued for the recommended strategies of the Hollywood/Pines Boulevard Multimodal Corridor Study. The recommended approach to Federal funding is to consolidate as many of the proposed strategies into a single comprehensive investment package, and pursue it as an integrated whole. This will ensure a complete, consistent and complementary combination of transportation improvements. The effort level expended by Broward County to obtain necessary funding will be minimized under this approach.

Selection of the most appropriate source of Federal (TEA-21) funding for the combined package is a function of several elements.

- Program eligibility of the various package components
- Cost
- Available state and local matching funds
- Competition for funds within Broward County and the State of Florida

Federal Highway Funding

Several programs provide sources of Federal TEA-21 funds delivered to the states through the Federal Highway Program. Appropriate programs for the type of capital activities recommended

in this study include the Surface Transportation Program (STP) and its Transportation Enhancement Activity element (TEA) and Hazard Elimination element. As is the case for all Federal transportation infrastructure funded activities, all projects must be consistent with state and local long-range plans and short-range programs (TIP).

Other primary sources of highway funding include programs such as the National Highway Systems (NHS) funding and Congestion Mitigation and Air Quality Improvement (CMAQ) programs. However, Hollywood/Pines Boulevard is not designated as part of the National Highway System and recommended strategies are expected to have little impact on NHS roadways. In addition, Broward County has an “air quality maintenance” designation regarding air quality issues, although CMAQ funds may be applied for as a funding source.

Surface Transportation Program (STP)

Of the Federal transportation capital improvement programs delivered to the state Departments of Transportation (DOTs), the Surface Transportation Program (STP) is the broadest and most flexible. Principally a source of capital finance for highway improvements and bridges, eligible STP funds may also be used for intercity bus facilities, modification of sidewalks to meet ADA requirements, carpool projects, infrastructure-based ITS capital improvements, safety measures, and transportation enhancements. Forty percent of each state's STP apportionment must be spent in urbanized areas having greater than 250,000 persons, with each urbanized area of this size getting a guaranteed percentage of this 40 percent. Broward County exceeds the population requirements to be included for a portion of this 40 percent. All urbanized areas are eligible to receive the remaining funds allocated during the statewide and local planning and programming processes.

In fiscal year 2003, the Federal government apportioned approximately \$5.6 billion under this formula allocated program. States receive funding based on factors such as lane-miles and vehicle miles traveled. States and local governments must match federal funds by a formula of 20 non-Federal cents for every 80 Federal cents. The Florida Department of Transportation

(FDOT) allocates Federal STP funds to projects, especially roadway projects, across the state according to the State Transportation Improvement Program (STIP).

On average, Florida receives between \$255 and \$265 million annually under STP and the Fort Lauderdale/Hollywood/Pompano urbanized area receives approximately \$19 million in total. In fiscal year 2003, Florida received \$262 million under STP. The recommended Hollywood/Pines Boulevard strategies are eligible for STP funding.

STP Transportation Enhancement Activities (TEA)

Certain TEA-21 funds are available to integrate transportation facilities into surrounding communities under the STP Transportation Enhancement Activities (TEA) program. Eligible projects include facilities for pedestrians and bicyclists, landscaping, historic transportation resources preservation (e.g., railroad passenger stations), public art, and removal of advertising. Competition for TEA funds is typically high.

The STP Transportation Enhancement Activities (TEA) program is apportioned as 10 percent of each state's STP allotment and represents approximately \$620 million of federal funds annually nationwide. Florida has typically received \$26 to \$45 million annually in TEA funds. The state government apportions TEA funds to specific projects in different jurisdictions.

Hollywood/Pines Boulevard recommended strategies eligible for STP Transportation Enhancement Activities (TEA) funding include the pedestrian and bicycle improvements, including establishing the bicycle path corridor and bicycle improvements associated with intermodal hubs such as the proposed Millennium Mall transit hub and existing Tri-Rail stations.

STP Hazard Elimination

The STP dedicates 10 percent of its funds for safety programs. STP safety is a mandatory program. States must implement a Hazard Elimination Program to identify and correct locations

that may cause a danger to motorists, bicyclists, and pedestrians. Section 1401 stipulates funds for pedestrian and bicycle paths, as well as roads and traffic calming measures that ensure safety. Such facilities must be publicly owned. The state government allocates STP Hazard Elimination funds to specific projects in different jurisdictions. Federal funds are matched by state or local funds on a 90/10 basis.

The Federal allotment for STP safety measures was approximately \$648 million in fiscal year 2003; Florida's share is typically \$30 to \$40 million. Broward County expects to receive less than one million dollars of Hazard Elimination funds in a typical year (although several million dollars of other STP Safety funds are available). Hollywood/Pines Boulevard CMS strategies eligible for STP Hazard Elimination funding include some pedestrian and bicycle improvements including sidewalk improvements that enhance accessibility to bus stops. However, the application process requires a study of hazards and corrective measures identifying the proposed locations as hazards.

Federal Transit Funding

The following potential funding sources pertain to funds delivered through the Federal Transit program. As is the case for all Federal transportation infrastructure funded activities, projects must be consistent with state and local long-range plans and short-range programs (TIP).

Section 5309 Capital Grants Program

In Florida, the Section 5309 urbanized area formula program has traditionally been the preferred source for routine transit infrastructure improvements. TEA-21 Section 5309 has three components with a mix of discretionary and formula-based elements. Section 5309 funds are divided 40 percent for discretionary "New Start" major investments, 40 percent for formula-based expansion of existing fixed guideway systems, and 20 percent for discretionary bus and bus facilities capital expenditures related to the replacement, rehabilitation, or purchase of buses and related infrastructure. Bus and New Starts projects are allocated at the discretion of the

Secretary of the DOT and/or the Congress. Since the recommended Hollywood/Pines Boulevard Multimodal Corridor Study projects do not contain any rail transit related activities, the information provided concentrates on the bus and bus facilities expenditures. Although the nationally available Section 5309 funds are substantial, the competition for the discretionary portions of the program is considerable.

The Federal Transit Authority (FTA) distributes Section 5309 capital funds directly to transit agencies. Federal grants cover 80 percent of net project costs, and state/local governments must pay the remaining 20 percent. However, ADA improvements are granted on a 90/10 basis.

Annual Section 5309 Federal capital investment for fiscal year 2003 was approximately \$3.1 billion, of which approximately \$653 million was allocated for capital bus expenditures. Florida has received approximately \$50 million of Section 5309 funds annually over the past several years, including approximately \$14 to \$15 million for bus and related facilities. Fort Lauderdale/Hollywood/Pompano transit operators utilize approximately \$3 million of Section 5309 funds for the purchase of buses annually, plus approximately \$13 million under the New Starts and Fixed Guideway allocation to support Tri-Rail double tracking.

Section 5309 Discretionary Bus and Bus Facilities funds could be sought for the bus transit portion of the recommended Hollywood/Pines Boulevard Multimodal Corridor Study improvements. Specifically, Hollywood/Pines Boulevard recommendations eligible for Section 5309 funds include the purchase of new buses for headway reductions, the purchase of new buses for the implementation of express bus service along Hollywood/Pines Boulevard, construction of new multimodal facilities, and the implementation of enhanced bus shelters.

Section 5307 Urbanized Area Formula Grants Program

The Urbanized Area Formula Grants program is a formula-based program with funds available for almost any rail and bus transit capital, rehabilitation/replacement, or planning activity; however, Section 5307 funds cannot be used to subsidize bus operations. Urban Area Formula

Grant apportionments are a function of population, population density, bus revenue miles, fixed guideway revenue miles, and fixed guideway route miles in the case of urban areas with 200,000 or more persons. A simpler formula applies to smaller cities. The federal government distributes these funds directly to transit agencies in larger urban areas and to the state on behalf of smaller urbanized areas below 200,000 in population. Section 5307 funds must be matched by state and local funds on an 80/20 basis, except for the 90/10 match allowed for vehicle improvements related to compliance with the Americans with Disabilities Act (ADA). For capital purchases, the match can be with state toll revenue credits. In addition to the funds designated for Section 5307, the "flexible funding" provision allows for the transfer from Federal Highway Administration (FHWA) sources such as STP and CMAQ to this program. Nationwide, roughly one-quarter to one-third of the Section 5307 capital expenditures is comprised of flexible funds. Over the course of TEA-21, Section 5307 funds available nationwide vary from \$3.2 to \$4.4 billion annually. Florida has obtained approximately \$140 million annually under Section 5307; the Fort Lauderdale/Hollywood/Pompano urbanized area obtains approximately \$25 million annually from Section 5307.

The transit improvements listed in the Hollywood/Pines Boulevard Multimodal Corridor Study are eligible for funding under Section 5307. ITS technology systems such as ATIS improvements at multimodal hubs, as well as other multimodal hub improvements such as bus bays, bus shelters, and associated infrastructure are also eligible.

Transit Enhancements

Transit Enhancements is a mandatory one-percent subset of the Section 5307 Urbanized Area Formula Grants program designed to integrate transit facilities into communities and generally improve accessibility in urbanized areas of 200,000 or more persons. Transit Enhancements covers bus shelters, pedestrian and bicycle access and facilities, safety enhancements and education, signage, public art, landscaping and beautification, and historic preservation (especially of mass transportation buildings and facilities). Many transit agencies apply the larger costs of the Americans with Disabilities Act (ADA) requirements to this one-percent

mandatory spending provision. The 80/20 Federal match applies to this portion of Urban Area Formula Grants and a 90/10 Federal match applies to ADA projects. Transit Enhancement Funds available to counties and transit agencies are approximately \$31 million annually for medium and large urban areas. The Fort Lauderdale/Hollywood/Pompano urbanized area presumably receives approximately \$250,000 annually for Transit Enhancements.

Eligible Hollywood/Pines Boulevard Multimodal Corridor Study projects include the aesthetic treatment of “enhanced” bus shelters at primary transfer locations, bike racks at multimodal hubs, landscaping at bus shelters, ADA-accessible bus stops, and pedestrian improvements to multimodal centers.

The relative abundance of transit capital funding stands in sharp contrast with the scarcity of resources available to fund operations and maintenance. As in most places, a shortage of operating subsidies serves as a constraint for Broward County Transit's service expansion efforts. Contributing to this situation is the limited availability of state funds for operating assistance and the gradual phase-out of federal operating support over the past several years. This is mitigated to some degree by the ability to use Section 5309 Capital Investment Grants and Loans, Section 5307 Urbanized Area Formula Grants, as well as other funds such as those providing transit to the elderly and disabled, for certain preventive maintenance expenditures as well, more broadly defined under TEA-21 as a capital, non-operating activity. Currently, non-local operating support for transit operations is limited to temporary (i.e., three years) "demonstration" or pilot programs such as the state service development program. As a consequence, local operating funding is necessary to implement new transit services such as express bus routes.

Federal Planning Funding

Although it is possible to use Federal Section 5307 Urbanized Area Formula Grants funding for planning, the primary source of Federal transit planning assistance is the Section 5303 Metropolitan Planning Program. The Transportation Community and System Preservation (TCSP) Pilot Program can also be used for this purpose.

Section 5303 FTA Metropolitan Planning Program and FHWA Transportation Planning Funds (PL-112)

The Broward County Metropolitan Planning Organization (MPO) is the grantee for all dedicated Federal metropolitan transportation planning funds in the county. Funding is applied to specific studies, to data collection efforts, or general overhead and administrative costs of the MPO.

The FTA and FHWA together distribute approximately \$260 million annually nationwide to metropolitan areas through the states on a formula based primarily upon population, with an 80/20 matching funds requirement. During fiscal year 2003, Florida received approximately \$17 million in Section 5303 and PL-112 funds. The Broward County Metropolitan Planning Organization receives between \$1 and \$2 million from Section 5303 and PL 112 funds annually.

Section 1221 The Transportation Community and System Preservation (TCSP) Pilot Program

The Transportation Community and System Preservation (TCSP) program is available on a discretionary basis for land-use planning intended to increase transportation efficiency or access to jobs. These initiatives are intended to have positive effects on the environment by promoting transit-oriented development (TOD). Section 1221 is a relatively small program; the Federal government disburses approximately \$25 million annually on a discretionary basis of USDOT staff. However, no local match is required. Competition for Section 1221 funding is considerable. The Federal Transit Administration (FTA) awards TCSP funds directly to specific projects. Broward County has recently received a TCSP grant through the South Florida Regional Planning Council (SFRPC) for master planning of the U.S. 441 corridor. Section 1221 funds could be pursued to promote TOD in the vicinity of the Millennium Mall transfer hub or the Downtown Hollywood Neighborhood Transit Center, although other funding sources may be more realistic.

Federal ITS Funding

ITS improvements are eligible for funding from a wide variety of sources including the National Highway System (NHS), STP, CMAQ, and ITS Integration Program funds. ITS Integration Program funds have been available through TEA-21 on an annual basis as a congressional appropriations earmark. The intent of the ITS Integration Program is to accelerate the integration and interoperability of ITS in metropolitan areas. Priority projects must demonstrate improved transportation efficiency, promote safety, increase traffic flow, reduce emissions, or promote tourism. The Federal share payable from ITS Integration Program funds is not to exceed 50 percent; however, the total federal share (ITS plus other federal-aid funds) may go as high as 80 percent. During fiscal year 2003, \$85 million was appropriated nationally under the ITS Integration Program.

It is expected that SAFETEA will build upon the ITS Integration Program offered through TEA-21 by implementing the ITS Performance Incentive Program. However, Congressional approval for SAFETEA has yet to be secured. The purpose of the ITS Performance Incentive Program is to provide states with financial incentives to support the deployment and integration of intelligent transportation systems based on the performance of these systems in reducing traffic congestion, improving transportation system reliability, providing better service to users of the highway system, and improving safety and security. The ITS Performance Incentive Program is expected to be a formula-based program phased in over three years. Until the formula is established, funds will be apportioned to the states according to the National Highway System (NHS) formula. National funding expectations are approximately \$135 million with a payable Federal share of 80 percent of a project's cost.

Hollywood/Pines Boulevard strategies that would be candidates for Federal ITS funds include upgrading communications networks, signal systems, traveler information systems at multimodal facilities, and ITS field devices along the corridor (i.e., CCTV cameras, dynamic message signs, travel speed monitoring devices, and trailblazers). However, under the current formula, which is based on the NHS formula, specific projects along Hollywood/Pines Boulevard would likely

need to be combined with other projects around the urbanized area since Hollywood/Pines Boulevard is not part of the National Highway System.

Summary of Federal Funding

Approximate Federal funds devoted to Florida and to the Fort Lauderdale/Hollywood/Pompano urbanized area during fiscal year 2003 are presented in Table 54.

Table 54. Federal Transportation Funds Apportioned in Fiscal Year 2003

Program Fund	Florida (\$ million)	Fort Lauderdale/ Hollywood/ Pompano (\$ million)
Surface Transportation Program	\$262	\$19
STP Transportation Enhancement Activities	\$35	\$1.9
STP Hazard Elimination	\$35	\$1.9
Section 5309 Capital Grants Program	\$50	\$3 ^(A)
Section 5307 Urbanized Area Formula Grants Program	\$140	\$25
Section 5307 Transit Enhancements	\$1.4	\$0.25
Section 5303 Metropolitan Planning Program	\$13.3	\$1.0 - 2.0
PL-112 Transportation Planning Funds	\$3.9	
Section 1221 Transp. Community and Sys. Preservation	varies ^(B)	

Notes:

^(A) – An additional \$13 million of Section 5309 funding was awarded to Tri-Rail under the fixed-guideway apportionment.

^(B) – Section 1221 funds are not awarded through a formula-based system; therefore, funding level is dependent on applications chosen at the discretion of the USDOT.

State/Local Funding

The State of Florida has two principal sources of funding that can be considered for the Hollywood/Pines Boulevard Multimodal Corridor Study strategies including the discretionary grant programs and the State Infrastructure Bank. Broward County has the ability to levy sales, property, and fuel taxes for funding transportation projects.

In the past, the Transportation Outreach Program (TOP) was dedicated to funding high priority transportation projects and was considered a funding source for some local transportation projects including the Port Everglades Seaport Security project. The State of Florida had budgeted \$100 million annually to the TOP. However, the Florida legislature recently repealed the Transportation Outreach Program and the \$100 million associated with TOP was assigned to the Strategic Intermodal System (SIS) program. It is unlikely that the SIS program will be a significant source of funding for strategies identified in the Hollywood/Pines Boulevard Multimodal Corridor Study. The short link of Hollywood Boulevard between I-95 and the Hollywood Tri-Rail Station is considered part of the SIS and could be eligible for SIS funding.

Discretionary Grant Programs

Three discretionary grant programs are currently offered by FDOT for multimodal funding assistance including the Park and Ride Lot Program, the Public Transit Service Development Grant Program, and the Intermodal Development Program.

The Park and Ride Lot Program provides for the purchase and/or leasing of private land for the construction of park and ride lots or the promotion of these lots. This program is an integral part of the commuter assistance program efforts to encourage the use of transit, carpools, vanpools, and other high occupancy modes. Eligible costs include planning, design, right of way acquisition, engineering, marketing, and construction of park and ride lots. This funding can be up to 100 percent state funds for projects. Only \$1,000,000 is available statewide from the park and ride lot program. In fiscal year 2004, FDOT District Four received \$480,000.

The Public Transit Service Development Grant Program was enacted by the Florida Legislature to provide initial funding for new transit projects. The program is selectively applied to determine whether a new or innovative technique or measure can be used to improve or expand public transit. Eligible costs include operating and capital costs. Up to one-half of the non-federal share of project costs may be awarded. Toll revenue credits may not be used as a match. Local funds or private funds may be used as a match. For projects including operating costs,

fares do not count as a match and must be deducted from the project budget. In fiscal year 2004, FDOT District Four received \$900,000.

The Intermodal Development Program provides a resource for major capital investment in fixed-guideway transportation systems, access to seaports, airports, and other transportation terminals, providing for the construction of intermodal or multimodal terminals, and to otherwise facilitate the intermodal or multimodal movement of people and goods. Intermodal Development Program funds will be allocated to FDOT districts by a formula. Projects that are eligible for funding under this program include major capital investments in public rail and fixed-guideway transportation facilities and systems that provide intermodal access and which have complied with the requirement of the Department's major capital investment policy. These include road, rail, or fixed-guideway access to, from, or between seaports, airports, and other transportation terminals. Construction of multimodal hubs and the development of dedicated bus lanes that facilitate multimodal movement are also eligible to receive Intermodal Development Program funds. In fiscal year 2004, FDOT District Four received \$2,100,000.

State Infrastructure Bank (SIB)

Florida established a State Infrastructure Bank (SIB) in June 2000 to provide loans and credits for transportation facility projects on the State Highway System. The Bank's source of funds includes a Federal component; therefore, projects must meet TEA-21 requirements and be in compliance with MPO long-range plans and short-range programs (TIP). The Bank will approve highway and transit projects.

The SIB disburses approximately \$50 to \$60 million annually. Most disbursements are short-term loans. The SIB can also assist in arranging further outside financing. The Bank appears to be obligated to disburse all available funds through 2004 to projects already approved. The SIB is a small and competitive fund. As a source of loans, SIB projects should be tied to some sort of cash flow. Both public and private projects are eligible.

New Local Funding Initiatives

Broward County's rapid growth and the associated stresses on the area's transportation infrastructure have created large funding requirements. To help address such needs, periodic attempts have been made to secure increased or new dedicated local funding resources for transportation.

Broward County has existing legislative authority to collect two additional cents per gallon of the Local Option Gas Tax with a majority vote of the County Commission. Such an increase would provide roughly \$14 million annually in added funding countywide. However, other funding sources such as a sales tax increase would most likely require voter approval. Miami-Dade County voters recently approved the People's Transportation Plan, which provides money for transportation projects through a one-half cent increase in sales tax. The People's Transportation Plan is primarily designed to fund mass transit projects, although municipalities receive funds for other transportation projects. A similar sales tax increase in Broward County could generate an additional \$60 to \$80 million for transportation projects. Other potential new local sources that may require voter approval include an increase in property tax. A one mill increase is expected to generate an additional \$70 to \$80 million annually.

Proposed Funding Strategy

The previous section described several sources of funding available from Federal, State, and local sources. The proposed funding strategy for projects identified in the Hollywood/Pines Boulevard Multimodal Corridor Study is presented in this section of the report.

The total cost of the projects identified in this study is \$25.6 million, not including long-term strategies that are being addressed in other planning efforts. Of this total, \$23.0 million are capital costs eligible for funding from Federal and local sources. Several options exist to fund the capital costs for improvements identified in this study. The most relevant funding sources for capital improvements include the following.

- Surface Transportation Program (STP)
- Section 5309 Capital Grants Program
- Section 5307 Urbanized Area Formula Grants Program
- FDOT Discretionary Grant Programs

Federal funding sources identified in this study typically cover 80 percent of a project's cost with a 20 percent local match. Therefore, approximately \$4.6 million will need to be attained from local sources to fund capital costs of projects identified in this study for which Federal funding is secured.

STP funding is the largest available source for roadway, pedestrian, and bicycle funding. The recommended Hollywood/Pines Boulevard strategies are eligible for STP funding. STP funding should be applied to the roadway and pedestrian projects developed in this study over the five-year planning horizon of this study. Broward County receives approximately \$19 million annually in STP funding. Therefore, STP funds will still be available for projects in other parts of the County.

