

CITY OF HALLANDALE BEACH

2030 Transportation Master Plan
Presentation to City Commission
June 9, 2009





PROJECT TEAM

HDR

Project Management/Transportation Planning



Media Relations Group, LLC
Public Involvement



Traffic Count Data Collection



Traffic Modeling



HDR

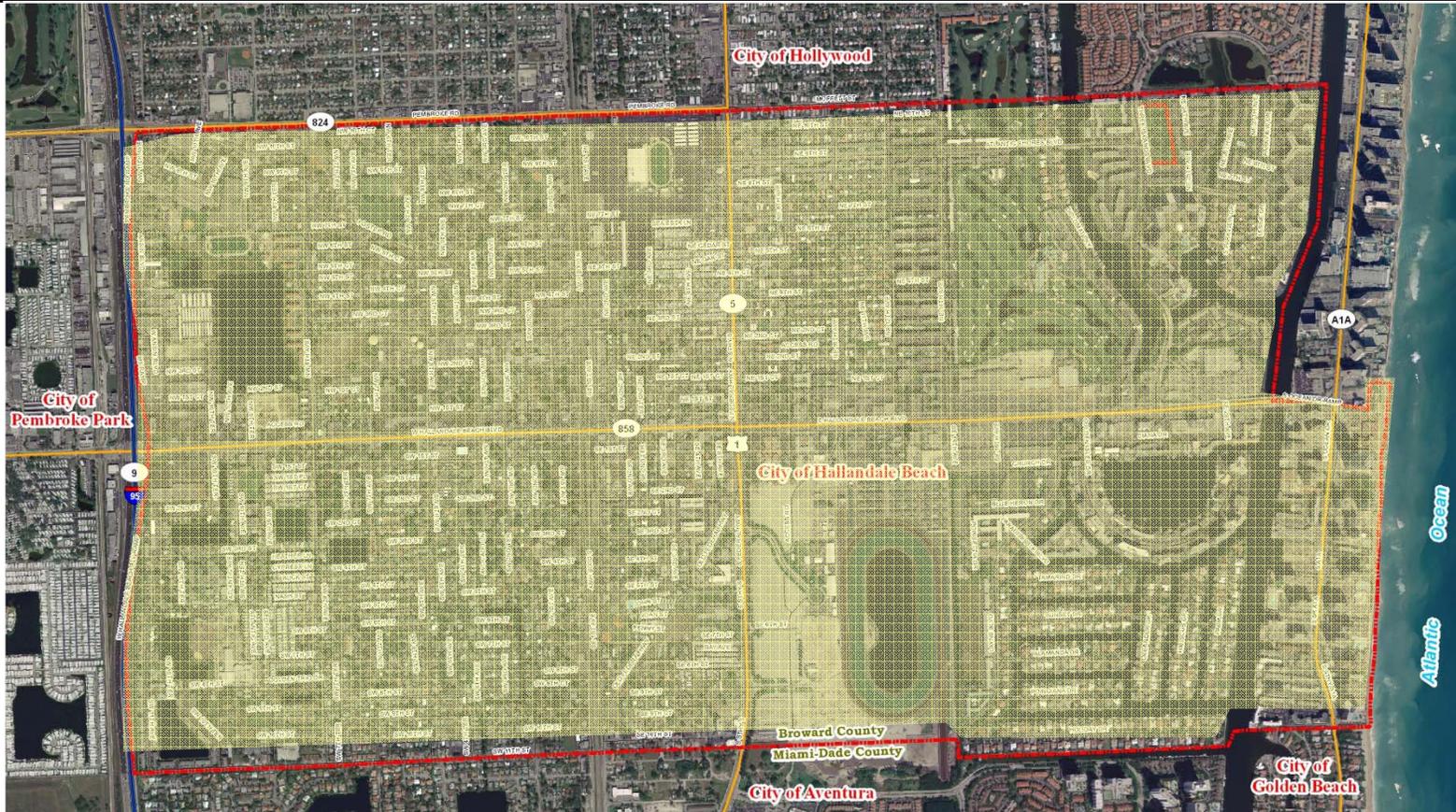


OBJECTIVES

The objective of this plan is to conduct a City-wide transportation study and prepare a Transportation Master Plan to determine project needs and costs based on the impact of accommodating current and anticipated traffic growth.