The STP Transportation Enhancement Activities (TEA) funding is especially relevant for projects that include aesthetic improvements to transportation corridors. Establishing the bicycle path corridor along Hollywood/Pines Boulevard is a project for which TEA funds could be applied, especially the multipurpose path between the Conservation Levee and NW 155th Avenue and the Johnson Street bicycle corridor recommendation.

Funding for capital transit projects included within this study's recommendations should be requested from the Section 5309 Capital Grants Program. This includes funds for the purchase of new buses for headway reductions and the implementation of express bus service along Hollywood/Pines Boulevard. Given the limited funding available from Section 5309, other funding sources for transit projects will likely be necessary. Section 5307 Urbanized Area Formula Grants funding should be used for activities such as the implementation of bus infrastructure, bus purchases, and transit improvements at multimodal hubs. ITS technology

systems such as ATIS improvements at multimodal hubs, as well as other multimodal hub improvements such as bus bays, bus shelters, and associated infrastructure should also be sought under Section 5307.

Transit Enhancements is a mandatory one-percent subset of the Section 5307 Urbanized Area Formula Grants program. Eligible Hollywood/Pines Boulevard Multimodal Corridor Study projects for Transit Enhancements include the aesthetic treatment of “enhanced” bus shelters at primary transfer locations, bike racks at multimodal hubs, landscaping at bus shelters, ADA-accessible bus stops, and pedestrian improvements to multimodal centers.

Federal funding is expected to be used for much of the cost of implementing the proposed strategies of the Hollywood/Pines Boulevard Multimodal Corridor Study. However, if a funding shortfall arises due to the demands of projects from other portions of the County, the discretionary grant programs offered by FDOT should then be used to fund projects recommended in this study. Grant programs such as the Park and Ride Lot Program and the Intermodal Development Program could be used to fund projects needed for the development of multimodal hubs recommended in this study.

IMPLEMENTATION PROGRAM

This chapter of the report provides a plan for implementing the strategies identified in the Hollywood/Pines Boulevard Multimodal Corridor Study including a schedule and the identification of entities responsible for implementation. The implementation program accounts for the cost estimates developed for the congestion management strategies and the sources identified for securing the necessary funding for implementing the strategies.

Implementation Schedule

The congestion management system (CMS) strategies developed in this study were intended to be short-range improvements that could be implemented at a low cost relative to traditional roadway widening over a period of five years. The implementation schedule reflects the five-year horizon of this study. The ranking of congestion management strategies provided in Table 53 served as a basis for developing the implementation schedule with priority given to projects that ranked higher in the benefit/cost analysis. However, funding availability was considered in the scheduling of the recommended strategies. In addition, some low-cost projects that could be quickly implemented were advanced to provide quick project benefits, which allowed implementation activities to occur while funding was secured for larger projects.

Table 55 presents the implementation schedule for the recommended congestion management strategies for Hollywood/Pines Boulevard including the suggested order of activities and the responsible agencies. A typical list of implementation activities in sequence is provided below.

- Adoption of the strategy into the overall Broward County Congestion Management System.
- Submittal for inclusion in the Transportation Improvement Program (TIP).
- Detailed analysis (if necessary).
- Design of the improvement (if necessary).
- Implementation of the improvement.
- Monitor the operation of the improvement.

HOLLYWOOD/PINES BOULEVARD MULTIMODAL CORRIDOR STUDY

Table 55. Implementation Schedule

Mode	Strategy	Immediate		Year 1		Year 2		Year 3		Year 4		Year 5	
		Activity	Agency	Activity	Agency	Activity	Agency	Activity	Agency	Activity	Agency	Activity	Agency
Pedestrian	Sidewalk Continuity	Adoption into CMS	MPO	Include in TIP	MPO	Design Improvements	FDOT BC Engin.	Implement Improvements	FDOT BC Engin.	Maintenance Activities	Cities	N/A	
	Lighting Strategies	Adoption into CMS	MPO	Include in TIP	MPO	Identify Specific Placement	FDOT BC TPD Cities	Implement Improvements	FDOT BC PWD Cities	Begin Monitoring	BC TPD Cities	Continue Monitoring	BC TPD Cities
	Sidewalk Connections	Adoption into CMS	MPO	Include in TIP	MPO	Design Improvements	FDOT BC Engin.	Implement Improvements	FDOT BC Engin.	Maintenance Activities	Cities	N/A	
	School Crossing Improvements	Adoption into CMS	MPO	Include in TIP	MPO	Plant Hedges or Place Barrier	FDOT BC Engin.	Monitor Improvements	FDOT BC Engin.	Determine Need for Further Improvements	FDOT BC Engin.	Design Improvements (if necessary)	FDOT BC Engin.
Bicycle	Bicycle Lanes (Turnpike PD&E section)	Adoption into CMS Coordinate with FDOT	MPO FDOT	Include in FDOT PD&E	FDOT	Add to Design of Improvements	FDOT	Interchange Modification (including bicycle lanes)	FDOT	Interchange Modification (including bicycle lanes)	FDOT	Begin Monitoring	FDOT MPO
	Bicycle Lanes (McArthur HS school zone)	Adoption into CMS Coordinate with school	MPO BC	Include in TIP	MPO	Prepare Striping & Resurfacing Plans	FDOT BC Engin.	Implement / Resurface	FDOT	Begin Monitoring	FDOT BC Schools	Continue Monitoring	FDOT BC Schools
	Bicycle Lanes (NW 155 Ave to NW 83 Ave)	Adoption into CMS	MPO	Include in TIP	MPO	Prepare Striping & Resurfacing Plans	FDOT BC Engin.	Convert Paved Shoulder (NW 83 Ave to Hiatus)	FDOT	Convert Paved Shoulder (Hiatus to NW 155 Ave)	FDOT	Begin Monitoring	FDOT BC Engin.
	Bicycle Lanes (Pembroke Road east of I-95)	Adoption into CMS	MPO	Include in TIP	MPO	Prepare Striping & Resurfacing Plans	FDOT BC Engin.	Implement / Resurface	FDOT	Begin Monitoring	FDOT	Continue Monitoring	FDOT
	Multipurpose Path (NW 155 Ave to U.S. 27)	Adoption into CMS	MPO	Include in TIP	MPO	Secure Funding	FDOT MPO	Design Improvements	FDOT BC Engin.	Implement Shared Use Path (north side of Pines Blvd)	FDOT BC Engin.	Begin Monitoring Implement Shared Use Path (south side of Pines Blvd)	FDOT BC Engin.
	Bicycle Lanes / Streetscaping (Johnson Street)	Adoption into CMS	MPO	Include in TIP	MPO	Secure Funding Public Involvement	MPO City	Design Improvements	BC Engin. City	Implement Bicycle Lanes as part of corridor streetscaping	BC Engin. City	Begin Monitoring	City
	Bicycle Lanes (U.S. 441 Transit Bridge)	Adoption into CMS	MPO	To be determined by schedule for U.S. 441 Reconstruction / Transit Bridge project.									
	Bicycle Racks	Adoption into CMS	MPO	Include in TIP	MPO	Purchase Bike Racks Install at Hubs, Bus Stops	BC Engin. BC Engin.	Maintenance Activities	BC Engin.	Maintenance Activities	BC Engin.	Maintenance Activities	BC Engin.
Transit	Bus Stop Accessibility	Adoption into CMS	MPO	Include in TIP	MPO	Secure Funding	BCT FDOT	Implement Access Paths, Concrete Pads for Stops	BCT Cities	Maintenance Activities	Cities	Maintenance Activities	Cities
	Express Bus Service	Adoption into CMS	MPO	Include in TIP Include in TDP	MPO TDP	Secure Funding	MPO BCT	Develop Route and Operational Details Public Involvement	BCT	Implement Express Bus with 20-minute headways	BCT	Begin Monitoring	BCT
	Bus Benches and Trash Receptacles	Adoption into CMS	MPO	Include in TIP	MPO	Install Bus Benches and Trash Receptacles	BCT Cities	Maintenance Activities	Cities	Maintenance Activities	Cities	Maintenance Activities	Cities
	Bus Shelters	Adoption into CMS	MPO	Include in TIP	MPO	Install Bus Shelters	BCT Cities	Maintenance Activities	Cities	Maintenance Activities	Cities	Maintenance Activities	Cities
	Headway Reductions	Adoption into CMS	MPO	Include in TIP Include in TDP	MPO BCT	Secure Funding	MPO BCT	Secure Funding Public Involvement	MPO BCT	Implement 20-minute headways on Route 7	BCT	Begin Monitoring	BCT
	Far Side Bus Bays	Adoption into CMS	MPO	Include in TIP	MPO	Secure Funding	MPO	Coordinate with FDOT	MPO FDOT	Design Improvements	FDOT BCT	Implement Improvements	FDOT BCT
Multimodal	Amenities at Multimodal Hubs	Adoption into CMS	MPO	Include in TIP	MPO	Install Low-Cost Items Secure Funding for Others	BCT Cities SFRTA	Install Amenities Secure Funding	BCT Cities SFRTA	Implement Improvements	BCT Cities SFRTA	Monitor Improvements	BCT Cities SFRTA
	Enhanced Benches and Shelters	Adoption into CMS	MPO	Include in TIP	MPO	Install at Hubs and Primary Bus Stops	BCT Cities	Install at Hubs and Primary Bus Stops	BCT Cities	Maintenance Activities	BC Engin. Cities	Maintenance Activities	BC Engin. Cities
	Neighborhood Transit Centers	Adoption into CMS	MPO	Coordinate with TDP	BCT	Secure Funding Public Involvement	MPO BCT Cities	Implement Improvements	BCT BC Engin. Cities	Begin Monitoring	BCT Cities	Maintenance Activities	BC Engin. Cities
	ITS Strategies (Kiosks and ATIS)	Adoption into CMS	MPO	Include in TIP	MPO	Coordinate with Hubs and Neighborhood Transit Ctrs	MPO	Install Improvements	BCT Cities	Maintenance Activities	BCT BC Engin.	Maintenance Activities	BCT BC Engin.
	TDM Strategies	Adoption into CMS	MPO	Include in TIP	MPO	Conduct Meetings with employers, public meetings	SFCS MPO	Implement Strategies Develop Marketing Prog.	SFCS MPO	Continue Strategies Begin Monitoring	SFCS	Continue Strategies Continue Monitoring	SFCS
Roadway	Intersection Improvements	Adoption into CMS	MPO	Include in TIP	MPO	Secure Funding Detailed Analysis	MPO FDOT	Public Involvement Design Improvements	FDOT	Begin Implementation Design Improvements	FDOT BC Engin.	Continue Implementation Begin Monitoring	FDOT BC Engin.
	Access Management	Adoption into CMS	MPO	Include in TIP	MPO	Secure Funding Detailed Analysis	MPO FDOT	Public Involvement Design Improvements	FDOT	Implement Improvements	FDOT BC Engin.	Begin Monitoring	FDOT BC Engin.
	Long-Term Solutions	Adoption into CMS	MPO	To be determined by other studies.									
	ITS Strategies	Adoption into CMS	MPO	To be determined by other studies.									

Please note that some steps, such as securing funding and conducting public involvement, are listed in the implementation schedule for certain strategies in Table 55. While these steps are important for most of the strategies listed, these steps are of particular importance for certain strategies and are therefore listed in the implementation schedule. However, securing funding for the recommended improvements and providing an informative program of public involvement is important for all strategies developed in the transportation planning process.

Responsible agencies for the different portions of the implementation schedule have been identified and included in Table 55. The Broward County Metropolitan Planning Organization (MPO) will be the primary source for adoption of strategies, securing funding, public involvement, overseeing the implementation process, and monitoring the improvements to determine effectiveness. The Broward County Traffic Engineering Division and the Florida Department of Transportation (FDOT) will provide assistance in designing and implementing improvements, as well as monitoring improvements. The MPO will work with FDOT in securing state funding as many of the funding sources identified in this study are administered through FDOT. Broward County Transit (BCT) will provide assistance in planning and implementing transit improvements related to bus operations and bus stop accessibility. Municipalities will be responsible for improvements along municipal streets. In addition, municipalities are responsible for installing and maintaining bus shelters, bus benches, and trash receptacles at bus stops.

The implementation schedule should be a dynamic document, not a static one. Flexibility of the implementation schedule is important depending on funding status and project priorities. The implementation schedule should be periodically reevaluated to determine the necessity of changing the schedule to meet changing transportation needs.

Implementation Monitoring Plan

A subcommittee of the Technical Advisory Committee (TAC) for the Hollywood/Pines Boulevard Multimodal Corridor Study should be formed to periodically review the progress of

the implementation program. The purpose of this “monitoring subcommittee” is to (1) ensure that sufficient progress is being made toward the implementation of recommended strategies, (2) recognize opportunities for reordering of priorities to meet a more efficient schedule, and (3) maintain a sense of ownership and motivation regarding the plan and its eventual implementation.

The recommended structure of the “monitoring subcommittee” includes a representative from the Broward County MPO to chair the committee, another representative from the Broward County MPO who is involved in the TIP process, a representative from FDOT to monitor funding and project design, a representative from BCT to monitor transit improvements, and one representative from each of the two municipalities along the study corridor – Hollywood and Pembroke Pines.

The first meeting of the “monitoring subcommittee” would likely occur two years from completion of the study. This would allow time for projects to become included in countywide transportation planning procedures during Year 1 and detailed analysis and design to be conducted during Year 2. In addition, several smaller-scale projects such as constructing bus shelters, installing bike racks, and constructing short segments of sidewalks could be completed during these first two years of the implementation schedule. The first meeting of the “monitoring subcommittee” could ensure that these activities have been progressing. Subsequent meetings would likely occur on an annual basis to coordinate project schedules and evaluate the progress of the implementation program.

PUBLIC INVOLVEMENT

At the outset of the Hollywood/Pines Boulevard Multimodal Corridor Study, public involvement was given a high priority within the structure of the study. Dynamic Perceptions, Inc., serving as a sub-consultant to Kimley-Horn and Associates, Inc., developed a strategy to solicit input from stakeholders and maximize public involvement. Stakeholders were defined as residents, business owners, elected officials, and civic activists in the impacted cities of Pembroke Pines and Hollywood. The budget for the public involvement initiatives was almost 10 percent of the entire study budget.

The public involvement initiatives began in November 2003 and continued through June 2004. The public involvement process began with a series of meetings with individual stakeholder groups, held at public buildings and community centers. Both traditional and non-traditional methods including mailings, flyers, e-mail, and telephone calls were used to promote the meetings in order to increase participation and attendance. Materials explaining the project and process were developed and made available to citizen groups, elected officials, and business owners. The materials also outlined how stakeholders could provide input if they were unable to attend meetings. An example of a two-page information sheet developed for the public involvement process of this study is included in Appendix F.

Following each meeting, stakeholder groups were also provided with a newsletter article on the project for publication in newsletters serving various communities in Hollywood and Pembroke Pines.

City of Hollywood

Based on a recommendation from the Hollywood representative on the Technical Advisory Committee, the public involvement initiatives in Hollywood began with meetings with residents and business owners. It was felt that a meeting with elected officials should be held at the conclusion of meetings with other stakeholders in order to give the elected officials an overview

of what had taken place. In addition to homeowners, business owners and elected officials, stakeholders in Hollywood included the Citizens Transportation Committee.

Citizens Transportation Committee

A meeting with the Hollywood Citizens Transportation Committee was held on November 13, 2003, at City Hall. A report of the meeting is provided in Appendix G. This group consists of residents who serve on a committee that advises elected officials and City staff on transportation related issues. Freddie Vargas, project manager for KHA, gave a PowerPoint presentation to the group outlining significant findings specific to the Hollywood area. Questions were solicited during the meeting. Following the meeting, members of the committee were provided with a copy of the PowerPoint presentation.

General Public Meeting

A public meeting for Hollywood residents and business owners was held on December 2, 2003. A direct mail letter was sent to all homeowners' association presidents encouraging them to attend the meeting and to also bring members of the association as well as members of the board of directors. Follow-up calls were made to each homeowners association president following the mailing. To reach business owners, a flyer was developed and posted at the Hollywood Chamber of Commerce. The Hollywood Chamber also sent an invitation via electronic mail to 900 chamber members. A PowerPoint presentation was given at the meeting and questions were solicited. Participants also received a Questions and Answers Handout during the meeting. A report of the meeting is provided in Appendix G.

Hollywood Council of Civic Associations

As a follow-up to the meeting with the general public on December 2, 2003, a meeting was held with the Hollywood Council of Civic Associations on December 15, 2003. This group consists of presidents of the homeowners associations in Hollywood. A PowerPoint presentation was given at this meeting and questions solicited. Attendees were asked to discuss the

Hollywood/Pines Boulevard project at upcoming meetings. Attendees received the Questions and Answers Handout and a copy of the PowerPoint presentation, which the president of the organization distributed to members via e-mail. A report of the meeting is provided in Appendix G.

Hollywood City Commission

A presentation to the Hollywood City Commission occurred on May 19, 2004. Mr. Freddie Vargas, project manager for KHA, gave a PowerPoint presentation that included study findings and recommendations. Questions were solicited and the elected officials discussed several items including bus stops at Young Circle, the possibility of expanding the Tri-Rail Station, concerns regarding access management proposals at 62nd Avenue. A report of the meeting is provided in Appendix G.

Hollywood Homeowners Association Newsletters

In addition to the public involvement meetings, homeowners associations were asked to publish an article on the Hollywood/Pines Boulevard Multimodal Corridor Study in newsletters serving various neighborhoods and communities. The following associations subsequently published the article.

<u>Association</u>	<u>Distribution</u>
Beverly Park Civic Association	2,400 members
Boulevard Heights Homeowners Association	5,000 members
Driftwood Civic Association	5,000 members
Emerald Hills Homeowners Association	4,000 members
Hollywood Hills Civic Association	6,000 members
Hollywood Lakes Section Civic Association	6,000 members

Survey of Presidential Circle Office Employees

To further assist the project team with data relative to pedestrian traffic, an observational survey of lunch hour traffic around Presidential Circle was completed. From field observations, there was no significant pedestrian or bicycle traffic attempting to cross traffic lanes from the outside of Presidential Circle to the building, inside the circle.

City of Pembroke Pines

The public involvement initiatives began in Pembroke Pines in April 2004. The Pembroke Pines representative on the Technical Advisory Committee felt that meetings should not be held with Pembroke Pines residents until after the study data had been gathered and recommendations developed. The reason for this approach was that several studies on traffic congestion had been undertaken or were about to be undertaken in Pembroke Pines by other governmental agencies. The representative felt that Pembroke Pines residents were disillusioned with the perception that nothing had resulted from prior studies. In Pembroke Pines, stakeholders were defined as residents, business owners, and elected officials. Because there is no central organization for all homeowners associations, select homeowners associations were targeted for presentations based on the number of members and the geographic location of the neighborhood within the City. The following meetings took place in Pembroke Pines.

Pembroke Pines City Commission

A presentation was given to the members of the Pembroke Pines City Commission on April 6, 2004. Mr. Freddie Vargas, project manager for KHA, gave a PowerPoint presentation that included study findings and recommendations. A report of the meeting is provided in Appendix G. Questions were solicited and the elected officials said they were satisfied with the study recommendations.

Century Village Executive Board Meeting

Century Village, the largest retirement community in Broward County, was contacted and asked for permission to give a presentation on the Hollywood/Pines Boulevard Multimodal Corridor Study at an upcoming board meeting of the 17 homeowners associations presidents. Permission was denied due to a full agenda. It was agreed that a copy of the presentation with the study information would be provided to association presidents. They agreed to distribute the materials at the Board meeting. This community represents more than 17,000 residents who are both vocal and active in community affairs.

Pembroke Lakes Homeowners Association

A presentation was given at the Pembroke Lakes Homeowners Association, which represents 1,700 homes in Pembroke Pines. The topic of the multimodal corridor study was publicized in the association's newsletter one month prior to the presentation and the meeting announcement was listed in the Sun-Sentinel newspaper. As a result, the meeting was well attended and residents exhibited a keen interest in the project and in traffic issues concerning Pembroke Pines. Copies of the Questions and Answers Handouts were given to attendees and additional copies were made available for future meetings. A report of the meeting is provided in Appendix G.

Silver Lakes Homeowners Association

The Silver Lakes Homeowners Association, representing 3,000 households in the western portion of the study area, was contacted and a presentation was scheduled for June 7, 2004. However, the association president canceled the presentation two weeks prior to the meeting. He stated that the association had a new issue to discuss and that there would be no time for the Hollywood/Pines Boulevard Multimodal Corridor Study presentation. He requested copies of the presentation, which were distributed to association presidents.

Pembroke Pines Homeowners Association Newsletters

In addition to the public involvement meetings, homeowners associations were asked to publish an article on the Hollywood/Pines Boulevard Multimodal Corridor Study in newsletters serving various neighborhoods and communities. The following associations subsequently published the article.

<u>Association</u>	<u>Distribution</u>
Pembroke Pines Century Village	17,000
Silver Lakes/Pines Property Management	3,000

Sun-Sentinel Newspaper Media

An article on the Hollywood/Pines Boulevard Multimodal Corridor Study was published in the Sun-Sentinel newspaper following the presentation to the Pembroke Pines City Commission. The Sun-Sentinel is the major daily newspaper serving Broward County, with a circulation of 400,000.

CONCLUSION

The Hollywood/Pines Boulevard Multimodal Corridor Study was undertaken by the Broward County Metropolitan Planning Organization (MPO) to develop a congestion management system (CMS) plan to enhance travel in the corridor for four primary modes of travel (pedestrian, bicycle, transit, and roadway) plus a multimodal section to integrate efficient transfers between modes into the transportation network.

The existing conditions analysis for this study determined that transportation conditions are deficient in several locations. Notable deficiencies include lack of continuous bicycle facilities, inadequate bus stop accessibility, and roadway travel delays along various congested areas of Hollywood/Pines Boulevard. Proposed transportation projects already contained within short-range transportation plans and programs will likely provide some benefit but are not sufficient to provide consistent travel mobility throughout the corridor. Some long-range transportation planning efforts are examining long-term solutions at certain locations. However, critical needs were identified in this study (1) to develop short-term solutions that can provide travel benefits while larger-scale transportation improvements are being developed and (2) to encourage alternatives to the single occupant automobile in order to provide sustainable travel mobility.

The Hollywood/Pines Boulevard Multimodal Corridor Study creates a mobility vision for an important travel corridor in southern Broward County. Recommended strategies range from filling in gaps in the sidewalk network to providing a continuous bicycle trail to developing infrastructure at multimodal hubs (key transfer locations) for enhanced integration of transit and other alternative travel modes into the transportation network. Bus stop infrastructure improvements were identified by location to improve the level of comfort and perception associated with bus transit. Intersection improvements were also identified to reduce delay and enhance safety. The implementation program developed in this study provides guidance for agencies to follow in implementing strategies over the next five years.

APPENDIX A:

Pedestrian Level of Service Calculations

PEDESTRIAN LEVEL OF SERVICE CALCULATIONS

	Intersection Street	Location	sidewalk	EOP to sidewalk	width outside lane	speed limit	paved shoulder	on-street parking	bike lane width	width of shoulder +bike lane	%OSP	sidewalk presence coeff.	Volume of 15 min peak AM	Volume of 15 min peak PM	total through lanes	avg. running speed AM	avg. running speed PM	barrier coeff	PED LOS # AM	L.O.S. AM	PED LOS # PM	L.O.S. PM
North Side	Dixie Highway	E of int.	13	0	15	25	0	15		0	1	2.1	142	139	1	25	25	1	2.986109	C	2.958809	C
	Dixie Highway	W of int.	13	0	11	35	0	16		0	1	2.1	142	139	2	35	35	1	2.701352	C	2.687702	C
	City Hall Circle	around the circle	15	0	12	35	0		3	3		1.5	578	527	2	35	35	1	4.717459	E	4.485409	D
	City Hall Circle	W of cir.	13	0	10.5	35	0	8	3.5	3.5	1	2.1	578	527	2	35	35	1	4.593039	E	4.360989	D
	28th Ave		8	0	10.5	35	0	8	0	0	1	3.6	578	527	3	35	35	1	3.77704	D	3.62234	D
	I-95 (Tri-Rail Station)		6	6	13	35	0			0		4.2	500	498	3	35	35	1	3.402428	C	3.396361	C
	W of Tri-Rail		6	9	13	35	0			0		4.2	500	498	3	35	35	1	3.321813	C	3.315746	C
	Park Rd		5	9	11	35	0			0		4.5	452	641	3	35	35	1	3.304975	C	3.878275	D
	35th Ave		10	5	11	35	0			0		3.0	452	641	3	35	35	1	3.207826	C	3.781126	D
	N Circle Dr. (E)		8	10	11.5	35	0			0		3.6	452	641	3	35	35	1	3.098124	C	3.671424	D
	N Circle Dr. (W)		10	9	11	35	0			0		3.0	452	641	3	35	35	1	3.105467	C	3.678767	D
	44th Ave		10	8	11	35	0	8		0	1	3.0	288	491	3	35	35	1	2.627801	C	3.243568	C
	48th Ave		10	9	11	35	0			0		3.0	288	491	3	35	35	1	2.608001	C	3.223767	C
	SR 7 (US 441)		6	0	13	35	0			0		4.2	346	471	3	35	35	1	3.114388	C	3.493555	C
	62nd Ave	W of int.	6	9	13	35	0			0		4.2	354	495	3	35	35	1	2.878946	C	3.306646	C
	64th Way (McArthur High School)	W of int.	5	2	13	40	0		4	4		4.5	365	655	3	40	40	1	3.220305	C	4.099972	D
	McArthur Pkwy		7	0	11.5	40	0		4	4		3.9	418	722	3	40	40	1	3.343207	C	4.26534	D
	74th Terr		5	2	13	40	0		4	4		4.5	374	548	3	40	40	1	3.247605	C	3.775405	D
	83rd Ave		6	36	12.5	45	4.5		0	4.5	1	4.2	374	548	3	45	45	1	2.639827	C	3.167627	C
	Douglas		7	36	11	45	0		5	5		3.9	346	836	3	45	45	1	2.537746	C	4.02408	D
	Hiatus rd		6.5	42	12	45	3.5			3.5		4.1	509	633	3	45	45	1	2.964056	C	3.340189	C
	114th Ave		6	63	12	45	3.5			3.5		4.2	346	539	3	45	45	1	2.208425	B	2.793859	C
	Flamingo Rd		7	25	12	45	5			5		3.9	405	663	4	45	45	1	2.57506	C	3.16201	C
	I-75		7	38	11	45	4			0		3.9	478	896	3	45	45	1	2.985489	C	4.253422	D
	Westfork Plaza		7	36	11.5	45	6			6		3.9	476	856	3	45	45	1	2.909076	C	4.061742	D
	Dykes Rd		7	37	11.5	50	3			3		3.9	333	707	3	50	50	1	2.696078	C	3.830544	D
	196th		7.5	50	11	50	5			5		3.8	397	462	2	50	50	1	3.27417	C	3.56992	D
	208th Ave		7.5	32	12	50	3			3		3.8	397	462	2	50	50	1	3.550957	D	3.846707	D
South Side	US 27		0	0	12	50	3			0		6.0	143	147	2	50	50	1	4.646979	E	4.665179	E
	208th Ave		6	70	12	50	3.5			3.5		4.2	381	279	2	50	50	1	3.002253	C	2.538153	C
	198th Terr		0	0	12	50	3.5			0		6.0	381	279	2	50	50	1	5.729879	F	5.265779	E
	196th Ave			0	12	50	0			0		6.0	381	279	3	50	50	1	5.152029	E	4.842629	E
	St. Edward Church access rd.		7	38	12	50	3.5			3.5		3.9	381	279	3	50	50	1	2.810909	C	2.501509	C
	186th Ave		7	35	11.5	50	3.5			3.5		3.9	381	279	3	50	50	1	2.865271	C	2.558711	C
	168th Ave		6	38	11.5	50	3.5			3.5		4.2	608	520	3	50	50	1	3.539627	D	3.272694	C
	Dykes Rd		0	0	11.5	50	4			0		6.0	608	520	3	50	50	1	5.892841	F	5.625908	F
	155th Grand Palm Dr		5	0	11	50	0			0		4.5	1031	628	3	50	50	1	5.863393	F	4.64096	E
	145th Ave		6	14	12	45	0			0		4.2	677	775	4	45	45	1	3.565461	D	3.788411	D
	136th Ave		5	27	12	45	5			5		4.5	677	775	4	45	45	1	3.24449	C	3.46744	C
	129th Ave		6	27	12	45	5			5		4.2	655	905	4	45	45	1	3.145583	C	3.714333	D
	Flamingo Rd	W of int., across from	6	66	12	45	5			5		4.2	784	886	4	45	45	1	2.890344	C	3.122394	C
	Flamingo Rd	int.	7	78	12	45	5			5		3.9	784	886	3	45	45	1	3.334502	C	3.643902	D
	Flamingo Rd	1st driveway E of int.	8	38	12	45	4			4		3.6	565	698	3	45	45	1	3.149026	C	3.55246	D
	Palm Ave		8	29	12	45	3			3		3.6	568	632	3	45	45	1	3.316133	C	3.510267	D
	83rd Ave		9	22	12	45	0		4	4	0	3.3	564	848	3	45	45	1	3.39316	C	4.254627	D
	Marketplace access rd	W of University	5.5	12	12	45	0		4	4		4.4	448	533	3	45	45	1	3.366958	C	3.624792	D
	University Dr		5	0	12	45	0		4	4		4.5	448	533	3	45	45	1	3.734185	D	3.992019	D
	access rd (Hooters)	E 300 from University	4.5	2	12	45	0		4	4		4.7	448	533	3	45	45	1	3.720708	D	3.978541	D
	McArthur HS parking lot entrance	W of 64th Way	6	0	13.5	40	0			0		4.2	470	431	3	40	40	1	3.624558	D	3.506258	D
	62nd Ave		6	0	13.5	35	0			0		4.2	494	490	3	35	35	1	3.547358	D	3.532225	D
	SR 7 (US 441)		9	5	11.5	35	0			0		3.3	540	442	3	35	35	1	3.469434	C	3.172167	C
	access rd to vacant mall	E 1000 from SR 7	10	8	11.5	35	0			0		3.0	540	442	3	35	35	1	3.384738	C	3.087472	C
	58th Ave	E of int.	4	14.5	11	35	0			0		4.8	288	491	3	35	35	1	2.745553	C	3.361319	C
	56th Ave		10	8.5	11	35	0			0		3.0	389	478	3	35	35	1	2.620338	C	3.236105	C
	Presidential Circle		10	8.5	11	30	0			0		3.0	389	478	3	30	30	1	2.796705	C	3.066672	C
	Presidential Circle	E of Circle	10	8.5	11	35	0			0		3.0	389	478	3	35	35	1	2.926705	C	3.196672	C
	emergency signal	E 350 from 35th Av	5.5	6	11	35	0			0		4.4	389	478	3	35	35	1	3.160233	C	3.4302	C
	Entrada Dr		5	8.5	10.5	35	0			0		4.5	389	478	3	35	35	1	3.143105	C	3.413072	C
	I-95	after NB E exit merge	13	0	11	35	0			0		2.1	576	543	3	35	35	1	3.808846	D	3.708746	D
	28th Ave		13	0	11	35	0			0		2.1	579	575	2	35	35	1	4.696096	E	4.677896	E
	City Hall Circle	E of Circle	13	0	12	35	0	16		0		2.1	579	575	2	35	35	1	4.664455	E	4.646255	E
	Dixie Hwy		13	0	14	25	0			0		2.1	149	203	1	25	25	1	3.084969	C	3.576369	D

APPENDIX B:

Bicycle Level of Service Calculations

BICYCLE LEVEL OF SERVICE CALCULATIONS

	Intersecting Street	Location	sidewalk	EOP to sidewalk	outside lane	speed limit	paved shoulder	on-street parking	bike lane width	Volume of 15 min peak AM	Volume of 15 min peak PM	total through lanes	speed factor	% of heavy vehicles	pavement condition rating	effective width of outside lane	AADT	eff. width as a fcn of volume	%OSP	bike LOS # (AM)	AM L.O.S.	bike LOS # (PM)	PM L.O.S.
North Side	Dixie Highway	E of int.	13		15	25		15		142	139	1	2.61271	0.01	3	5	14400	15	1	4.566184	E	4.555358	E
	Dixie Highway	W of int.	13		11	35		16		142	139	2	3.843045	0.03	3	1	14400	11	1	5.016511	E	5.005685	E
	Hollywood City Hall Circle	around the circle	15		12	35			3	578	527	2	3.843045	0.03	3	15	14400	15		4.608211	E	4.561378	E
	Hollywood City Hall Circle	W of cir.	13		10.5	35		8	3.5	578	527	2	3.843045	0.03	3	14	14400	14		4.753211	E	4.706378	E
	28th Ave		8		10.5	35		8	ends	578	527	3	3.843045	0.03	3	10.5	48500	10.5		4.97639	E	4.929557	E
	I-95 (Tri-Rail Station)		6	6	13	35				500	496	3	3.843045	0.02	3	13	48500	13		4.409178	D	4.407146	D
	W of Tri-Rail		6	9	13	35				500	496	3	3.843045	0.02	3	13	50000	13		4.409178	D	4.407146	D
	Park Rd		5	9	11	35				452	641	3	3.843045	0.02	3	11	50000	11		4.598008	E	4.775127	E
	35th Ave		10	5	11	35	1			452	641	3	3.843045	0.03	3	12	50000	11		4.682973	E	4.860092	E
	N Circle Dr. (E)		8	10	11.5	35				452	641	3	3.843045	0.03	3	11.5	50000	11.5		4.741723	E	4.918842	E
	N Circle Dr. (W)		10	9	11	35				452	641	3	3.843045	0.03	3	11	50000	11		4.797973	E	4.975092	E
	44th Ave		10	8	11	35		8		288	491	3	3.843045	0.03	3	1	48000	11	1	5.169457	E	5.439934	E
	48th Ave		10	9	11	35				288	491	3	3.843045	0.03	3	11	51000	11		4.569457	E	4.839934	E
	SR 7 (US 441)		6		13	35				346	471	3	3.843045	0.03	3	13	53000	13		4.422481	D	4.578849	E
	62nd Ave	W of int.	6	9	13	35				354	495	3	3.843045	0.03	3	13	53000	13		4.43407	D	4.604047	E
	64th Way (McArthur High School)	W of int.	5	2	13	40			4	365	655	3	4.165221	0.03	3	17	53000	17		3.959844	D	4.256306	D
	McArthur Pkwy		7		11.5	40			4	418	722	3	4.165221	0.03	3	15.5	53000	15.5		4.272335	D	4.549432	E
	74th Terr		5	2	13	40			4	374	548	3	4.165221	0.05	3	17	51000	17		4.459235	D	4.652919	E
	83rd Ave		6	36	12.5	45	4.5		ends	374	548	3	4.415119	0.03	3	17	56000	12.5		4.057177	D	4.251401	D
	Douglas		7	36	11	45	0		5	346	836	3	4.415119	0.02	3	16	56000	16		3.953532	D	4.400802	D
	Hiatus rd		6.5	42	12	45	3.5			509	633	3	4.415119	0.02	3	15.5	56000	12		4.227989	D	4.338526	D
	114th Ave		6	63	12	45	3.5			346	539	3	4.415119	0.02	3	15.5	59000	12		4.032282	D	4.257024	D
	Flamingo Rd		7	25	12	45	5			405	663	4	4.415119	0.02	3	17	66000	12		3.722504	D	3.972398	D
	I-75		7	38	11	45	4			478	896	3	4.415119	0.05	3	15	63500	11		5.018375	E	5.336938	E
	Westfork Plaza		7	36	11.5	45	6			476	856	3	4.415119	0.05	3	17.5	66000	11.5		4.609999	E	4.907533	E
	Dykes Rd		7	37	11.5	50	3			333	707	3	4.619301	0.05	3	14.5	51500	11.5		5.002613	E	5.384328	E
	196th		7.5	50	11	50	5			397	462	2	4.619301	0.04	3	16	32500	11		4.788589	E	4.865464	E
	208th Ave		7.5	32	12	50	3			397	462	2	4.619301	0.04	3	15	32500	12		4.943589	E	5.020464	E
South Side	US 27				12	50	3			342	75	2	4.619301	0.04	3	15	8500	12		4.867982	E	4.098699	D
	208th Ave		6	70	12	50	3.5			381	279	2	4.619301	0.04	3	15.5	8500	12		4.846482	E	4.688507	E
	198th Terr	ends			12	50	3.5			381	279	2	4.619301	0.04	3	15.5	8500	12		4.846482	E	4.688507	E
	196th Ave				12	50				381	279	3	4.619301	0.04	3	12	8500	12		5.122161	E	4.964186	E
	St. Edward Church access rd.		7	38	12	50	3.5			381	279	3	4.619301	0.04	3	15.5	32500	12		4.640911	E	4.482936	D
	186th Ave		7	35	11.5	50	3.5			381	279	3	4.619301	0.04	3	15	32500	11.5		4.717161	E	4.559186	E
	168th Ave		6	38	11.5	50	3.5			608	520	3	4.619301	0.04	3	15	32500	11.5		4.954121	E	4.874853	E
	Dykes Rd	ends			11.5	50	4			608	520	3	4.619301	0.04	3	15.5	51500	11.5		4.877871	E	4.798603	E
	155th Grand Palm Dr		5		11.5	50				1031	628	3	4.619301	0.05	3	11.5	51500	11.5		5.965595	F	5.714253	F
	145th Ave		6	14	12	45				677	775	4	4.415119	0.03	3	12	69500	12		4.937724	E	5.006266	E
	136th Ave		5	27	12	45	5			677	775	4	4.415119	0.02	3	17	69500	12		3.982992	D	4.051535	D
	129th Ave		6	27	12	45	5			655	905	4	4.415119	0.02	3	17	69500	12		3.966243	D	4.130156	D
	Flamingo Rd	W of int., across from P	6	66	12	45	5			784	886	4	4.415119	0.02	3	17	66000	12		4.057388	D	4.119398	D
	Flamingo Rd	int.	7	78	12	45	5			784	886	3	4.415119	0.02	3	17	66000	12		4.203243	D	4.265253	D
	Flamingo Rd	1st driveway E of int.	8	38	12	45	4			565	698	3	4.415119	0.02	3	16	59000	12		4.202158	D	4.309335	D
	Palm Ave		8	29	12	45	3			568	632	3	4.415119	0.02	3	15	59000	12		4.359843	D	4.413975	D
	83rd Ave		9	22	12	45			4	564	848	3	4.415119	0.05	3	16	59000	16		4.947255	E	5.154023	E
	Marketplace access rd	W of University	5.5	12	12	45			4	448	533	3	4.415119	0.05	3	16	56000	16		4.830512	E	4.918592	E
	University Dr		5		12	45			4	448	533	3	4.415119	0.02	3	16	51000	16		4.084518	D	4.172598	D
	access rd (Hooters)	E 300 from University	4.5	2	12	45			4	448	533	3	4.415119	0.03	3	16	51000	16		4.31425	D	4.40233	D
	McArthur HS parking lot entrance	W of 64th Way	6		13.5	40			ends	470	431	3	4.165221	0.05	3	13.5	51000	13.5		5.108823	E	5.064904	E
	62nd Ave		6		13.5	35				494	490	3	3.843045	0.03	3	13.5	51000	13.5		4.536772	E	4.53265	E
	SR 7 (US 441)		9	5	11.5	35				540	442	3	3.843045	0.03	3	11.5	53000	11.5		4.831912	E	4.73038	E
	access rd to vacant mall	E 1000 from SR 7	10	8	11.5	35				540	442	3	3.843045	0.03	3	11.5	41000	11.5		4.831912	E	4.73038	E
	58th Ave	E of int.	4	14.5	11	35				288	491	3	3.843045	0.03	3	11	41000	11		4.569457	E	4.839934	E
	56th Ave		10	8.5	11	35				288	491	3	3.843045	0.03	3	11	41000	11		4.569457	E	4.839934	E
	Presidential Circle		10	8.5	11	30				389	478	3	3.388965	0.03	3	11	38000	11		4.566469	E	4.670927	E
	Presidential Circle	E of Circle	10	8.5	11	35				389	478	3	3.843045	0.04	3	11	38000	11		4.938316	E	5.042774	E
	emergency signal	E 350 from 35th Ave	5.5	6	11	35				389	478	3	3.843045	0.03	3	11	38000	11		4.721871	E	4.826329	E
	Entrada Dr		5	8.5	10.5	35				389	478	3	3.843045	0.02	3	10.5	50000	10.5		4.575656	E	4.680114	E
	I-95	after NB E exit merges	13		11	35				576	543	3	3.843045	0.02	3	11	48500	11		4.720918	E	4.691006	E
	28th Ave		13		11	35			3.5	579	575	2	3.843045	0.03	3	14.5	48500	14.5		4.682838	E	4.679323	E
	Hollywood City Hall Circle	E of Circle	13		12	35			3.5	579	575	2	3.843045	0.03	3	15.5	48500	15.5		4.532838	E	4.529323	E
	Dixie Highway		13		14	25		16		214	282	1	2.61271	0.01	3	4	14400	14	1	4.819129	E	4.959026	E

APPENDIX C:

Travel Time Run Data

Eastbound AM Peak Travel Time Runs

Control Point	Miles	Run Number										Average Travel Time (sec)	Average Travel Speed (MPH)	Average Delay (sec)	Number of Signals	Signals Per Mile	Class	LOS
		1		2		3		4		5								
		Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)							
US 27			0				0				0			0.0				
BETWEEN	1.4	0:02:07		0:02:03		0:02:02		0:01:45		0:01:50		0:01:57	42.9		1	0.71	1	A
SW 196TH AVENUE			58		0		0		0		0		11.6					
BETWEEN	0.7	0:01:13		0:00:49		0:00:56		0:00:50		0:00:10		0:00:48	52.9		1	1.43	1	A
SW 186TH AVENUE			0		0		48		0		0		9.6					
BETWEEN	0.3	0:00:30		0:00:23		0:01:19		0:00:25		0:00:17		0:00:35	31.0		1	3.33	2	B
SW 184TH AVENUE			0		57		0		27		0		16.8					
BETWEEN	0.5	0:00:45		0:01:53		0:00:39		0:01:16		0:00:33		0:01:01	29.4		1	2.00	2	B
SW 178TH AVENUE			39		0		0		0		0		7.8					
BETWEEN	0.5	0:02:32		0:00:47		0:00:46		0:00:43		0:00:51		0:01:08	26.5		1	2.00	2	C
SW 172ND AVENUE			51		0		110		0		120		56.2					
BETWEEN	0.8	0:02:14		0:01:48		0:03:37		0:01:06		0:03:09		0:02:23	20.2		3	3.75	2	D
DYKES ROAD			51		113		141		0		176		96.2					
BETWEEN	0.8	0:02:37		0:04:02		0:03:29		0:00:56		0:05:12		0:03:15	14.8		2	2.50	2	E
NW 155TH AVENUE / GRAND PALMS DRIVE			0		0		0		0		0		0.0					
BETWEEN	0.4	0:00:51		0:00:46		0:00:36		0:00:23		0:00:49		0:00:41	35.1		1	2.50	2	A
SB 1-75 RAMP			0		0		0		0		0		0.0					
BETWEEN	0.5	0:00:39		0:01:05		0:00:45		0:00:41		0:01:02		0:00:50	35.7		1	2.00	2	A
NB 1-75 RAMP			44		0		58		0		0		20.4					
BETWEEN	0.5	0:01:04		0:00:38		0:01:06		0:00:37		0:00:48		0:00:51	35.6		1	2.00	2	A
NW 136TH AVENUE			0		42		0		0		0		8.4					
BETWEEN	0.4	0:00:39		0:01:35		0:00:56		0:00:37		0:00:40		0:00:53	27.0		1	2.50	2	C
NW 129TH AVENUE			47		31		10		9		0		19.4					
BETWEEN	0.5	0:01:03		0:01:29		0:01:24		0:01:07		0:00:59		0:01:12	24.9		1	2.00	2	C
FLAMINGO ROAD			0		0		92		42		0		26.8					
BETWEEN	0.4	0:00:37		0:00:35		0:02:12		0:01:20		0:00:30		0:01:03	22.9		1	2.50	2	C
SW 118TH AVENUE			0		0		51		20		0		14.2					
BETWEEN	0.6	0:00:59		0:01:11		0:01:13		0:01:28		0:00:58		0:01:10	30.9		2	3.33	2	B
HIATUS ROAD			0		0		0		0		0		0.0					
BETWEEN	0.4	0:00:28		0:00:31		0:00:31		0:00:36		0:00:27		0:00:31	47.1		1	2.50	2	A
NW 108TH AVENUE			52		40		31		39		45		41.4					
BETWEEN	0.6	0:01:44		0:01:57		0:02:10		0:01:59		0:02:01		0:01:58	18.3		2	3.33	2	D
PALM AVENUE			48		11		0		0		23		16.4					
BETWEEN	0.4	0:01:10		0:01:13		0:00:51		0:00:38		0:01:13		0:01:01	23.6		1	2.50	2	C
SW 96TH AVENUE			0		77		0		22		73		34.4					
BETWEEN	0.6	0:00:47		0:02:36		0:00:56		0:01:21		0:02:21		0:01:36	22.5		1	1.67	1	D
DOUGLAS ROAD			0		0		0		40		0		8.0					
BETWEEN	0.3	0:00:27		0:00:45		0:00:27		0:01:19		0:00:38		0:00:43	25.0		1	3.33	2	C
NW 86TH AVENUE			0		0		0		7		0		1.4					
BETWEEN	0.6	0:00:54		0:01:12		0:00:46		0:01:20		0:01:04		0:01:03	34.2		2	3.33	2	B
UNIVERSITY DRIVE			58		30		103		0		10		40.2					
BETWEEN	1	0:03:11		0:02:12		0:03:36		0:01:28		0:01:48		0:02:27	24.5		2	2.00	2	C
NW 72ND AVENUE			79		36		0		5		0		24.0					
BETWEEN	0.9	0:01:54		0:01:53		0:01:11		0:01:29		0:00:39		0:01:25	38.0		2	2.22	2	A
SW 64TH WAY			0		0		0		0		0		0.0					
BETWEEN	0.1	0:00:23		0:00:03		0:00:32		0:00:09		0:00:10		0:00:15	23.4		1	10.00	3	C
NW 64TH AVENUE			0		11		0		0		10		4.2					
BETWEEN	0.3	0:02:01		0:01:06		0:00:37		0:01:02		0:00:57		0:01:09	15.7		1	3.33	2	E
FLORIDA TURNPIKE			0		4		0		22		0		5.2					
BETWEEN	0.1	0:00:09		0:00:04		0:00:03		0:00:27		0:02:44		0:00:41	8.7		1	10.00	3	F
NW 62ND AVENUE			31		0		0		0		65		19.2					
BETWEEN	0.1	0:00:46		0:00:42		0:00:27		0:00:35		0:00:19		0:00:34	10.7		1	10.00	3	E
SR 7			0		26		0		26		0		10.4					
BETWEEN	0.5	0:00:51		0:01:23		0:00:31		0:01:05		0:00:22		0:00:50	35.7		2	4.00	2	A
N 56TH AVENUE			8		0		45		75		30		31.6					
BETWEEN	1	0:01:58		0:01:47		0:02:51		0:03:05		0:02:29		0:02:26	24.7		2	2.00	2	C
PRESIDENTIAL CIRCLE			0		17		0		0		0		3.4					
BETWEEN	0.5	0:01:08		0:01:27		0:00:57		0:00:52		0:01:08		0:01:06	27.1		1	2.00	2	C
PARK ROAD			60		21		0		91		0		34.4					
BETWEEN	0.5	0:01:59		0:01:46		0:00:50		0:02:45		0:04:20		0:02:20	12.9		2	4.00	2	F
SB 1-95 RAMP			0		0		222		75		0		59.4					
BETWEEN	0.1	0:00:08		0:00:10		0:04:08		0:02:11		0:00:09		0:01:21	4.4		1	10.00	3	F
NB 1-95 RAMP			0		0		0		12		33		9.0					
BETWEEN	0.4	0:01:00		0:02:09		0:01:13		0:01:36		0:02:01		0:01:36	15.0		2	5.00	3	D
LIBRARY CIRCLE			93		191		4		41		48		75.4					
BETWEEN	1.1	0:04:02		0:06:48		0:04:08		0:04:19		0:04:12		0:04:42	14.1		4	3.64	2	E
YOUNG CIRCLE			0		0		0		0		0		0.0					
Totals		0:42:50	719	0:48:48	707	0:47:45	915											

Eastbound PM Peak Travel Time Runs

Control Point	Miles	Run Number										Average Travel Time (sec)	Average Travel Speed (MPH)	Average Delay (sec)	Number of Signals	Signals Per Mile	Class	LOS
		1		2		3		4		5								
		Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)							
US 27			38		14		0		0		0		10.4					
BETWEEN	1.4	0:02:21		0:02:28		0:02:24		0:02:02		0:01:53		0:02:14	37.7		1	0.71	1	B
SW 196TH AVENUE			0		0		0		34		0		6.8		1			
BETWEEN	0.7	0:00:46		0:00:53		0:00:50		0:01:30		0:00:11		0:00:50	50.4		1	1.43	1	A
SW 186TH AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.3	0:00:24		0:00:28		0:00:50		0:00:26		0:00:27		0:00:31	34.8		1	3.33	2	B
SW 184TH AVENUE			55		82		0		0		0		27.4					
BETWEEN	0.5	0:01:37		0:02:11		0:02:54		0:00:45		0:00:42		0:01:38	18.4		1	2.00	2	D
SW 178TH AVENUE			31		42		110		94		30		61.4		1	2.00	2	
BETWEEN	0.5	0:01:26		0:01:21		0:01:06		0:02:16		0:01:42		0:01:34	19.1		1		2	D
SW 172ND AVENUE			35		24		19		68		14		32.0					
BETWEEN	0.8	0:02:05		0:02:07		0:02:05		0:02:05		0:02:09		0:02:06	22.8		3	3.75	2	C
DYKES ROAD			53		52		52		107		64		65.6					
BETWEEN	0.8	0:01:56		0:01:46		0:02:00		0:04:43		0:02:18		0:02:33	18.9		2	2.50	2	D
NW 155TH AVENUE / GRAND PALMS DRIVE			11		18		0		78		0		21.4					
BETWEEN	0.4	0:00:58		0:00:59		0:00:38		0:02:00		0:00:34		0:01:02	23.3		1	2.50	2	C
SB I-75 RAMP			0		0		11		0		9		4.0					
BETWEEN	0.5	0:00:41		0:00:39		0:01:01		0:00:31		0:01:09		0:00:48	37.3		1	2.00	2	A
NB I-75 RAMP			47		52		33		62		15		41.8					
BETWEEN	0.5	0:01:29		0:01:23		0:01:25		0:01:37		0:01:10		0:01:25	21.2		1	2.00	2	D
NW 136TH AVENUE			72		0		43		0		38		30.6					
BETWEEN	0.4	0:01:54		0:00:44		0:01:35		0:00:40		0:01:38		0:01:18	18.4		1	2.50	2	D
NW 129TH AVENUE			65		36		72		0		90		52.6					
BETWEEN	0.5	0:01:48		0:01:13		0:02:11		0:00:42		0:02:34		0:01:42	17.7		1	2.00	2	D
FLAMINGO ROAD			51		30		30		0		24		27.0					
BETWEEN	0.4	0:01:29		0:01:16		0:01:12		0:00:33		0:01:09		0:01:08	21.2		1	2.50	2	D
SW 118TH AVENUE			0		70		0		15		54		27.8					
BETWEEN	0.6	0:00:52		0:02:20		0:00:48		0:01:02		0:01:34		0:01:19	27.3		2	3.33	2	C
HIATUS ROAD			0		25		0		0		0		5.0					
BETWEEN	0.4	0:00:24		0:01:01		0:00:42		0:00:29		0:01:36		0:00:50	28.6		1	2.50	2	B
NW 108TH AVENUE			44		46		0		74		47		42.2					
BETWEEN	0.6	0:01:40		0:01:59		0:01:32		0:02:06		0:02:00		0:01:51	19.4		2	3.33	2	D
PALM AVENUE			0		81		0		47		23		30.2					
BETWEEN	0.4	0:00:38		0:01:01		0:00:36		0:01:15		0:01:01		0:00:54	26.6		1	2.50	2	C
SW 96TH AVENUE			91		61		92		93		54		78.2					
BETWEEN	0.6	0:02:25		0:01:40		0:02:24		0:02:34		0:01:53		0:02:11	16.5		1	1.67	1	E
DOUGLAS ROAD			0		0		0		0		0		0.0					
BETWEEN	0.3	0:00:33		0:00:30		0:00:30		0:00:35		0:00:54		0:00:36	29.7		1	3.33	2	B
NW 86TH AVENUE			63		30		29		0		33		31.0					
BETWEEN	0.6	0:01:39		0:01:13		0:01:33		0:00:51		0:01:18		0:01:19	27.4		2	3.33	2	C
UNIVERSITY DRIVE			0		0		0		13		0		2.6					
BETWEEN	1	0:01:33		0:01:46		0:01:34		0:01:26		0:01:43		0:01:36	37.3		2	2.00	2	A
NW 72ND AVENUE			0		0		0		165		0		33.0					
BETWEEN	0.9	0:01:24		0:01:20		0:01:13		0:04:06		0:01:34		0:01:55	28.1		2	2.22	2	B
SW 64TH WAY			0		0		0		58		0		11.6					
BETWEEN	0.1	0:00:11		0:00:08		0:00:10		0:01:20		0:00:15		0:00:25	14.5		1	10.00	3	D
NW 64TH AVENUE			12		20		10		8		0		10.0					
BETWEEN	0.3	0:00:36		0:00:53		0:00:57		0:00:54		0:00:21		0:00:44	24.4		1	3.33	2	C
FLORIDA TURNPIKE			0		0		40		0		0		8.0					
BETWEEN	0.1	0:00:22		0:00:03		0:01:14		0:00:49		0:00:15		0:00:33	11.0		1	10.00	3	E
NW 62ND AVENUE			93		131		80		32		98		86.8					
BETWEEN	0.1	0:01:53		0:02:25		0:00:49		0:00:35		0:02:09		0:01:34	3.8		1	10.00	3	F
SR 7			20		0		0		0		0		4.0					
BETWEEN	0.5	0:01:12		0:01:11		0:01:22		0:01:31		0:00:57		0:01:15	24.1		2	4.00	2	C
N 56TH AVENUE			24		0		30		95		0		29.8					
BETWEEN	1	0:02:22		0:02:10		0:02:29		0:03:23		0:02:30		0:02:35	23.3		2	2.00	2	C
PRESIDENTIAL CIRCLE			25		0		0		0		69		18.8					
BETWEEN	0.5	0:01:36		0:01:32		0:01:08		0:01:04		0:02:14		0:01:31	19.8		1	2.00	2	D
PARK ROAD			17		32		0		203		61		62.6					
BETWEEN	0.5	0:02:31		0:00:34		0:01:04		0:03:59		0:02:31		0:02:08	14.1		2	4.00	2	E
SB I-95 RAMP			0		30		0		0		0		6.0					
BETWEEN	0.1	0:00:16		0:00:56		0:00:12		0:00:11		0:00:13		0:00:22	16.7		1	10.00	3	D
NB I-95 RAMP			114		62		16		32		10		46.8					
BETWEEN	0.4	0:02:28		0:01:12		0:01:47		0:01:42		0:01:04		0:01:39	14.6		2	5.00	3	D
LIBRARY CIRCLE			100		179		64		139		108		118.0					
BETWEEN	1.1	0:04:51		0:07:27		0:05:07		0:04:25		0:05:26		0:05:27	12.1		4	3.64	2	F
YOUNG CIRCLE			0		0				0		0		0.0					
Totals		0:48:20	1061	0:48:49	1117	0:47:22	731											

Westbound AM Peak Travel Time Runs

Control Point	Miles	Run Number										Average Travel Time (sec)	Average Travel Speed (MPH)	Average Delay (sec)	Number of Signals	Signals Per Mile	Class	LOS
		1		2		3		4		5								
		Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)							
US 1 AND YOUNG CIR			11		79		119		57		110			75.2				
BETWEEN	1.100	0:03:40		0:03:41		0:04:40		0:03:51		0:04:44		0:04:07	16.0		4	3.64	2	E
LIBRARY CIRCLE			90		69		185		93		33		94.0					
BETWEEN	0.500	0:05:08		0:01:58		0:04:19		0:03:03		0:01:46		0:03:15	9.2		2	4.00	3	F
NB I-95 RAMP			0		0		0		0		0		0.0					
BETWEEN	0.100	0:00:22		0:00:10		0:00:04		0:00:10		0:00:07		0:00:11	34.0		1	10.00	3	A
SB I-95 RAMP			0		19		6		37		24		17.2					
BETWEEN	0.4	0:00:35		0:01:20		0:01:08		0:01:43		0:01:27		0:01:15	19.3		2	5.00	2	D
PARK ROAD			0		0		0		0		0		0.0					
BETWEEN	0.5	0:01:08		0:00:54		0:00:54		0:01:04		0:01:11		0:01:02	28.9		1	2.00	2	B
PRESIDENTIAL CIRCLE			40		128		47		0		49		52.8					
BETWEEN	1.100	0:03:17		0:02:31		0:02:36		0:01:51		0:02:52		0:02:37	25.2		2	1.82	2	C
N 56TH AVENUE			20		47		24		53		20		32.8					
BETWEEN	0.400	0:01:40		0:01:39		0:01:17		0:01:07		0:01:28		0:01:26	16.7		2	5.00	2	E
STATE ROUTE 7			0		63		43		20		0		25.2					
BETWEEN	0.200	0:00:10		0:01:29		0:01:05		0:02:07		0:00:29		0:01:04	11.3		1	5.00	3	E
NW 62ND AVENUE			46		0		0		0		34		16.0					
BETWEEN	0.100	0:01:01		0:00:06		0:00:16		0:00:07		0:00:59		0:00:30	12.1		1	10.00	3	E
FLORIDA TURNPIKE			0		0		0		0		0		0.0					
BETWEEN	0.2	0:01:18		0:01:21		0:00:27		0:00:24		0:00:42		0:00:50	14.3		1	5.00	2	E
NW 64TH AVENUE			31		0		0		0		0		6.2					
BETWEEN	0.1	0:01:01		0:00:11		0:00:09		0:00:13		0:00:17		0:00:22	16.2		1	10.00	3	D
SW 64TH WAY			20		45		0		0		55		24.0					
BETWEEN	0.9	0:02:39		0:02:11		0:01:23		0:01:25		0:02:47		0:02:05	25.9		2	2.22	2	C
NW 72ND AVENUE			70		34		89		40		86		63.8					
BETWEEN	1	0:03:01		0:03:01		0:03:19		0:02:54		0:03:23		0:03:08	19.2		2	2.00	2	D
UNIVERSITY DRIVE			0		0		0		0		16		3.2					
BETWEEN	0.6	0:01:10		0:01:11		0:01:06		0:01:06		0:01:19		0:01:10	30.7		2	3.33	2	B
NW 86TH AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.4	0:00:35		0:00:45		0:00:20		0:00:35		0:00:38		0:00:35	41.6		1	2.50	2	A
DOUGLAS RD			0		27		0		0		0		5.4					
BETWEEN	0.5	0:00:49		0:01:15		0:00:47		0:00:55		0:00:56		0:00:56	31.9		1	2.00	1	C
SW 96TH AVENUE			50		0		36		20		8		22.8					
BETWEEN	0.4	0:01:24		0:00:47		0:01:13		0:00:58		0:00:50		0:01:02	23.1		1	2.50	2	C
PALM AVENUE			0		35		0		0		0		7.0					
BETWEEN	0.7	0:00:52		0:01:39		0:01:03		0:01:02		0:00:55		0:01:06	38.1		2	2.86	2	A
NW 108TH AVENUE			0		14		0		0		0		2.8					
BETWEEN	0.3	0:00:25		0:00:55		0:00:32		0:00:34		0:00:25		0:00:34	31.6		1	3.33	2	B
HIATUS ROAD			0		81		13		42		0		27.2					
BETWEEN	0.6	0:00:46		0:01:08		0:01:43		0:01:58		0:00:44		0:01:16	28.5		2	3.33	2	B
NW 118TH AVENUE			0		0		0		45		0		9.0					
BETWEEN	0.4	0:00:27		0:01:22		0:00:31		0:01:29		0:00:34		0:00:53	27.4		1	2.50	2	C
FLAMINGO ROAD			0		86		57		6		10		31.8					
BETWEEN	0.5	0:00:53		0:01:27		0:01:50		0:01:18		0:01:09		0:01:19	22.7		1	2.00	2	C
NW 129TH AVENUE			4		0		48		0		0		10.4					
BETWEEN	0.5	0:01:06		0:00:45		0:01:32		0:00:33		0:00:42		0:00:56	32.4		1	2.00	2	B
NW 136TH AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.5	0:00:40		0:00:40		0:00:40		0:00:32		0:00:37		0:00:38	47.6		1	2.00	2	A
NB I-75			0		0		0		0		0		0.0					
BETWEEN	0.4	0:00:39		0:00:39		0:00:32		0:00:35		0:00:43		0:00:38	38.3		1	2.50	2	A
SB I-75			37		29		0		0		49		23.0					
BETWEEN	0.5	0:01:36		0:01:35		0:00:30		0:00:40		0:01:40		0:01:12	24.9		1	2.00	2	C
NW 155TH AVENUE / GRAND PALMS DRIVE			0		68		0		0		70		27.6					
BETWEEN	0.6	0:00:58		0:02:11		0:00:49		0:00:43		0:02:18		0:01:24	25.8		2	3.33	2	C
DYKES ROAD			39		12		52		0		8		22.2					
BETWEEN	0.9	0:00:42		0:02:00		0:02:13		0:01:19		0:01:41		0:01:35	34.1		3	3.33	2	B
SW 172ND AVENUE			0		48		0		0		0		9.6					
BETWEEN	0.5	0:00:41		0:01:57		0:00:41		0:00:43		0:00:36		0:00:56	32.4		1	2.00	2	B
SW 178TH AVENUE			167		0		0		0		36		40.6					
BETWEEN	0.5	0:03:33		0:00:44		0:00:38		0:00:35		0:01:22		0:01:22	21.8		1	2.00	2	D
SW 184TH AVENUE			3		0		0		0		0		0.6					
BETWEEN	0.3	0:00:27		0:00:26		0:00:31		0:00:24		0:00:27		0:00:27	40.0		1	3.33	2	A
SW 186TH AVENUE			0		0		0		11		0		2.2					
BETWEEN	0.7	0:00:46		0:01:00		0:00:54		0:01:06		0:00:47		0:00:55	46.2		1	1.43	1	A
SW 196TH AVENUE			74		18		0		0		12		20.8					
BETWEEN	1.4	0:03:09		0:02:43		0:01:57		0:02:20		0:02:14		0:02:29	33.9		1	0.71	1	C
US 27			0		0		0		0		0		0.0					
Totals		0:46:38	702	0:45:41	902	0:41:39	719		0		0		0.0					