The plan recommends both short-term, mid-term, and long-range improvements (2009-2030).

STUDY AREA



FUTURE TRAFFIC GROWTH ESTIMATES

Road Name	From	To	AADT		Growth 2005-2030	
			2005	2030	Volume	%
W-E						
Pembroke Rd	I-95	S 28th AVE	40,000	49,600	9,600	24
	S 28th AVE	W 8th AVE	-	-	-	-
	W 8th AVE	Dixie Hwy	-	-	-	-
	Dixie Hwy	E 1st AVE	-	-	-	-
	E 1st AVE	US-1	24,000	-	-	-
NE 10th ST	US-1	S 14th AVE	6,700	9,400	2,700	40
NE 9th ST	US-1	S 14th AVE	8,500	4,200	-4,300	-51
	S 14th AVE	Diplomat Pwky	-	2,700	-	-
Hallandale Beach Blvd	I-95	W 8th AVE	60,800	69,200	8,400	14
	W 8th AVE	Dixie Hwy	-	-	-	-
	Dixie Hwy	E 1st AVE	-	-	-	-
	E 1st AVE	US-1	38,000	-	-	-
	US-1	S 14th AVE	47,000	51,000	4,000	9
	S 14th AVE	Diplomat Pwky	-	-	-	-
Diplomat Pwky	SR A1A	35,500	37,900	2,400	7	
N-S						
W 8th AVE	Pembroke Rd	Hallandale Beach Blvd	7,400	13,000	5,600	76
	Hallandale Beach Blvd	Countyline Rd	8,800	17,200	8,400	95
Dixie Hwy	Pembroke Rd	Hallandale Beach Blvd	6,000	17,700	11,700	195
	Hallandale Beach Blvd	Countyline Rd	5,400	25,100	19,700	365
E 1st AVE	Pembroke Rd	Hallandale Beach Blvd	3,900	-	-	-
	Hallandale Beach Blvd	Countyline Rd	3,100	-	-	-
US-1	Pembroke Rd	NE 9th ST (Atlantic Shore)	35,500	-	-	-
	NE 9th ST (Atlantic Shore)	Hallandale Beach Blvd	-	45,800	-	-
	Hallandale Beach Blvd	Countyline Rd	52,500	69,500	17,000	32
S 14th AVE	NE 10th ST	NE 9th ST	-	-	-	-
	NE 9th ST	Hallandale Beach Blvd	6,600	12,800	6,200	94
Diplomat Pwky	NE 9th ST	Hallandale Beach Blvd	3,900	4,200	300	8
SR A1A	Pembroke Rd	Hallandale Beach Blvd	28,000	46,700	18,700	67
	Hallandale Beach Blvd	Countyline Rd	28,500	47,900	19,400	68