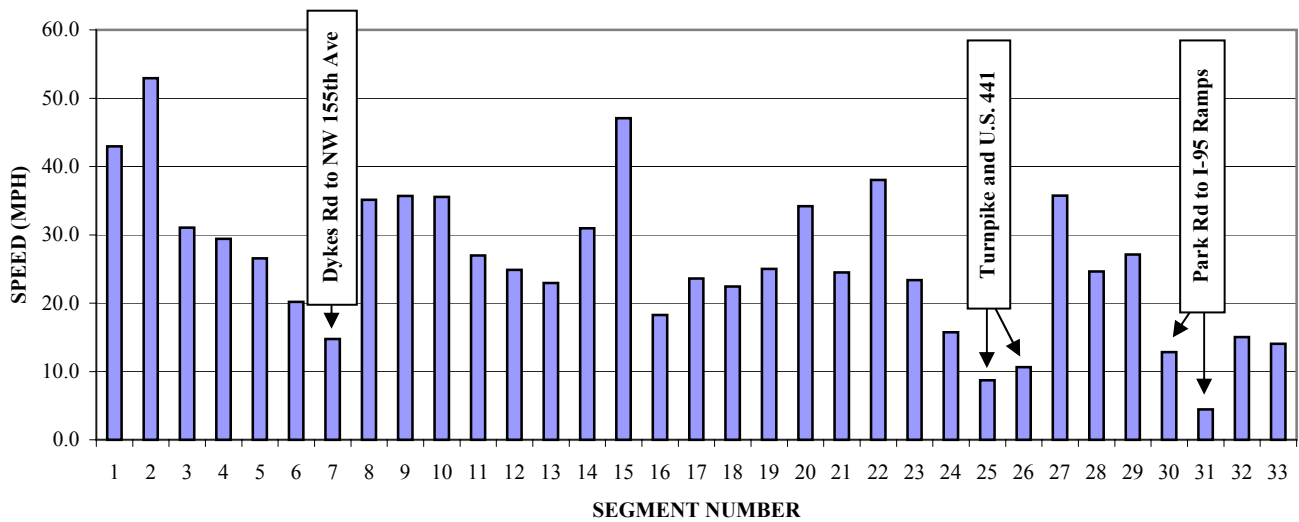
Westbound PM Peak Travel Time Runs

Control Point	Miles	Run Number										Average Travel Time (sec)	Average Travel Speed (MPH)	Average Delay (sec)	Number of Signals	Signals Per Mile	Class	LOS
		1		2		3		4		5								
		Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)	Travel Time	Delay (sec)							
US 1 AND YOUNG CIR			45		72		92		116		10			67.0				
BETWEEN	1.100	0:02:55		0:03:24		0:03:40		0:04:48		0:03:45		0:03:42	17.8		4	3.64	2	D
LIBRARY CIRCLE			13		58		112		30		0		42.6					
BETWEEN	0.500	0:00:57		0:02:05		0:03:29		0:01:28		0:01:02		0:01:48	16.6		2	4.00	3	D
NB I-95 RAMP			88		0		0		0		0		17.6					
BETWEEN	0.100	0:01:52		0:00:11		0:00:05		0:00:08		0:00:12		0:00:30	12.2		1	10.00	3	E
SB I-95 RAMP			12		91		0		54		0		31.4					
BETWEEN	0.4	0:01:24		0:02:22		0:01:30		0:01:48		0:00:04		0:01:26	16.8		2	5.00	2	E
PARK ROAD			50		0		60		0		0		22.0					
BETWEEN	0.5	0:01:59		0:00:55		0:02:45		0:00:59		0:01:04		0:01:32	19.5		1	2.00	2	D
PRESIDENTIAL CIRCLE			10		83		10		92		0		39.0					
BETWEEN	1.100	0:02:10		0:03:12		0:02:05		0:03:21		0:01:51		0:02:32	26.1		2	1.82	2	C
N 56TH AVENUE			120		193		0		65		20		79.6					
BETWEEN	0.400	0:02:17		0:03:59		0:01:01		0:01:45		0:01:14		0:02:03	11.7		2	5.00	2	F
STATE ROUTE 7			0		0		0		14		0		2.8					
BETWEEN	0.200	0:00:48		0:00:28		0:00:54		0:00:47		0:00:35		0:00:42	17.0		1	5.00	3	D
NW 62ND AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.100	0:00:42		0:00:07		0:00:11		0:00:06		0:00:12		0:00:16	23.1		1	10.00	3	C
FLORIDA TURNPIKE			0		0		10		53		0		12.6					
BETWEEN	0.2	0:00:26		0:00:16		0:00:45		0:01:23		0:00:18		0:00:38	19.1		1	5.00	2	D
NW 64TH AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.1	0:00:31		0:00:16		0:00:39		0:00:11		0:00:23		0:00:24	15.0		1	10.00	3	D
SW 64TH WAY			47		75		0		127		0		49.8					
BETWEEN	0.9	0:01:53		0:02:25		0:00:47		0:03:26		0:01:23		0:01:59	27.3		2	2.22	2	C
NW 72ND AVENUE			7		137		15		17		0		35.2					
BETWEEN	1	0:01:42		0:03:44		0:01:50		0:01:45		0:01:42		0:02:09	28.0		2	2.00	2	C
UNIVERSITY DRIVE			0		0		11		0		15		5.2					
BETWEEN	0.6	0:00:55		0:00:53		0:01:10		0:00:56		0:01:27		0:01:04	33.6		2	3.33	2	B
NW 86TH AVENUE			0		0		96		96		0		38.4					
BETWEEN	0.4	0:00:32		0:00:05		0:02:12		0:02:03		0:01:11		0:01:13	19.8		1	2.50	2	D
DOUGLAS RD			0		32		0		33		0		13.0					
BETWEEN	0.5	0:00:48		0:01:28		0:00:51		0:01:28		0:00:58		0:01:07	27.0		1	2.00	1	C
SW 96TH AVENUE			10		0		35		0		10		11.0					
BETWEEN	0.4	0:00:49		0:00:48		0:01:16		0:00:38		0:00:49		0:00:52	27.7		1	2.50	2	C
PALM AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.7	0:01:02		0:00:55		0:01:15		0:01:05		0:01:02		0:01:04	39.5		2	2.86	2	A
NW 108TH AVENUE			35		43		46		43		0		33.4					
BETWEEN	0.3	0:01:17		0:01:15		0:01:25		0:01:15		0:01:12		0:01:17	14.1		1	3.33	2	E
HIATUS ROAD			0		10		128		10		0		29.6					
BETWEEN	0.6	0:01:00		0:04:00		0:03:13		0:01:12		0:01:02		0:02:05	17.2		2	3.33	2	D
NW 118TH AVENUE			20		0		9		0		0		5.8					
BETWEEN	0.4	0:01:03		0:00:40		0:00:50		0:00:37		0:00:37		0:00:45	31.7		1	2.50	2	B
FLAMINGO ROAD			98		0		0		0		0		19.6					
BETWEEN	0.5	0:02:40		0:00:44		0:00:43		0:00:46		0:01:11		0:01:13	24.7		1	2.00	2	C
NW 129TH AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.5	0:00:47		0:00:43		0:00:41		0:00:47		0:00:46		0:00:45	40.2		1	2.00	2	A
NW 136TH AVENUE			0		0		0		21		15		7.2					
BETWEEN	0.5	0:00:41		0:00:49		0:00:50		0:00:58		0:01:01		0:00:52	34.7		1	2.00	2	B
NB I-75			0		0		0		0		0		0.0					
BETWEEN	0.4	0:00:50		0:00:44		0:00:46		0:00:40		0:00:42		0:00:44	32.4		1	2.50	2	B
SB I-75			0		21		0		0		0		4.2					
BETWEEN	0.5	0:00:51		0:00:56		0:00:34		0:00:40		0:00:46		0:00:45	39.6		1	2.00	2	A
NW 155TH AVENUE / GRAND PALMS DRIVE			0		0		0		0		0		0.0					
BETWEEN	0.6	0:01:05		0:00:56		0:00:54		0:00:49		0:00:52		0:00:55	39.1		2	3.33	2	A
DYKES ROAD			59		68		0		79		52		51.6					
BETWEEN	0.9	0:02:56		0:02:43		0:01:12		0:02:38		0:02:28		0:02:23	22.6		3	3.33	2	C
SW 172ND AVENUE			0		15		0		53		0		13.6					
BETWEEN	0.5	0:00:56		0:00:44		0:00:37		0:01:17		0:00:52		0:00:53	33.8		1	2.00	2	B
SW 178TH AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.5	0:00:35		0:00:41		0:00:38		0:00:32		0:00:44		0:00:38	47.4		1	2.00	2	A
SW 184TH AVENUE			0		0		0		0		0		0.0					
BETWEEN	0.3	0:00:28		0:00:26		0:00:22		0:00:35		0:00:27		0:00:28	39.1		1	3.33	2	A
SW 186TH AVENUE			11		8		0		30		27		15.2					
BETWEEN	0.7	0:01:05		0:01:02		0:00:46		0:01:20		0:01:09		0:01:04	39.1		1	1.43	1	B
SW 196TH AVENUE			0		0		0		12		0		2.4					
BETWEEN	1.4	0:02:00		0:02:11		0:01:52		0:02:01		0:02:36		0:02:08	39.4		1	0.71	1	B
US 27			0		0		0		0		0		0.0					
Totals		0:41:56	625	0:46:07	906	0:41:48	624											

APPENDIX D:

Average Travel Speed Graphs

EASTBOUND AM PEAK AVERAGE TRAVEL SPEED

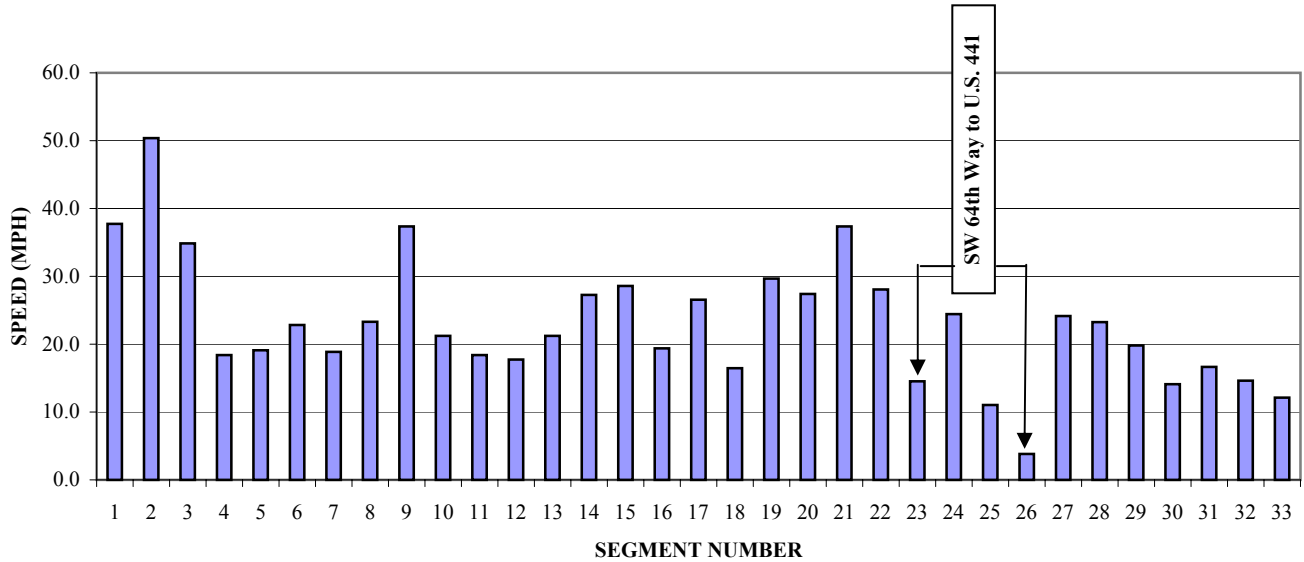


SEGMENT NUMBER	ROADWAY SEGMENT
1	FROM U.S. 27 TO SW 196TH AVENUE
2	FROM SW 196TH AVENUE TO SW 186TH AVENUE
3	FROM SW 186TH AVENUE TO SW 184TH AVENUE
4	FROM SW 184TH AVENUE TO SW 178TH AVENUE
5	FROM SW 178TH AVENUE TO SW 172ND AVENUE
6	FROM SW 172ND AVENUE TO DYKES ROAD
7	FROM DYKES ROAD TO NW 155TH AVENUE
8	FROM NW 155TH AVENUE TO SB I-75 RAMP
9	FROM SB I-75 RAMP TO NB I-75 RAMP
10	FROM NB I-75 RAMP TO SW 136TH AVENUE
11	FROM SW 136TH AVENUE TO SW 129TH AVENUE

SEGMENT NUMBER	ROADWAY SEGMENT
12	FROM SW 129TH AVENUE TO FLAMINGO ROAD
13	FROM FLAMINGO ROAD TO SW 118TH AVENUE
14	FROM SW 118TH AVENUE TO HIATUS ROAD
15	FROM HIATUS ROAD TO SW 108TH AVENUE
16	FROM SW 108TH AVENUE TO PALM AVENUE
17	FROM PALM AVENUE TO SW 96TH AVENUE
18	FROM SW 96TH AVENUE TO DOUGLAS ROAD
19	FROM DOUGLAS ROAD TO SW 86TH AVENUE
20	FROM SW 86TH AVENUE TO UNIVERSITY DRIVE
21	FROM UNIVERSITY DRIVE TO SW 72ND AVENUE
22	FROM SW 72ND AVENUE TO SW 64TH WAY

SEGMENT NUMBER	ROADWAY SEGMENT
23	FROM SW 64TH WAY TO N 64TH AVENUE
24	FROM N 64TH AVENUE TO FLORIDA'S TURNPIKE
25	FROM FLORIDA'S TURNPIKE TO S 62ND AVENUE
26	FROM S 62ND AVENUE TO U.S. 441
27	FROM U.S. 441 TO S 56TH AVENUE
28	FROM S 56TH AVENUE TO PRESIDENTIAL CIRCLE
29	FROM PRESIDENTIAL CIRCLE TO PARK ROAD
30	FROM PARK ROAD TO SB I-95 RAMP
31	FROM SB I-95 RAMP TO NB I-95 RAMP
32	FROM NB I-95 RAMP TO CITY HALL CIRCLE
33	FROM CITY HALL CIRCLE TO YOUNG CIRCLE

EASTBOUND PM PEAK AVERAGE TRAVEL SPEED

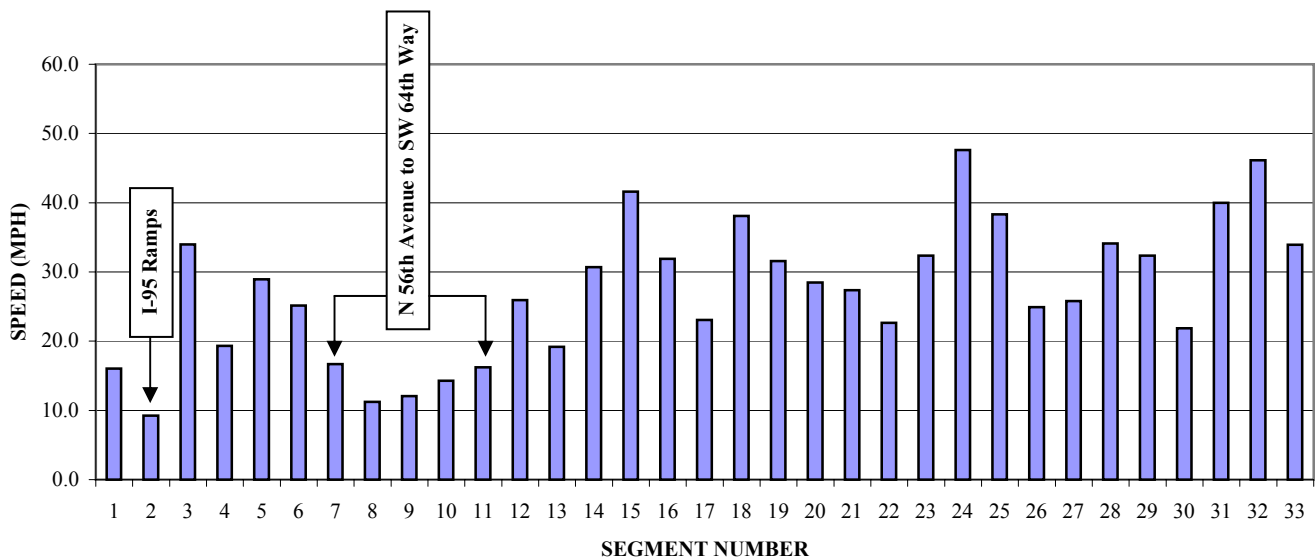


SEGMENT NUMBER	ROADWAY SEGMENT
1	FROM U.S. 27 TO SW 196TH AVENUE
2	FROM SW 196TH AVENUE TO SW 186TH AVENUE
3	FROM SW 186TH AVENUE TO SW 184TH AVENUE
4	FROM SW 184TH AVENUE TO SW 178TH AVENUE
5	FROM SW 178TH AVENUE TO SW 172ND AVENUE
6	FROM SW 172ND AVENUE TO DYKES ROAD
7	FROM DYKES ROAD TO NW 155TH AVENUE
8	FROM NW 155TH AVENUE TO SB I-75 RAMP
9	FROM SB I-75 RAMP TO NB I-75 RAMP
10	FROM NB I-75 RAMP TO SW 136TH AVENUE
11	FROM SW 136TH AVENUE TO SW 129TH AVENUE

SEGMENT NUMBER	ROADWAY SEGMENT
12	FROM SW 129TH AVENUE TO FLAMINGO ROAD
13	FROM FLAMINGO ROAD TO SW 118TH AVENUE
14	FROM SW 118TH AVENUE TO HIATUS ROAD
15	FROM HIATUS ROAD TO SW 108TH AVENUE
16	FROM SW 108TH AVENUE TO PALM AVENUE
17	FROM PALM AVENUE TO SW 96TH AVENUE
18	FROM SW 96TH AVENUE TO DOUGLAS ROAD
19	FROM DOUGLAS ROAD TO SW 86TH AVENUE
20	FROM SW 86TH AVENUE TO UNIVERSITY DRIVE
21	FROM UNIVERSITY DRIVE TO SW 72ND AVENUE
22	FROM SW 72ND AVENUE TO SW 64TH WAY

SEGMENT NUMBER	ROADWAY SEGMENT
23	FROM SW 64TH WAY TO N 64TH AVENUE
24	FROM N 64TH AVENUE TO FLORIDA'S TURNPIKE
25	FROM FLORIDA'S TURNPIKE TO S 62ND AVENUE
26	FROM S 62ND AVENUE TO U.S. 441
27	FROM U.S. 441 TO S 56TH AVENUE
28	FROM S 56TH AVENUE TO PRESIDENTIAL CIRCLE
29	FROM PRESIDENTIAL CIRCLE TO PARK ROAD
30	FROM PARK ROAD TO SB I-95 RAMP
31	FROM SB I-95 RAMP TO NB I-95 RAMP
32	FROM NB I-95 RAMP TO CITY HALL CIRCLE
33	FROM CITY HALL CIRCLE TO YOUNG CIRCLE

WESTBOUND AM PEAK AVERAGE TRAVEL SPEED

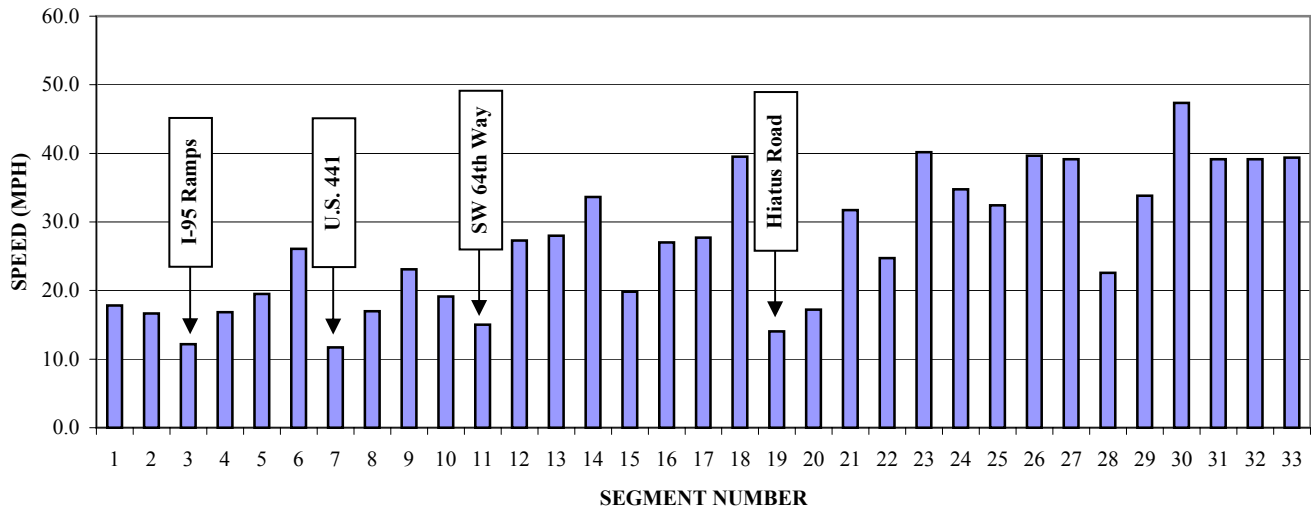


SEGMENT NUMBER	ROADWAY SEGMENT
1	FROM YOUNG CIRCLE TO CITY HALL CIRCLE
2	FROM CITY HALL CIRCLE TO NB I-95 RAMP
3	FROM NB I-95 RAMP TO SB I-95 RAMP
4	FROM SB I-95 RAMP TO PARK ROAD
5	FROM PARK ROAD TO PRESIDENTIAL CIRCLE
6	FROM PRESIDENTIAL CIRCLE TO N 56TH AVE
7	FROM N 56TH AVENUE TO U.S. 441
8	FROM U.S. 441 TO N 62ND AVENUE
9	FROM N 62ND AVENUE TO FLORIDA'S TURNPIKE
10	FROM FLORIDA'S TURNPIKE TO N 64TH AVENUE
11	FROM N 64TH AVENUE TO SW 64TH WAY