Growth estimates based on 2030 Broward County Model



EXISTING VS. FUTURE YEAR LEVEL OF SERVICE

Intersection	Location	2006 Existing		2030	
		Delay (s)	LOS	Delay (s)	LOS
1	Pembroke Rd @ I-95 SB Ramp	14.7	B	13.9	B
2	Pembroke Rd @ I-95 NB Ramp	24.3	C	23.3	C
3	Pembroke Rd @ NW 8th Ave	15.9	B	15.8	B
4	Pembroke Rd @ N. Dixie Hwy	8.3	A	8.5	A
5	Pembroke Rd @ E 1st Ave	10.1	B	10.3	B
6	Pembroke Rd @ US 1	38.6	D	59.7	E
7	Atlantic Shore Blvd @ US 1	31.2	C	34.8	C
8	NE 3rd St @ N. Dixie Hwy	8.9	A	7.3	A
9	NE 3rd St @ E 1st Ave	8.5	A	8.8	A
10	NE 3rd St @ US 1	9.8	A	20.1	C
11	Hallandale Beach Blvd @ I-95 SB Ramp	59.7	E	59.7	E
12	Hallandale Beach Blvd @ I-95 NB Ramp	112	F	112	F
13	Hallandale Beach Blvd @ NW 8th Ave	28.1	C	59.2	E
14	Hallandale Beach Blvd @ N. Dixie Hwy	63.8	E	138.3*	F*
15	Hallandale Beach Blvd @ E 1st Ave	79.4	E		
16	Hallandale Beach Blvd @ US 1	147.9	F	255.7	F
17	Hallandale Beach Blvd @ NE 10th Ave	23	C	31.2	C
18	Hallandale Beach Blvd @ NE 14th Ave	31.2	C	33.9	C
19	Hallandale Beach Blvd @ A1A	20.4	C	52.5	D
20	SE 3rd St @ N. Dixie Hwy	27.1	C	29.6	C
21	SE 3rd St @ E 1st Ave	34.3	C	30.8	C
22	SE 3rd St @ US 1	27.8	C	64.7	E
23	SE 9th St @ US 1	22.2	C	75.9	E
24	County-line Rd @ N. Dixie Hwy	13.8	B	13.3	B
25	County-line Rd @ E 1st Ave	9.6	A	9.5	A

* Reflects new combined signal

Level of Service (LOS) Conditions with 2030 build out and no transportation improvements.



TRANSPORTATION IMPROVEMENT OPPORTUNITIES

- ❑ Pembroke Road is under capacity
- ❑ Dixie Highway is underutilized
- ❑ Alternative mode improvements (transit, pedestrian, bicycle) have the ability to move more people in relatively compact area



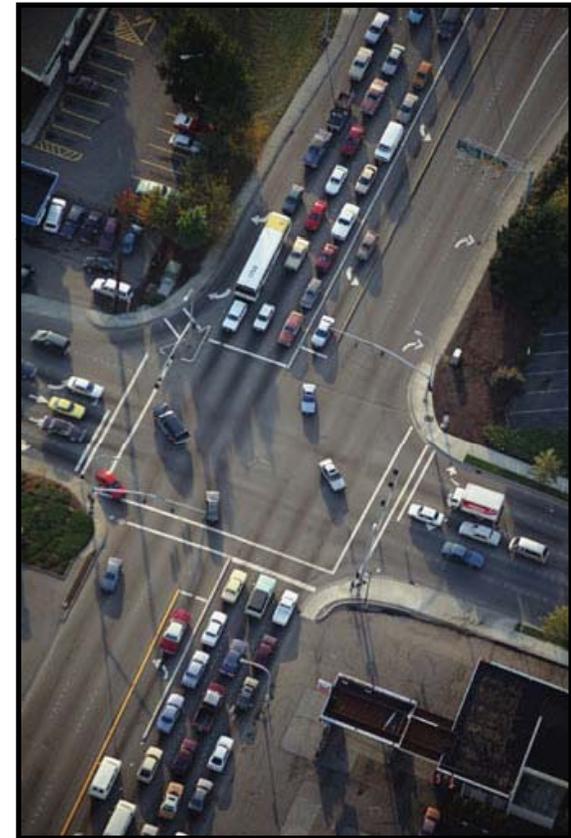
PROGRAM CONSTRAINTS

- ❑ The plan should minimize the impact of additional traffic to residential neighborhoods
- ❑ Broward County MPO's opposition to new urban interchanges on arterial streets
- ❑ FHWA interchange spacing standards prohibits new interchange on I-95 at County Line Road
- ❑ Broward County Greenway Plan would eliminate one-lane on Dixie Highway