SEGMENT NUMBER	ROADWAY SEGMENT
12	FROM SW 64TH WAY TO NW 72ND AVENUE
13	FROM NW 72ND AVENUE TO UNIVERSITY DRIVE
14	FROM UNIVERSITY DRIVE TO NW 86TH AVENUE
15	FROM NW 86TH AVENUE TO DOUGLAS ROAD
16	FROM DOUGLAS ROAD TO NW 96TH AVENUE
17	FROM NW 96TH AVENUE TO PALM AVENUE
18	FROM PALM AVENUE TO NW 108TH AVENUE
19	FROM NW 108TH AVENUE TO HIATUS ROAD
20	FROM HIATUS ROAD TO NW 118TH AVENUE
21	FROM NW 118TH AVENUE TO FLAMINGO ROAD
22	FROM FLAMINGO ROAD TO NW 129TH AVENUE

SEGMENT NUMBER	ROADWAY SEGMENT
23	FROM NW 129TH AVENUE TO NW 136TH AVENUE
24	FROM NW 136TH AVENUE TO NB I-75 RAMP
25	FROM NB I-75 RAMP TO SB I-75 RAMP
26	FROM SB I-75 RAMP TO NW 155TH AVENUE
27	FROM NW 155TH AVENUE TO DYKES ROAD
28	FROM DYKES ROAD TO NW 172ND AVENUE
29	FROM NW 172ND AVENUE TO NW 178TH AVENUE
30	FROM NW 178TH AVENUE TO NW 184TH AVENUE
31	FROM NW 184TH AVENUE TO NW 186TH AVENUE
32	FROM NW 186TH AVENUE TO NW 196TH AVENUE
33	FROM NW 196TH AVENUE TO U.S. 27

WESTBOUND PM PEAK AVERAGE TRAVEL SPEED



SEGMENT NUMBER	ROADWAY SEGMENT
1	FROM YOUNG CIRCLE TO CITY HALL CIRCLE
2	FROM CITY HALL CIRCLE TO NB I-95 RAMP
3	FROM NB I-95 RAMP TO SB I-95 RAMP
4	FROM SB I-95 RAMP TO PARK ROAD
5	FROM PARK ROAD TO PRESIDENTIAL CIRCLE
6	FROM PRESIDENTIAL CIRCLE TO N 56TH AVE
7	FROM N 56TH AVENUE TO U.S. 441
8	FROM U.S. 441 TO N 62ND AVENUE
9	FROM N 62ND AVENUE TO FLORIDA'S TURNPIKE
10	FROM FLORIDA'S TURNPIKE TO N 64TH AVENUE
11	FROM N 64TH AVENUE TO SW 64TH WAY

SEGMENT NUMBER	ROADWAY SEGMENT
12	FROM SW 64TH WAY TO NW 72ND AVENUE
13	FROM NW 72ND AVENUE TO UNIVERSITY DRIVE
14	FROM UNIVERSITY DRIVE TO NW 86TH AVENUE
15	FROM NW 86TH AVENUE TO DOUGLAS ROAD
16	FROM DOUGLAS ROAD TO NW 96TH AVENUE
17	FROM NW 96TH AVENUE TO PALM AVENUE
18	FROM PALM AVENUE TO NW 108TH AVENUE
19	FROM NW 108TH AVENUE TO HIATUS ROAD
20	FROM HIATUS ROAD TO NW 118TH AVENUE
21	FROM NW 118TH AVENUE TO FLAMINGO ROAD
22	FROM FLAMINGO ROAD TO NW 129TH AVENUE

SEGMENT NUMBER	ROADWAY SEGMENT
23	FROM NW 129TH AVENUE TO NW 136TH AVENUE
24	FROM NW 136TH AVENUE TO NB I-75 RAMP
25	FROM NB I-75 RAMP TO SB I-75 RAMP
26	FROM SB I-75 RAMP TO NW 155TH AVENUE
27	FROM NW 155TH AVENUE TO DYKES ROAD
28	FROM DYKES ROAD TO NW 172ND AVENUE
29	FROM NW 172ND AVENUE TO NW 178TH AVENUE
30	FROM NW 178TH AVENUE TO NW 184TH AVENUE
31	FROM NW 184TH AVENUE TO NW 186TH AVENUE
32	FROM NW 186TH AVENUE TO NW 196TH AVENUE
33	FROM NW 196TH AVENUE TO U.S. 27

APPENDIX E:

Intersection Capacity Analysis

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.

Intersection: U.S. 27

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	0.0	0.0	0.0	55.5	0.0	39.1	0.0	21.4	0.1	81.7	14.0	0.0	35.2	AVG. DELAY (SEC)
	MOVEMENT LOS	0	0	0	E	0	D	0	C	A	F	B	0	D	LOS
	MOVEMENT V/C	0.00	0.00	0.00	0.90	0	0.49	0.00	0.22	0.07	0.81	0.41	0.00	0.62	V/C RATIO
	QUEUE (FT)	0	0	0	#530	0	61	0	141	0	#259	261	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	0.0	0.0	0.0	61.8	0.0	141.2	0.0	6.1	0.6	62.3	1.7	0.0	19.4	AVG. DELAY (SEC)
	MOVEMENT LOS	0	0	0	E	0	F	0	A	A	E	A	0	B	LOS
	MOVEMENT V/C	0.00	0.00	0.00	0.44	0	1	0.00	0.23	0.34	0.47	0.14	0.00	0.41	V/C RATIO
	QUEUE (FT)	0	0	0	91	0	0	64	0	123	0	122	38		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
 Intersection: NW/SW 184th Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	57.3	39.3	33.1	62.9	33.5	31.8	54.7	31.1	37.3	60.5	30.9	30.8	40.1	AVG. DELAY (SEC)
	MOVEMENT LOS	E	D	C	E	C	C	D	C	D	E	C	C	D	LOS
	MOVEMENT V/C	0.32	0.72	0.35	0.71	0.55	0.41	0.55	0.16	0.46	0.76	0.25	0.21	0.64	V/C RATIO
	QUEUE (FT)	58	369	49	#162	293	54	137	97	136	#221	145	45		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	54.5	35.2	32.5	61.8	39.0	34.3	54.3	29.8	31.6	58.8	29.3	31.3	40.8	AVG. DELAY (SEC)
	MOVEMENT LOS	D	D	C	E	D	C	D	C	C	E	C	C	D	LOS
	MOVEMENT V/C	0.34	0.49	0.26	0.72	0.73	0.46	0.61	0.16	0.25	0.75	0.18	0.28	0.53	V/C RATIO
	QUEUE (FT)	73	224	42	#174	371	55	163	98	49	#229	111	52		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
 Intersection: NW/SW 172nd Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	64.2	21.4	13.2	47.6	17.0	14.4	46.4	42.1	73.3	60.6	40.2	168.4	38.5	AVG. DELAY (SEC)
	MOVEMENT LOS	E	C	B	D	B	B	D	D	E	E	D	F	D	LOS
	MOVEMENT V/C	0.84	0.75	0.11	0.34	0.41	0.14	0.25	0.23	0.86	0.83	0.23	1.20	0.81	V/C RATIO
	QUEUE (FT)	#218	593	44	66	245	32	55	64	60	#225	72	164		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	42.2	19.2	15.6	42.1	22.5	17.4	43.0	42.0	50.6	42.1	38.7	118.3	31.3	AVG. DELAY (SEC)
	MOVEMENT LOS	D	B	B	D	C	B	D	D	D	D	D	F	C	LOS
	MOVEMENT V/C	0.39	0.5	0.12	0.42	0.71	0.34	0.28	0.42	0.66	0.42	0.24	1.06	0.64	V/C RATIO
	QUEUE (FT)	111	294	29	122	465	69	74	127	63	122	88	83		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.

Intersection: Dykes Rd.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	60.7	28.8	18.6	140.0	20.1	17.0	60.9	46.3	136.7	64.4	46.0	48.5	47.3	AVG. DELAY (SEC)
	MOVEMENT LOS	E	C	B	F	C	B	E	D	F	E	D	D	D	LOS
	MOVEMENT V/C	0.40	0.75	0.17	1.09	0.37	0.09	0.46	0.27	1.11	0.63	0.28	0.45	0.85	V/C RATIO
	QUEUE (FT)	87	664	56	#304	265	29	100	113	314	135	117	56		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	75.6	21.9	17.3	160.4	26.2	16.0	115.7	64.6	164.9	82.7	65.3	209.6	59.3	AVG. DELAY (SEC)
	MOVEMENT LOS	E	C	B	F	C	B	F	E	F	F	E	F	E	LOS
	MOVEMENT V/C	0.56	0.5	0.17	1.12	0.71	0.14	0.94	0.4	1.12	0.68	0.44	1.24	0.85	V/C RATIO
	QUEUE (FT)	145	443	38	#403	778	58	#258	159	224	#155	172	294		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: NW/SW 155th Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
AM	AVG. DELAY (SEC)	31.8	270.1	27.0	85.9	38.0	30.3	33.8	147.7	0.0	166.6	169.3	0.0	174.6	AVG. DELAY (SEC)
	MOVEMENT LOS	C	F	C	F	D	C	C	F	0	F	F	0	F	LOS
	MOVEMENT V/C	0.58	1.50	0.04	0.76	0.72	0.32	0.14	1.14	0.00	1.20	1.07	0.00	1.28	V/C RATIO
	QUEUE (FT)	121	#1586	32	#207	510	100	104	#500	#585	95	0	0		QUEUE (FT)
PM	AVG. DELAY (SEC)	110.1	26.6	16.5	186.7	27.6	16.6	58.4	315.1	0.0	61.6	143.6	0.0	48.6	AVG. DELAY (SEC)
	MOVEMENT LOS	F	C	B	F	C	B	E	F	0	E	F	0	D	LOS
	MOVEMENT V/C	0.99	0.76	0.17	1.21	0.9	0.54	0.43	1.48	0	0.52	0.97	0	1.04	V/C RATIO
	QUEUE (FT)	#330	723	86	#621	#1143	319	150	133	137	68	0	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: NW/SW 136th Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	46.1	21.5	13.5	46.1	16.8	11.8	45.2	44.4	33.6	45.8	45.1	136.4	26.1	AVG. DELAY (SEC)
	MOVEMENT LOS	D	C	B	D	B	B	D	D	C	D	D	F	C	LOS
	MOVEMENT V/C	0.33	0.76	0.18	0.35	0.52	0.01	0.46	0.13	0.29	0.40	0.06	1.05	0.67	V/C RATIO
	QUEUE (FT)	72	546	74	76	314	11	107	44	69	89	20	62		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	58.8	29.9	18.2	57.6	36.8	15.9	64.5	56.6	37.4	60.2	58.6	180.7	40.0	AVG. DELAY (SEC)
	MOVEMENT LOS	E	C	B	E	D	B	E	E	D	E	E	F	D	LOS
	MOVEMENT V/C	0.62	0.82	0.22	0.66	0.95	0.14	0.7	0.19	0.26	0.46	0.17	1.14	0.92	V/C RATIO
	QUEUE (FT)	188	767	116	221	#1060	73	#198	72	110	111	47	70		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: NW/SW 129th Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	65.2	45.8	31.1	70.4	43.5	35.2	64.2	33.4	33.1	65.5	31.3	35.1	46.3	AVG. DELAY (SEC)
	MOVEMENT LOS	E	D	C	E	D	D	E	C	C	E	C	D	D	LOS
	MOVEMENT V/C	0.64	0.90	0.37	0.42	0.73	0.27	0.57	0.07	0.05	0.69	0.07	0.29	0.64	V/C RATIO
	QUEUE (FT)	159	#729	159	68	445	71	132	59	23	188	64	54		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	102.5	60.4	29.2	92.2	49.9	35.5	150.0	50.9	47.3	83.1	54.9	59.3	65.7	AVG. DELAY (SEC)
	MOVEMENT LOS	F	E	C	F	D	D	F	D	D	F	D	E	E	LOS
	MOVEMENT V/C	0.91	0.98	0.25	0.64	0.84	0.31	1.11	0.28	0.09	0.66	0.1	0.3	0.82	V/C RATIO
	QUEUE (FT)	#321	#1080	140	150	732	134	#529	211	35	170	76	56		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: Flamingo Rd.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	204.2	52.9	369.5	65.7	62.9	45.4	236.5	48.1	39.7	65.7	59.7	62.5	120.2	AVG. DELAY (SEC)
	MOVEMENT LOS	F	D	F	E	E	D	F	D	D	E	E	E	F	LOS
	MOVEMENT V/C	1.30	0.90	1.70	0.66	0.91	0.34	1.36	0.73	0.28	0.50	0.87	0.80	1.36	V/C RATIO
	QUEUE (FT)	#747	#686	#1286	189	#537	86	#578	434	57	117	447	99		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	651.4	127.7	93.8	450.5	111.9	52.7	451.2	147.4	288.1	79.7	69.3	640.4	251.9	AVG. DELAY (SEC)
	MOVEMENT LOS	F	F	F	F	F	D	F	F	F	E	E	F	F	LOS
	MOVEMENT V/C	2.26	1.15	1.01	1.79	1.09	0.56	1.82	1.17	1.47	0.74	0.85	2.26	1.74	V/C RATIO
	QUEUE (FT)	#1239	#1243	589	#622	#1006	242	#1122	#1028	#1095	264	520	#1677		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.

Intersection: NW 118th Ave. (Mall entrance)

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	58.9	7.5	4.4	58.9	6.9	4.7	63.2	50.7	51.6	51.2	50.6	51.2	10.5	AVG. DELAY (SEC)
	MOVEMENT LOS	E	A	A	E	A	A	E	D	D	D	D	D	B	LOS
	MOVEMENT V/C	0.27	0.51	0.02	0.22	0.44	0.05	0.65	0.03	0.13	0.08	0.01	0.09	0.50	V/C RATIO
	QUEUE (FT)	44	332	10	36	266	16	145	20	27	31	12	23		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	547.2	15.3	9.2	125.5	15.3	9.8	67.9	62.6	70.1	77.5	63.0	217.6	80.8	AVG. DELAY (SEC)
	MOVEMENT LOS	F	B	A	F	B	A	E	E	E	E	E	F	F	LOS
	MOVEMENT V/C	2	0.59	0.07	0.96	0.59	0.14	0.49	0.16	0.57	0.69	0.2	1.26	0.83	V/C RATIO
	QUEUE (FT)	#607	510	21	#246	509	44	184	97	117	262	115	#454		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: Hiatus Rd.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	67.2	79.4	21.9	133.5	29.9	20.4	101.6	57.0	208.5	61.6	55.9	48.3	70.3	AVG. DELAY (SEC)
	MOVEMENT LOS	E	E	C	F	C	C	F	E	F	E	E	D	E	LOS
	MOVEMENT V/C	0.48	1.07	0.22	1.05	0.69	0.15	0.98	0.56	1.27	0.87	0.68	0.24	1.09	V/C RATIO
	QUEUE (FT)	101	#1203	83	#272	555	44	#272	221	#376	#341	313	46		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	89.8	35.6	21.3	172.1	31.8	21.9	512.1	113.0	94.7	510.9	76.5	74.0	93.6	AVG. DELAY (SEC)
	MOVEMENT LOS	F	D	C	F	C	C	F	F	F	F	E	E	F	LOS
	MOVEMENT V/C	0.77	0.84	0.31	1.14	0.77	0.35	1.96	1.01	0.86	1.95	0.76	0.63	1.18	V/C RATIO
	QUEUE (FT)	211	912	98	#391	780	111	#821	#529	206	#770	346	112		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.

Intersection: Palm Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	65.0	154.9	35.6	78.1	41.2	33.4	65.1	45.1	45.2	108.1	92.5	41.5	89.7	AVG. DELAY (SEC)
	MOVEMENT LOS	E	F	D	E	D	C	E	D	D	F	F	D	F	LOS
	MOVEMENT V/C	0.71	1.24	0.43	0.87	0.75	0.35	0.69	0.63	0.59	1.00	1.05	0.44	1.07	V/C RATIO
	QUEUE (FT)	180	#1048	139	#254	475	60	168	327	146	#297	#691	146		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	138.1	142.8	41.6	83.9	135.7	45.0	160.2	69.3	58.4	150.0	57.2	55.7	114.5	AVG. DELAY (SEC)
	MOVEMENT LOS	F	F	D	F	F	D	F	E	E	F	E	E	F	LOS
	MOVEMENT V/C	1.05	1.18	0.4	0.72	1.16	0.49	1.12	0.88	0.65	1.09	0.66	0.58	1.04	V/C RATIO
	QUEUE (FT)	#396	#1346	201	214	#1278	235	#433	623	294	#417	441	192		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: Douglas Rd.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	62.1	23.5	19.9	65.5	18.2	14.5	93.8	55.2	74.0	62.6	61.2	58.2	35.1	AVG. DELAY (SEC)
	MOVEMENT LOS	E	C	B	E	B	B	F	E	E	E	E	E	D	LOS
	MOVEMENT V/C	0.35	0.64	0.40	0.61	0.38	0.04	0.91	0.46	0.79	0.56	0.62	0.41	0.71	V/C RATIO
	QUEUE (FT)	71	482	89	121	248	18	#353	151	69	156	167	48		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	84.0	46.0	28.8	245.2	60.6	23.4	1236.8	75.7	80.7	124.4	69.2	72.4	161.9	AVG. DELAY (SEC)
	MOVEMENT LOS	F	D	C	F	E	C	F	E	F	F	E	E	F	LOS
	MOVEMENT V/C	0.69	0.91	0.42	1.33	1	0.18	3.54	0.78	0.77	0.93	0.62	0.64	1.26	V/C RATIO
	QUEUE (FT)	190	#1114	193	#498	#1343	96	#1645	365	137	#366	287	109		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
 Intersection: University Dr.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	121.0	57.2	55.3	84.5	50.4	46.0	176.6	43.2	39.1	66.5	34.5	31.4	59.7	AVG. DELAY (SEC)
	MOVEMENT LOS	F	E	E	F	D	D	F	D	D	E	C	C	E	LOS
	MOVEMENT V/C	1.03	0.86	0.72	0.87	0.69	0.45	1.17	0.64	0.37	0.77	0.58	0.37	0.81	V/C RATIO
	QUEUE (FT)	#327	462	218	#256	358	61	#315	416	60	262	392	54		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	94.4	51.5	46.4	120.6	85.5	66.6	435.2	100.8	68.6	89.8	58.0	86.0	106.0	AVG. DELAY (SEC)
	MOVEMENT LOS	F	D	D	F	F	E	F	F	E	F	E	F	F	LOS
	MOVEMENT V/C	0.93	0.74	0.54	0.99	1	0.81	1.77	1.04	0.69	0.9	0.73	0.93	1.08	V/C RATIO
	QUEUE (FT)	#432	573	134	#362	#808	275	#774	#754	194	#402	511	339		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: N/S 72nd Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	64.9	40.5	0.0	64.6	35.2	0.0	163.0	35.3	34.7	67.5	35.4	35.8	47.4	AVG. DELAY (SEC)
	MOVEMENT LOS	E	D	0	E	D	0	F	D	C	E	D	D	D	LOS
	MOVEMENT V/C	0.52	0.82	0.00	0.44	0.63	0.00	1.13	0.27	0.23	0.66	0.20	0.21	0.61	V/C RATIO
	QUEUE (FT)	119	549	95	387	#501	208	54	#214	153	49	0	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	84.0	41.7	0.0	74.2	55.8	0.0	280.5	54.2	45.4	94.1	57.2	56.5	66.6	AVG. DELAY (SEC)
	MOVEMENT LOS	F	D	0	E	E	0	F	D	D	F	E	E	E	LOS
	MOVEMENT V/C	0.72	0.83	0	0.57	0.97	0	1.42	0.55	0.17	0.81	0.51	0.46	0.88	V/C RATIO
	QUEUE (FT)	#205	701	152	#922	#674	348	66	#266	294	122	0	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Pines Blvd.
Intersection: SW 64th Way

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	0.0	50.4	0.0	72.4	30.2	0.0	23.2	0.0	25.5	0.0	0.0	0.0	40.8	AVG. DELAY (SEC)
	MOVEMENT LOS	0	D	0	E	C	0	C	0	C	0	0	0	D	MOVEMENT LOS
	MOVEMENT V/C	0.00	0.86	0.00	0.48	0.59	0.00	0.03	0.00	0.19	0.00	0.00	0.00	0.50	MOVEMENT V/C
	QUEUE (FT)	0	572	0	125	356	0	40	0	47	0	0	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	0.0	34.1	0.0	74.9	24.3	0.0	38.1	0.0	39.9	0.0	0.0	0.0	30.4	AVG. DELAY (SEC)
	MOVEMENT LOS	0	C	0	E	C	0	D	0	D	0	0	0	C	MOVEMENT LOS
	MOVEMENT V/C	0	0.59	0	0.75	0.81	0	0.09	0	0.19	0	0	0	0.60	MOVEMENT V/C
	QUEUE (FT)	0	377	0	299	551	0	87	0	51	0	0	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.

Intersection: N 64th Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	U	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	74.6	6.0	0.0	8.1	10.9	8.2	0.0	0.0	0.0	75.9	0.0	57.8	14.6	AVG. DELAY (SEC)
	MOVEMENT LOS	E	A	0	A	B	A	0	0	0	E	0	E	B	LOS
	MOVEMENT V/C	0.48	0.42	0.00	0.02	0.38	0.05	0.00	0.00	0.00	0.78	0.00	0.20	0.49	V/C RATIO
	QUEUE (FT)	110	264	0	6	300	27	0	0	0	313	0	38		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	73.0	8.6	0.0	77.6	20.2	11.5	0.0	0.0	0.0	73.9	0.0	61.7	20.9	AVG. DELAY (SEC)
	MOVEMENT LOS	E	A	0	E	C	B	0	0	0	E	0	E	C	LOS
	MOVEMENT V/C	0.58	0.4	0	0.24	0.75	0.23	0	0	0	0.75	0	0.45	0.73	V/C RATIO
	QUEUE (FT)	172	306	0	40	854	116	0	0	0	298	0	55		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.
Intersection: Florida's Turnpike

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	0.0	33.1	498.3	287.2	13.0	0.0	45.1	0.0	616.1	0.0	0.0	0.0	278.8	AVG. DELAY (SEC)
	MOVEMENT LOS	0	C	F	F	B	0	D	0	F	0	0	0	F	LOS
	MOVEMENT V/C	0.00	0.55	2.00	1.47	0.30	0.00	0.50	0.00	2.23	0.00	0.00	0.00	1.98	V/C RATIO
	QUEUE (FT)	0	395	#1685	#761	182	0	294	0	#1667	0	0	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	0.0	51.0	251.6	68.1	18.7	0.0	114.5	0.0	505.3	0.0	0.0	0.0	135.6	AVG. DELAY (SEC)
	MOVEMENT LOS	0	D	F	E	B	0	F	0	F	0	0	0	F	LOS
	MOVEMENT V/C	0	0.82	1.42	0.9	0.66	0	1.1	0	1.98	0	0	0	1.46	V/C RATIO
	QUEUE (FT)	0	562	#744	506	493	0	#910	0	#1149	0	0	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.
Intersection: N/S 62nd Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
AM	AVG. DELAY (SEC)	78.6	29.4	0.0	41.0	18.4	0.0	254.8	55.4	0.0	52.9	76.9	0.0	51.2	AVG. DELAY (SEC)
	MOVEMENT LOS	E	C	0	D	B	0	F	E	0	D	E	0	D	LOS
	MOVEMENT V/C	0.36	0.77	0.00	0.12	0.40	0.00	1.41	0.48	0.00	0.13	0.74	0.00	0.93	V/C RATIO
	QUEUE (FT)	60	816	0	24	316	0	#767	251	0	54	250	0		QUEUE (FT)
PM	AVG. DELAY (SEC)	78.0	47.5	0.0	60.1	41.5	0.0	55.0	46.8	0.0	38.8	54.3	0.0	46.2	AVG. DELAY (SEC)
	MOVEMENT LOS	E	D	0	E	D	0	E	D	0	D	D	0	D	LOS
	MOVEMENT V/C	0.62	0.93	0	0.18	0.82	0	0.84	0.46	0	0.16	0.5	0	0.87	V/C RATIO
	QUEUE (FT)	166	#907	0	39	654	0	#428	328	0	70	292	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.

Intersection: U.S. 441 (S.R. 7)

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	57.4	101.9	0.0	58.5	47.5	0.0	431.7	59.7	35.0	447.0	73.6	36.6	115.9	AVG. DELAY (SEC)
	MOVEMENT LOS	E	F	0	E	D	0	F	E	D	F	E	D	F	LOS
	MOVEMENT V/C	0.70	1.11	0.00	0.54	0.82	0.00	1.80	0.94	0.30	1.83	1.01	0.38	1.15	V/C RATIO
	QUEUE (FT)	196	#757	0	109	389	0	#729	#600	54	#745	#668	128		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	73.4	60.8	0.0	113.0	93.3	0.0	674.5	113.4	41.8	92.3	68.4	50.3	125.1	AVG. DELAY (SEC)
	MOVEMENT LOS	E	E	0	F	F	0	F	F	D	F	E	D	F	LOS
	MOVEMENT V/C	0.79	0.94	0	0.97	1.05	0	2.31	1.1	0.29	0.85	0.94	0.58	1.23	V/C RATIO
	QUEUE (FT)	280	657	0	#287	#747	0	#1148	#942	98	#331	#713	245		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.

Intersection: N/S 56th Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	88.9	45.8	0.0	109.4	31.5	0.0	31.6	39.1	0.0	30.9	37.7	0.0	42.4	AVG. DELAY (SEC)
	MOVEMENT LOS	F	D	0	F	C	0	C	D	0	C	D	0	D	LOS
	MOVEMENT V/C	0.66	0.87	0.00	0.83	0.47	0.00	0.30	0.41	0.00	0.29	0.35	0.00	0.65	V/C RATIO
	QUEUE (FT)	117	610	0	#215	279	0	#157	310	0	#130	278	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	86.9	107.6	0.0	96.1	169.7	0.0	105.7	30.8	0.0	88.8	30.1	0.0	120.3	AVG. DELAY (SEC)
	MOVEMENT LOS	F	F	0	F	F	0	F	C	0	F	C	0	F	LOS
	MOVEMENT V/C	0.79	1.1	0	0.89	1.26	0	0.88	0.47	0	0.78	0.43	0	0.78	V/C RATIO
	QUEUE (FT)	#203	#658	0	#295	#891	0	#233	315	0	#192	291	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.
Intersection: Park Rd.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	55.4	36.5	26.0	57.3	28.7	27.0	52.5	39.2	207.6	62.5	33.8	33.3	56.3	AVG. DELAY (SEC)
	MOVEMENT LOS	E	D	C	E	C	C	D	D	F	E	C	C	E	LOS
	MOVEMENT V/C	0.62	0.78	0.11	0.77	0.57	0.44	0.40	0.53	1.33	0.79	0.30	0.22	0.94	V/C RATIO
	QUEUE (FT)	128	409	30	#218	296	51	81	255	#653	#198	157	45		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	91.0	43.5	33.9	78.8	44.1	35.4	76.4	55.7	105.1	82.0	49.5	54.6	55.8	AVG. DELAY (SEC)
	MOVEMENT LOS	F	D	C	E	D	D	E	E	F	F	D	D	E	LOS
	MOVEMENT V/C	0.84	0.68	0.18	0.81	0.82	0.52	0.54	0.5	0.99	0.79	0.43	0.55	0.85	V/C RATIO
	QUEUE (FT)	#257	530	108	298	707	217	126	309	172	253	299	139		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.

Intersection: I-95 SB

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	0.0	37.7	0.6	8.1	8.7	0.0	0.0	0.0	0.0	238.3	0.0	1.3	46.5	AVG. DELAY (SEC)
	MOVEMENT LOS	0	D	A	A	A	0	0	0	0	F	0	A	D	LOS
	MOVEMENT V/C	0.00	0.70	0.35	0.45	0.68	0.00	0.00	0.00	0.00	1.39	0.00	0.53	0.82	V/C RATIO
	QUEUE (FT)	0	364	0	m34	m54	0	0	0	0	#593	0	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	0.0	54.1	0.8	1.4	5.0	0.0	0.0	0.0	0.0	566.5	0.0	1.2	100.8	AVG. DELAY (SEC)
	MOVEMENT LOS	0	D	A	A	A	0	0	0	0	F	0	A	F	LOS
	MOVEMENT V/C	0	0.73	0.42	0.3	0.63	0	0	0	0	2.08	0	0.52	0.86	V/C RATIO
	QUEUE (FT)	0	457	0	m5	m114	0	0	0	0	#1051	0	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

m = Volume for 95th percentile queue is metered by upstream signal.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.

Intersection: I-95 NB

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
Peak Period		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
AM	AVG. DELAY (SEC)	6.2	6.2	0.0	0.0	58.4	2.2	124.4	0.0	0.4	0.0	0.0	0.0	28.7	AVG. DELAY (SEC)
	MOVEMENT LOS	A	A	0	0	E	A	F	0	A	0	0	0	C	LOS
	MOVEMENT V/C	0.56	0.57	0.00	0.00	0.90	0.66	1.10	0.00	0.27	0.00	0.00	0.00	0.79	V/C RATIO
	QUEUE (FT)	m53	m54	0	0	#319	0	#421	0	0	0	0	0		QUEUE (FT)
PM	AVG. DELAY (SEC)	12.1	14.5	0.0	0.0	147.6	1.1	49.1	0.0	0.6	0.0	0.0	0.0	46.2	AVG. DELAY (SEC)
	MOVEMENT LOS	B	B	0	0	F	A	D	0	A	0	0	0	D	LOS
	MOVEMENT V/C	0.55	0.75	0	0	1.15	0.5	0.67	0	0.36	0	0	0	0.79	V/C RATIO
	QUEUE (FT)	m64	m89	0	0	#576	0	444	0	0	0	0	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

m = Volume for 95th percentile queue is metered by upstream signal.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.

Intersection: N/S 24th Ave.

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	25.9	28.3	0.0	31.8	42.3	0.0	9.5	9.6	0.0	15.9	16.5	0.0	28.9	AVG. DELAY (SEC)
	MOVEMENT LOS	C	C	0	C	D	0	A	A	0	B	B	0	C	LOS
	MOVEMENT V/C	0.40	0.59	0.00	0.10	0.78	0.00	0.18	0.13	0.00	0.09	0.16	0.00	0.37	V/C RATIO
	QUEUE (FT)	64	213	0	24	229	0	77	69	0	52	93	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	23.4	23.9	0.0	33.1	40.8	0.0	12.8	13.0	0.0	19.9	21.7	0.0	28.0	AVG. DELAY (SEC)
	MOVEMENT LOS	C	C	0	C	D	0	B	B	0	B	C	0	C	LOS
	MOVEMENT V/C	0.51	0.57	0	0.44	0.82	0	0.21	0.17	0	0.09	0.25	0	0.47	V/C RATIO
	QUEUE (FT)	84	235	0	79	277	0	80	94	0	46	126	0		QUEUE (FT)

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.
 Intersection: Dixie Highway SB

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	0.0	41.2	0.0	4.1	4.0	0.0	0.0	0.0	0.0	34.1	37.8	120.7	45.1	AVG. DELAY (SEC)
	MOVEMENT LOS	0	D	0	A	A	0	0	0	0	C	D	F	D	LOS
	MOVEMENT V/C	0.00	0.82	0.00	0.03	0.25	0.00	0.00	0.00	0.00	0.20	0.59	1.09	0.58	V/C RATIO
	QUEUE (FT)	0	255	0	m6	29	0	0	0	0	73	161	71		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	0.0	180.0	0.0	0.5	0.6	0.0	0.0	0.0	0.0	79.2	159.2	713.7	217.6	AVG. DELAY (SEC)
	MOVEMENT LOS	0	F	0	A	A	0	0	0	0	E	F	F	F	LOS
	MOVEMENT V/C	0	1.21	0	0.06	0.22	0	0	0	0	0.52	1.1	2.36	0.66	V/C RATIO
	QUEUE (FT)	0	#761	0	m1	m3	0	0	0	0	174	#393	117		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

m = Volume for 95th percentile queue is metered by upstream signal.

Capacity Analysis Summary - Existing Conditions

Corridor: Hollywood Blvd.

Intersection: Dixie Highway NB

Peak Period		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL INTERSECTION	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
<i>AM</i>	AVG. DELAY (SEC)	1.9	2.0	0.0	0.0	33.3	0.0	39.7	36.3	34.3	0.0	0.0	0.0	20.0	AVG. DELAY (SEC)
	MOVEMENT LOS	A	A	0	0	C	0	D	D	C	0	0	0	C	LOS
	MOVEMENT V/C	0.26	0.38	0.00	0.00	0.42	0.00	0.57	0.37	0.08	0.00	0.00	0.00	0.43	V/C RATIO
	QUEUE (FT)	m9	m13	0	0	173	0	168	102	21	0	0	0		QUEUE (FT)
<i>PM</i>	AVG. DELAY (SEC)	1.0	3.0	0.0	0.0	129.1	0.0	36.6	35.2	32.2	0.0	0.0	0.0	43.3	AVG. DELAY (SEC)
	MOVEMENT LOS	A	A	0	0	F	0	D	D	C	0	0	0	D	LOS
	MOVEMENT V/C	0.43	0.72	0	0	1.04	0	0.33	0.26	0.06	0	0	0	0.62	V/C RATIO
	QUEUE (FT)	m4	m6	0	0	#710	0	269	198	26	0	0	0		QUEUE (FT)

Note:

= 95th percentile volume exceeds capacity, queue may be longer.

m = Volume for 95th percentile queue is metered by upstream signal.

APPENDIX F:
Questions and Answers Public Handout

Multimodal Corridor *Hollywood Boulevard/Pines Boulevard* STUDY

Questions and Answers

Q. Why is the Hollywood Boulevard/Pines Boulevard corridor being studied?

A. The Broward County Metropolitan Planning Organization (MPO) identified 16 corridors in Broward County that are in need of congestion mitigation. The Hollywood/Pines Boulevard corridor is among the 16 corridors identified. This study is being conducted to examine the factors contributing to congestion, and to examine solutions to ease traffic congestion on the Hollywood Boulevard/Pines Boulevard corridor

Q. What are the boundary limits of the study?

A. The eastern boundary of the study is Hollywood Boulevard at Young Circle in Hollywood and the western boundary of the study is U.S. 27 in Pembroke Pines.

Q. Have any of the other corridors been studied?

A. Four of the 16 corridors in need of congestion mitigation have already been studied. Those corridors include:

- Oakland Park Boulevard (1995)
- U.S. 441 (1998)
- Atlantic Boulevard (1999)
- Sunrise Boulevard (2001)

Q. Who is conducting the study?

A. The Broward County Metropolitan Planning Organization has contracted with Kimley-Horn and Associates (KHA), a nationwide transportation engineering company to conduct the study. The Fort Lauderdale office of KHA is managing this study.

Multimodal Corridor STUDY

Q. Why is public involvement an important part of the study?

- A. Both the Metropolitan Planning Organization and Kimley-Horn and Associates want to ensure that stakeholders in Hollywood have the opportunity to provide input that may be taken into consideration during data analysis and when recommendations for traffic congestion mitigation are being developed.

Q. What has been done so far?

- A. The data collection phase was completed and the data analysis phase of the study is under way. The public involvement phase is an on going effort through the course of the study.

Q. Are the cities being studied involved in the Hollywood Boulevard/Pines Boulevard multi-modal study?

Yes. A Technical Advisory Committee was established and is in place to provide technical support and assistance needed during the data collection process and to guide the development of the study. Representatives from the City of Hollywood and Pembroke Pines are members of this Committee. Other members include representatives from State and County agencies.

Q. What is the next step in the process?

- A. The next step is to allow stakeholders and governmental agencies within the study area to provide input on the study. Ultimately, a congestion management plan will be developed. The plan will provide recommendations on how to reduce congestion in the study area. The basis of this plan will be used to apply for state and federal funding to implement the recommendations.

Q. How does this study relate to several others that are being conducted by other County and State agencies?

- A. Several transportation programs and plans were reviewed to gather information regarding future improvements in the study area. The review of documents helped to generate information about the future conditions of the corridor. Recommendations developed for the Hollywood/Pines Boulevard Multimodal Corridor Study should be compatible with improvements identified in work programs and other long-range planning efforts.

APPENDIX G:
Reports from Public Involvement Activities

Hollywood Boulevard/Pines Boulevard Corridor Study
Presentation to the Hollywood Citizen Transportation Committee
Thursday, November 13, 2003
Hollywood City Hall
6:30 p.m.

Citizen Transportation Committee members in attendance: Don Levine, John Vetter, Robert Goodman, Duane Grant, Jean Johnson, Phillip Schentrup and Bradley Swing. Also in attendance, Gil Martinez, City of Hollywood, Arlene Allen-Mitchell, Dynamic Perceptions, Inc., Enrique Zelaya, Metropolitan Planning Organization, Tommy Dawson, Metropolitan Planning Organization, Freddie Vargas, Kimley-Horn and Associates, Inc. and Stewart Robertson, Kimley-Horn and Associates, Inc.

Freddie Vargas of Kimley-Horn and Associates, Inc. began the presentation to the Hollywood Citizen Transportation Committee at 6:45 p.m. He provided the group with an overview of how the study was initiated by saying that the MPO has identified corridors in Broward County that are congested. He also said the purpose of the study is to identify strategies to reduce the congestion of Hollywood Boulevard and Pines Boulevard. Mr. Vargas explained that the boundaries for the study include from U.S. 27 on the west to Young Circle on the east. Mr. Vargas said that the original study boundaries extended to A1A, but the City of Hollywood requested that the segment from Young Circle to A1A be excluded.

A question was raised by a CTC member regarding the impact of excluding A1A in the study. Mr. Vargas responded that the City of Hollywood may have other plans for the segment and that each strategy recommended for congestion mitigation will be prioritized based on funding.

Mr. Vargas then gave an analysis of data collected and analyzed with regard to existing traffic conditions on Hollywood Boulevard. He explained that conditions were analyzed for five transportation modes: pedestrian, bicycle, transit, multimodal and roadway. He also described the level of service for roadway segments on the corridor during morning and afternoon peak times. He provided an overview of the performance of roadway segments one and two, which include Young Circle to N/S 64th Avenue and N/S 64th Avenue to Hiatus Road.

A question was raised by a CTC member regarding the difference in level of service between the north and south side of the street at Young Circle. Another question was raised regarding the metrics used for the analysis, which determined level of service. Mr. Vargas responded that factors used to determine the performance of roadway segments included the presence or lack of sidewalks, traffic volume, lateral separation of pavement, width of lanes and the presence of on-street parking. Mr. Vargas also said he will re-review the data to ensure the level of service calculations are accurate and will provide his findings to the CTC.

Another CTC member asked if the study was done prior to Harrison Street becoming a two-way street and whether or not the impact of the two-way street has been documented. Mr. Vargas responded that the data had been collected prior to Harrison Street becoming a two-way street, therefore, the impact is not yet known.

Mr. Vargas then gave an analysis of crash data from 1999 to 2001. This data was also used to determine the level of service on Hollywood Boulevard. Mr. Vargas indicated that there are concerns about the number of crashes in Hollywood.

Bicycle safety on Hollywood Boulevard was then discussed. A question was raised about the crash data relating to bicycle accidents and whether bicycle crashes occurred when cyclists were walking or riding their bicycles. Mr. Vargas responded that most crashes do not occur when a person is walking their bicycle. Another question was raised regarding whether or not crashes occur at signalized intersections. Mr. Vargas said he would examine the data to provide an answer to this question. Mr. Vargas said the areas of concern for bicyclists are the areas of McArthur High School and West Hollywood Elementary School.

Stewart Robertson then discussed level of service on Hollywood Boulevard from a public transportation perspective. In Hollywood, Young Circle dominates passenger activity. He also said that the majority of bus stops do not have bus shelters. He said that one outcome of the study may be to recommend moving bus stops from one side of the street to another, or to recommend an Express Service with fewer stops along the route.

Discussion followed about bus shelters. A comment was made that the City of Hollywood requested that shelters be removed because the shelters attracted transients. The comment was also made that the City of Hollywood was looking into moving the transfer facility to Polk Street and that \$1.6 million was to be allocated for that project. Gil Martinez from the City's planning staff will find out the status of the relocation effort.

The function of the roadway was then discussed. Mr. Robertson said that cars are the most used form of transportation along Hollywood Boulevard. He said recommendations will be to move towards other transportation means to ease congestion.

Mr. Robertson said that the next step in the Hollywood Boulevard/Pines Boulevard corridor study is to provide a five-year outlook for the corridor.

The presentation concluded at 8:00 p.m.

Hollywood Boulevard/Pines Boulevard Corridor Study
Presentation to Hollywood Residents
Thursday, December 4, 2003
6:30 p.m.
3250 Hollywood Boulevard

In attendance: Suzanne Kincaid, Hollywood Lakes Section Civic Association, Leslee Gibbs, Hollywood Lakes Section Civic Association, Cynthia Greene-Eason, Condo Presidents of Hollywood Beach, Alan Steib, Condo Presidents of Hollywood Beach, Linda Wilson, Hollywood Lakes Section Civic Association, Jason Price, Metropolitan Planning Organization, Enrique Zelaya, Metropolitan Planning Organization, Tommy Dawson, Metropolitan Planning Organization, Arlene Allen-Mitchell, Dynamic Perceptions, Inc., Stewart Robertson, Kimley-Horn and Associates, Inc., Freddie Vargas, Kimley-Horn and Associates, Inc.

Note: Letters were sent to presidents of 38 Homeowners and Civic Associations in the City of Hollywood inviting them to a presentation on the Hollywood Boulevard/Pines Boulevard Corridor Multimodal Study. The presidents were also asked to encourage their members to attend.