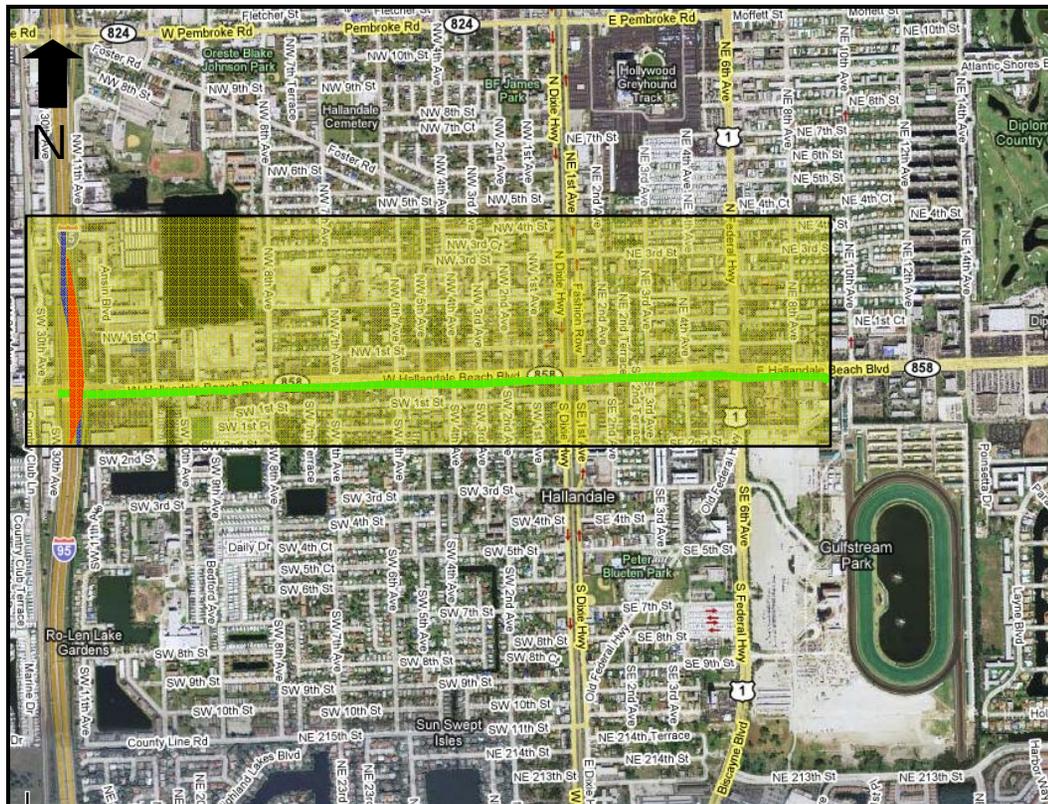
PROPOSED TRANSPORTATION IMPROVEMENT SCENARIOS

- ❑ Major Capital Roadway Improvements
- ❑ Transportation Systems Management (TSM) Improvements
- ❑ Advanced Traffic Management System (ATMS)/Intelligent Transportation System (ITS) Improvements
- ❑ Transit Improvements
- ❑ Bicycle/Pedestrian Improvements
- ❑ Alternate Circulation Routes



MAJOR CAPITAL ROADWAY IMPROVEMENTS CONSIDERED

- ❑ Hallandale Beach Boulevard Exclusive Lanes (I-95 to NE 10 Avenue)