Freddie Vargas of Kimley-Horn and Associates began the presentation by giving an overview of why the study is taking place. He explained that the level of service of Hollywood Boulevard was analyzed from a multimodal perspective; that is different modes of transportation, including cars, bicycles, pedestrian, multimodal and roadway.

Mr. Vargas then provided an analysis of existing transportation conditions on Hollywood Boulevard. A question was raised on whether vehicular speed was taken into consideration when determining the level of service. Mr. Vargas responded affirmatively.

Mr. Vargas then discussed pedestrian mobility on Hollywood Boulevard. He said problem areas for pedestrians include the 64th Avenue/Florida Turnpike area. He said Hollywood scored 100% as it relates to sidewalk availability throughout the study area.

Mr. Vargas then discussed pedestrian crash data and said that the Turnpike area, State Road 7 and 56th Avenue are the most critical sections relative to crash incidents. A question was raised as to whether or not the widening of U.S. 441 will be taken into account as it relates to recommendations for congestion mitigation. Mr. Vargas responded affirmatively. A question was raised about the source of the crash data. Mr. Vargas responded that the data was obtained from the Florida Department of Transportation. A comment was made that the number of crashes reported for Hollywood seemed low. Mr. Vargas responded that Hollywood Beach, which has the most pedestrians, was not included in the study.

Mr. Vargas then provided an overview of the bicycle analysis that was done for the study area. He said the 72nd Avenue and 64th Avenue area has the highest concentration of

bicycle crashes. A question was raised as to whether or not a determination has been made to delineate bicycle lanes. Mr. Vargas said that this has not yet been decided.

Stewart Robertson discussed the level of service for Hollywood Boulevard as it relates to transit (public transportation). He said Young Circle has the highest passenger activity as it relates to people boarding the bus. The second highest passenger activity in the study area is Pembroke Lakes Mall and Broward Community College.

A question was raised as to whether or not cross routes was analyzed. Mr. Robertson responded that boarding was analyzed because boarding sites would be where infrastructure improvements if recommended, would be made. A question was raised as to whether or not there are more accidents involving pedestrians in areas where there is high passenger activity. Mr. Robertson responded that there are more pedestrian and vehicular accidents in places where there is high passenger activity. Mr. Robertson added that pedestrian improvement should to be made for the entire corridor.

A question was raised as to whether or not the rear end of Young Circle, behind Publix was included in the study. Mr. Robertson said he would check the data to be sure.

Discussion ensued about who is responsible for bus bench placement. Mr. Zelaya responded that some benches are installed by individual cities, some by Broward County and some by private contractors.

Discussion then ensued as to why A1A is not included in the study. Mr. Zelaya responded that the City of Hollywood requested that this area be excluded from the study. Discussion ensued on how to have A1A included in the study. A comment was made from residents they will take the matter up with Hollywood city officials.

Mr. Robertson then discussed problem area relating to transit, which includes the Tri-Rail station area. He said county buses cannot access Tri-Rail so passengers must cross the street to board the bus, which presents safety concerns. There are also no bike lanes even though there are bicycles parked at Tri-Rail.

Mr. Robertson said the study will examine how to improve the bus stop infrastructure at Young Circle. Discussion ensued regarding the problem with transients using bus shelters.

Mr. Robertson then discussed the level of service of the roadway. He said the analysis was based on average speed of drivers. A question was raised about the cause of slower speed in some areas. Mr. Robertson said proximity to traffic lights at I-95 and Hollywood Boulevard.

A question was raised about whether or not signalization is an issue. Mr. Robertson responded that the signals are on a short span. He also said in urban areas, there are typically four or fewer signals per mile. However at 64th Avenue and 441 there are 4 in a

quarter mile. The density of the signals contributes to the lower speed, which contributes to a lower level of service.

A question was raised as to whether or not there can be signalization by periods of time. Mr. Robertson said yes, that is already the case in some area where signals have multiple timing patterns. A question was raised as to whether or not the study will examine reconfiguring the signal at the Hollywood Boulevard and the Turnpike and I-95. The response was yes. Mr. Zelaya added that the approach to the study is to mitigate congestion using a multi-modal approach. He said the study will recommend short to medium range solutions (2-5 years).

A question was raised as to whether or not the study will recommend additional entrances to I-95. Mr. Zelaya said that issue is currently being analyzed. He said the study will not recommend widening the roads because that increases capacity which leads to more traffic.

Mr. Robertson the next step in the study is to develop recommendations for traffic congestion mitigation. An implementation plan and financial analysis will also be developed.

A question was raised about funding sources for implementation of recommendations. Mr. Zelaya responded that various funding sources are available, including County Operating Funds, Traffic Engineering Funds, Enhancement Funds and Congestion Mitigation Funds. Mr. Zelaya said intersection improvements typically take 1-2 years. Right of way acquisition is more expensive and the acquisition takes at least 2-4 years. He said the MPO has budgeted \$115 million for right of way acquisition on US 441. A question was raised as to whether or not this study will recommend right of way acquisition. Mr. Zelaya responded that this study will focus on short to medium range solutions.

The presentation concluded at 8:30 p.m.

Hollywood Boulevard/Pines Boulevard Corridor Study
Presentation to Hollywood Council of Civic Associations
Monday, December 15, 2003
Fred Lippman Center
2030 Polk Street
7:45 p.m.

In attendance: Jonathan Anderson, Washington Park Homeowners Association, Chuck Vollman, Park East Civic Association, Alan Steib, Hollywood Beach Civic Association, Shelly Steib, Hollywood Beach Civic Association, Ken Crawford, United Neighbors, Hank Lowenstein, North Beach Civic Association, Patricia Smith, Driftwood Civic Association, Carlos Llanos, Lawn Acres Civic Association, Linda Wilson, Hollywood Lakes Civic Association, Estelle Lowenstein, North Beach Civic Association, Dick Miller, Hollywood Hills Civic Association, Steve Welch, Council of Civic Associations, Freddie Vargas, Kimley-Horn and Associates, Inc., Kimberly Boggs, Kimley-Horn and Associates, Inc., Arlene Allen-Mitchell, Dynamic Perceptions, Inc.

Arlene Allen-Mitchell began by giving an overview of the study and by introducing Freddie Vargas of Kimley-Horn and Associates. She told the group that this study has been commissioned by the Broward County Metropolitan Planning Organization to examine solutions to mitigate the traffic congestion on Hollywood Boulevard.

Mr. Vargas began the presentation by explaining the indicators used to determine the level of service of the Hollywood Boulevard Corridor. He explained that the purpose of the presentation is to provide representatives with information that can be disseminated at various homeowners associations. He also mentioned that a CD of the presentation will be given to Alan Steib so that it can be posted on the Council's website. He also mentioned that questions, comments and ideas can be sent to Kimley-Horn's website.

He then explained the study boundaries include US 27 on the west to Young Circle in the east. He said that there have been inquiries about including A1A in the study. However, the Broward County MPO indicated that the original budget for the study included Young Circle, however the funding was removed after the City of Hollywood requested that A1A be excluded. Currently, the funds are not available to include Young Circle in the study. However, if the City can come up with additional funding, A1A could be included in the study.

Mr. Vargas then said that after the study is complete, Kimley-Horn and Associates will develop a series of strategies on how to alleviate the congestion on the corridor. The strategies will be reviewed by several agencies and will become a tool for the MPO Board to use. Following adoption of the strategies, the county staff will coordinate with the Florida Department of Transportation and the affected cities to seek the funding necessary to implement the strategies recommended in the study.

Mr. Vargas then said that all previous studies and reports pertaining to Hollywood Boulevard have been looked at and information extracted for the current study. In instances where the information was insufficient, Kimley-Horn and Associates conducted field research and collected data.

He explained that travel time was used as an indicator to determine how well or how badly the corridor is performing at various times of the day. Various segments of the corridor were ranked from A, which is the best level of service, to F, which is the worst level of service. He said the study takes a multi-modal approach and includes pedestrian, bicycle, traffic, bus routes.

He said the study will not advocate adding traffic lanes, but will recommend alternate modes of transportation. He said segments that were analyzed were Segment 1: Young Circle to the Florida Turnpike and Segment 2: from the Turnpike to Hiatus Road.

The performance of the corridor from the pedestrian perspective was analyzed first. Mr. Vargas said there is not much difference between how the corridor performs in segment one in the a.m. and p.m. The factors used to determine level of performance include volume of traffic and how far the traffic is from the pedestrian walkway. He said the area from I-95 to Dixie Highway is experiencing a poor level of service.

Mr. Vargas then discussed pedestrian accessibility for Segments 1 and 2, which he described as because there are continuous sidewalks on both sides of the street.

Crash data with pedestrians was analyzed for the whole corridor, not just for the Hollywood section. There were 29 crashes that occurred on the corridor from 1999 to 2001 and 26 occurred near signalized intersections.

A question was raised as to whether or not the crashes occurred because the pedestrians were not using the pedestrian features at the intersections. Mr. Vargas explained that the pedestrians were probably impatient in waiting for the walk signal, which is why the crashes occurred.

A question was raised as to whether or not 29 crashes is considered a high volume of crashes. Mr. Vargas responded that since the data is for several miles of corridor, the number is not considered high, given the fact that there are schools in the area with more pedestrians.

Mr. Vargas summarized the pedestrian level of service by saying that generally speaking the performance of the corridor is okay, however there are areas where there are deficiencies, such as McArthur High School and 56th Avenue.

Mr. Vargas then discussed the performance of the corridor as it relates to bicycles. Bicycle facilities were evaluated: bike lanes, etc. The corridor is deficient in both the a.m. and p.m. Hollywood does not have bicycle lanes in a lot of areas, which forces cyclists to

ride on the street. He said that bicycles are considered vehicles, which is why they were considered as one of the elements of the study.

Regarding collisions, the highest number of collisions between bicycles and vehicles occurred between 72nd and 64th Avenue, because of the school area. However, the fatalities are low, because of the low speed of the vehicles before the crash. Most of the crashes occur when the cyclist is trying to cross the street.

A comment was made that a lack of training on how to ride and the rules of the road is contributing to the problem. Mr. Vargas agreed and said the State and County have programs that provide information to bicyclists and motorists. He said one of the strategies from the study could be to recommend more educational programs along the corridor, using the existing facilities to promote education.

Mr. Vargas then discussed the transit aspect of the study, by saying that the corridor is served by Broward County Transit. He explained which areas have the most number of passengers based on the load factor. He said that the study will examine how to improve the load factor to move more people to buses and encourage them to leave their vehicles behind. In Hollywood, Young Circle is the area with the highest concentration of passengers.

There are 70 bus stops on the corridor and a high percentage of them (51%) have some obstacle. In many instances the bus stops are in the middle of the sidewalk. Only 19% of the bus stops have shelters and bus bays are also lacking. There is no bus service to the Tri Rail station which means the bus has to be accessed from across the street.

Mr. Vargas then discussed the portion of the study that addresses the roadway. Several intersections are failing as the level of service is poor. Of the intersections studied, 10 were level D, 5 or 10 others were F in the a.m., and 11 are at level of service F. Mr. Vargas also said there is not much opportunity to improve access management.

Mr. Vargas then discussed the next steps in the study. He said Kimley-Horn and Associates is calculating how the corridor will operate five years from now. They will continue with public involvement meetings. The next step will involve developing strategies that make the situation better. An implementation plan will be prepared.

Mr. Vargas told the group that the City of Hollywood has representation on the Technical Advisory Committee, the group that is guiding the study effort. He said questions concerns or ideas can be addressed to the representative or to Kimley-Horn and Associates.

The presentation concluded at 8:45 p.m.

MEMORANDUM

To: Enrique Zelaya, Broward County MPO Project Manager
TAC Members

From: Freddie A. Vargas, P.E., KHA Project Manager

Subject: Hollywood/Pines Boulevard CMS Multimodal Study
Hollywood Commission Meeting Minutes

The Commission presentation started at 5:10 PM on May 19, 2004. It was held in the City of Hollywood Commission Chambers during a scheduled Commission meeting. The presentation was conducted by Freddie Vargas, Kimley-Horn Project Manager.

Information about the study including the study limits, goals and findings were presented to the Mayor and Commissioners. A copy of the Powerpoint presentation was made available to the Mayor and each Commissioner. Throughout the presentation, questions were asked and comments were made by the Mayor and Commissioners about specific places in the study area.

Young Circle

Mayor Guilianti asked about the bus stop area in Young Circle. She expressed concerns about the impact of buses that stop in front of buildings on Young Circle. She would like a primary stop for Broward County Transit buses north or south of the circle. Commissioner Wasserstrom suggested that the county use Papa John's for a transit drop-off area.

Hollywood Blvd. Tri-Rail Station

Commissioner Bober asked about the possibility of expanding the Tri-Rail facility. Freddy Vargas reported that the need for parking expansion was identified at the Hollywood-Sheridan Street station. Issues with land use development at the Hollywood Blvd. station were also identified.

Commissioner Bober offered the following comments about the Tri-Rail station on Hollywood Blvd.:

- While he would not support moving the bus station, moving it would make it more multi-modal
- There is a safety issue from I-95 to N. Park Road
- A station would attract an undesirable element

Freddie Vargas indicated that he would ask Tri-Rail about the Hollywood Blvd. station expansion and forward the information to the City of Hollywood.

US441 to the Turnpike

The Mayor asked if the turn on 62nd will be restricted. Freddie indicated that based on study findings the Turnpike traffic causes stacking problems. People who would like to turn on 62nd will have to continue west to 63rd and make a u-turn. This will ease the overflow near the Turnpike.

Other Questions

Commissioner Oliveri requested information about the study schedule and securing of funds to implement the study recommendations. Freddie Vargas reported that the final study information would be presented to the MPO Board in June. This would begin the process for the County to secure funding for the study recommendation.

Hollywood Boulevard/Pines Boulevard Corridor Study
Presentation to the Pembroke Pines City Commission
April 7, 2004
Pembroke Pines City Hall
8:00 p.m.

Elected officials and staff in attendance: Eileen Tesh, City Clerk; Samuel S. Goren, City Attorney; Charles F. Dodge, City Manager; William Armstrong, Commissioner; Frank C. Ortis, Commissioner; Angelo Castillo, Commissioner; Ben Fiorendino, Commissioner; Taj Saddiqui, Public Services Manager; Freddie Vargas, Kimley-Horn and Associates, Inc.; Arlene Allen-Mitchell, Dynamic Perceptions, Inc.

Mr. Vargas began the presentation by giving an overview of the project. He explained that the purpose of the presentation was to provide information on the strategies that would be recommended for Pembroke Pines as it relates to the Pines/Hollywood Boulevard Corridor Multimodal Study.

Pedestrian Mode

Mr. Vargas said that 91 percent of the corridor in Pembroke Pines has sidewalks. The deficiency occurs at Pines Boulevard at the I-75 bridge. The study will recommend that new sidewalks be constructed at 96th and 91st Avenue and that a series of connections be made at the North/South direction of Palm Avenue, Douglas Road and University Drive.

Bicycle

Mr. Vargas said that the study will recommend upgrading the sidewalk from I-75 to NW 83rd Avenue to provide for a multipurpose path.

Transit

There are 13 bus stops in the west bound direction on Pines Boulevard and 8 bus stops in the east bound direction. Many of these bus stops do not have benches or trash containers. Accessibility to bus stops is impaired and in some instances, bus benches are in the middle of the sidewalk. The research found that in 17 locations, access to the bus stop is blocked or impeded because the path to the bus stop does not continue. As a result, far side bus bays are recommended.

The study will also propose a limited stop bus service for Route 7, which will reduce passenger's wait time from 30 minutes to 20 minutes. It will also reduce the length of passenger's trip from Pembroke Lakes Mall to Young Circle Park in Hollywood. The study is also proposing a Neighborhood Transit Center with enhanced bench design. A multi-modal hub is being proposed with information kiosks and other amenities to improve service.

Roadway

There are roads in Pembroke Pines that are performing at a Level of Service F, the worst level of service. Geometric lane improvements are being proposed to bring the level of

service from F to D. A turbo lane is being proposed for Pines Boulevard and 155th Avenue. At Hiatus Road, north and south bound dual left turn lanes are being proposed and it is recommended that the south bound through lane be extended. This will reduce the delay in this area by 35%.

Mr. Vargas then said that the next step in the process is to prepare the final report and develop an implementation plan for the recommendations.

Commissioner Ortis commented that he suggested at FDOT meetings that no U-turns be allowed at Pines Boulevard and Flamingo Road. He asked what the status of this recommendation was. Mr. Vargas responded that he will explore the matter further.

The presentation concluded at 8:30 p.m.

Pembroke Lakes Homeowners Association Meeting
Tuesday, May 20, 2004
7:30 p.m.

In attendance: Freddie Vargas, Kimley-Horn and Associates, Inc.; Tommy Dawson, Metropolitan Planning Organization; Arlene Allen-Mitchell, Dynamic Perceptions, Inc.; and members of the Pembroke Lakes Homeowners Association.

The meeting was called to order at 7:35 p.m. by Paul Girelli, Pembroke Lakes Homeowners Association President. Mr. Girelli began the meeting by introducing Tommy Dawson and Freddie Vargas.

Mr. Vargas began his presentation by explaining the purpose of the study, which is to evaluate the multimodal elements of Pines Boulevard. He explained to the group that the study is nearing completion and that the study team is currently working on the financial analysis of the recommendations. He also explained that public involvement meetings have been held along the corridor throughout the project.

Study Findings

Sidewalks

Mr. Vargas explained to the group that sidewalks are missing in some areas because there is no development in some areas west of I-75. In addition, there are no sidewalks on the bridge over I-75. He is recommending that the bridge cross-section be evaluated so people can safely cross the bridge. Sidewalks are also missing at 96th and 91st streets and the recommendation is for sidewalks to be constructed. In the Palm Avenue/Douglas Road area, sidewalk connectors are needed on the north and south sides of the streets.

Bicycles

The study team is recommending that a multi-purpose path be built from US 27 to NW 155th Street and Pines Boulevard. The path would consist of sidewalk and bicycle lane to be shared by walkers and bicyclers. From NW 155th street to 83rd Avenue over I-75 the right of way is reduced. The study team is recommending that a bicycle lane be added. There will also be a recommendation to add bicycle lanes on Johnson Street.

Transit

The study team found that 21 bus stops along Pines Boulevard have no trash containers or shelter for passengers. The team is recommending that 15 stops be provided with shelters. In addition, obstacles that impede access to the bus stop need to be removed at 17 stops. And, in some locations, access paths need to be constructed from the sidewalk to the bus stop. Mr. Vargas mentioned to the group that Broward County Transit is proposing adding more stops along Route 7, which runs along Pines Boulevard. The additional routes will reduce the wait time from 30 minutes to 20 minutes. The additional buses are planned for 2009; however, the study team is proposing that the routes be added by 2008. The study team is also proposing a limited stop buses for Route 7. These buses will only stop at critical stops.

Multimodal

The study team is proposing three Neighborhood Transit Centers with enhanced bench design. He showed the group a similar concept in the Orlando area. The enhanced benches will be comfortable for passengers waiting for buses and would discourage people from using the benches to sleep overnight. One of the multi-modal hubs is proposed for Pembroke Lakes Mall.

Roadway

The study team found that several intersections are operating at a poor level of service in Pembroke Pines. The team is recommending that the Pines and US 27 intersection incorporate a Florida T intersection. With this design, the southbound traffic never moves and the westbound left turn traffic movement uses the median.

The team is also recommending that at Pines Boulevard and 155th Avenue, a lane be added from 155th Avenue east to I-75 and a third lane be added in the southbound direction. That would bring that intersection from a level of service F to a level of service D. At Pines and Hiatus Road, the team is recommending that dual left turn lanes be added northbound and southbound. This will provide a 37% reduction in delay at that area.

At Palm Avenue, the team recommends that a thru lane be added in the southbound direction going towards city hall. This will provide a 35% reduction in delay. At Pines Boulevard and 118th Avenue, the team recommends extending the left storage length.

Mr. Vargas explained to the group that the study is not looking at the Pines Boulevard and Flamingo Road Intersection because it is currently the focus of a PD&E study. The team is also not recommending any improvements to Pines Boulevard and University Drive because the improvements cannot be made in the short term.

Next Steps

Mr. Vargas told the group that the next step in the study process to make the recommendations to the MPO board for their approval.

Questions and Answers

Questions were then solicited from the group.

- Q. Does the study take into account air quality reduction?
- A. Mr. Vargas explained that a reduction in traffic reduces pollution and improves air quality. With improvements in delay comes a reduction in pollutants.

- Q. How will sidewalk allow for sharing with bicyclers and walkers?
- A. There is room for sidewalk to be expanded to include a bike lane and a lane for walkers. In addition, the bike lane will remove bikes from the road.

- Q. Why does the diagram show Pines Boulevard going over Flamingo Road? Does that include roadway construction similar to the Aventura area?

A. This study does not look at that intersection because on an ongoing FDOT study.

Q. If dual turn lanes are added at Pines and Hiatus, where will the property in that area go?

A. There is enough right-of-way available in the area to allow for the addition of the lanes.

Q. What can be done about the overflow traffic that is currently on Taft Street?

A. The County has plans for aesthetic improvements along the corridor that will allow for traffic calming.

Q. Did the study look at the Town Center Project that is proposed for the City Hall area and the traffic it will generate?

A. Information was received, but later on the study. The study team had been seeking information but didn't receive it until later on in the study.

The presentation concluded at 8:45 p.m.