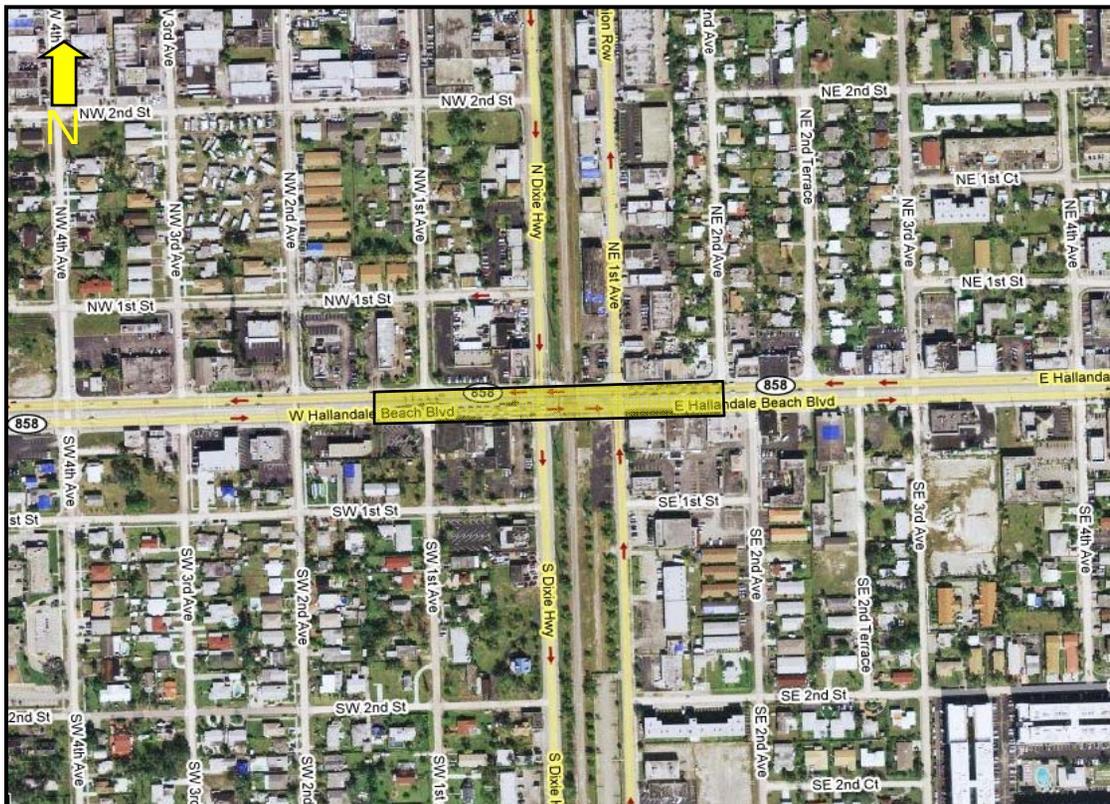
MAJOR CAPITAL ROADWAY IMPROVEMENTS CONSIDERED

- Fly-Over/Grade Separation US 1 @ Hallandale Beach Blvd.



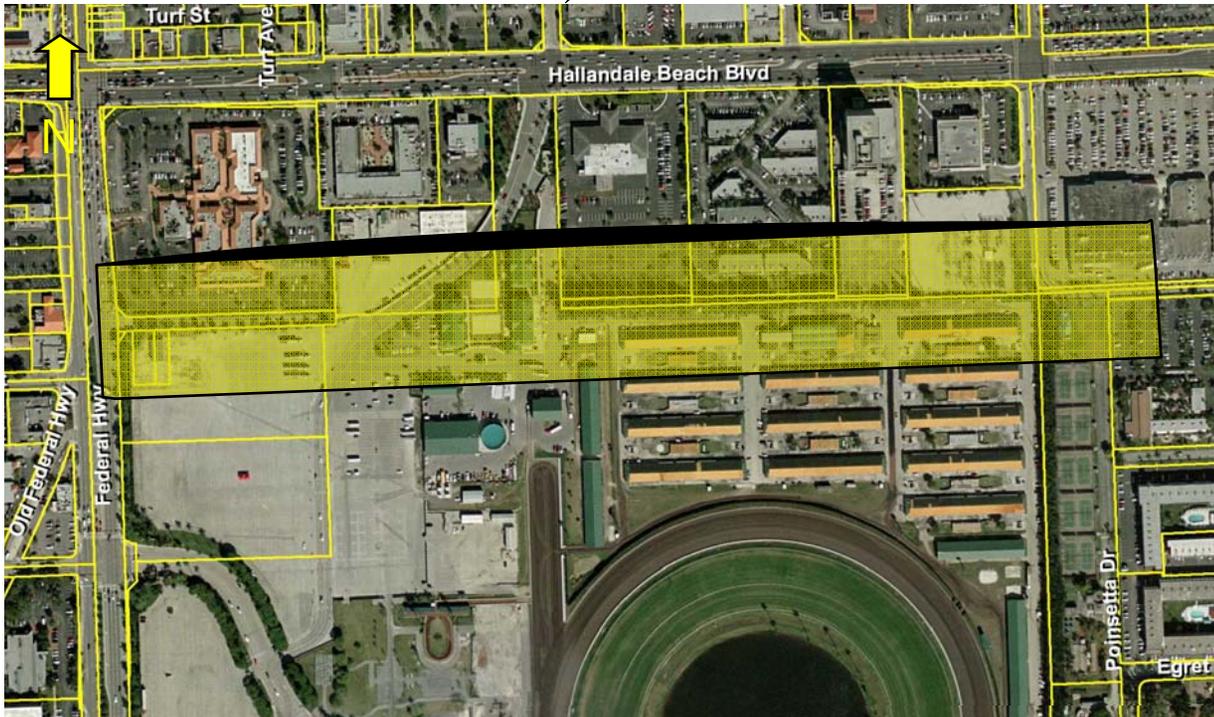
MAJOR CAPITAL ROADWAY IMPROVEMENTS CONSIDERED

- Fly-Over/Grade Separation Dixie Hwy. @ Hallandale Beach Blvd.



MAJOR CAPITAL ROADWAY IMPROVEMENTS CONSIDERED

- New connection: SE 2nd Street extension (US-1 to SE 14th Avenue/Church Road)



TRANSIT IMPROVEMENTS CONSIDERED

- ❑ Connector shuttle from existing Tri-Rail station at Hollywood Blvd. and future Park & Ride facilities.
- ❑ Transit super stops on US 1 at Pembroke Rd. (Mardi Gras) and at US-1 at Gulfstream Park
- ❑ Expansion of Hallandale Community Bus Circulator
- ❑ Dedicated Bus Stop Bays on Major Arterial Routes
- ❑ Land Use/Transit-Oriented Development (TOD) Regulations for Future Development
- ❑ New FEC Commuter Rail service with dedicated shuttle to Gulfstream Park

BICYCLE/PEDESTRIAN IMPROVEMENTS CONSIDERED

- ❑ Bike lanes and sidewalks included in future roadway improvements on all arterials and collectors
- ❑ Implementation of crossing countdown signal heads at all traffic signals with 2 or more lanes
- ❑ Bike parking at public buildings and major destinations
- ❑ Installation of adequate lighting along bike/ped routes
- ❑ Implementation of city-wide bike and pedestrian signage
- ❑ Implementation of bike detectors at all minor street intersections

ALTERNATE CIRCULATION ROUTES CONSIDERED

- ❑ Low assignment:
 - VMS informational signs
 - Employee, suppliers & regular visitor information on alternate routes
- ❑ Medium assignment:
 - VMS directional signs
 - local street improvements
 - traffic calming treatments
 - informational brochures, websites, tickets and receipts
 - bulletin boards and information channels



IMPROVEMENT TIMELINE



- ❑ Short-Term (2009-2013)
- ❑ Mid-Term (2014-2019)
- ❑ Long-Term (2020-2030)

RECOMMENDED SHORT-TERM IMPROVEMENTS (2009-2013)

❑ Major Capital Roadway Improvements

- New Connection: SE 2nd St. Extension (US-1 to SE 16th Avenue)
- **Conduct** Feasibility Study of Grade Separation Hallandale Beach Blvd @ Dixie Hwy
- **Begin** Feasibility Study of County Line Road: Dixie Hwy to I-95

❑ TSM Improvements

- Single Point Intersection at Hallandale Beach Blvd. @ Dixie Hwy
- **Begin** SE 3rd St. Alternate Corridor Bypass: SE 1st Ave. to US1
- **Begin** SE 9th St. Corridor Improvements

❑ ATMS(ITS) Improvements

- Wireless - Interconnect Signalization
- Emergency Vehicle Pre-Emption System
- Video Detection System



RECOMMENDED SHORT-TERM IMPROVEMENTS (2009-2013)

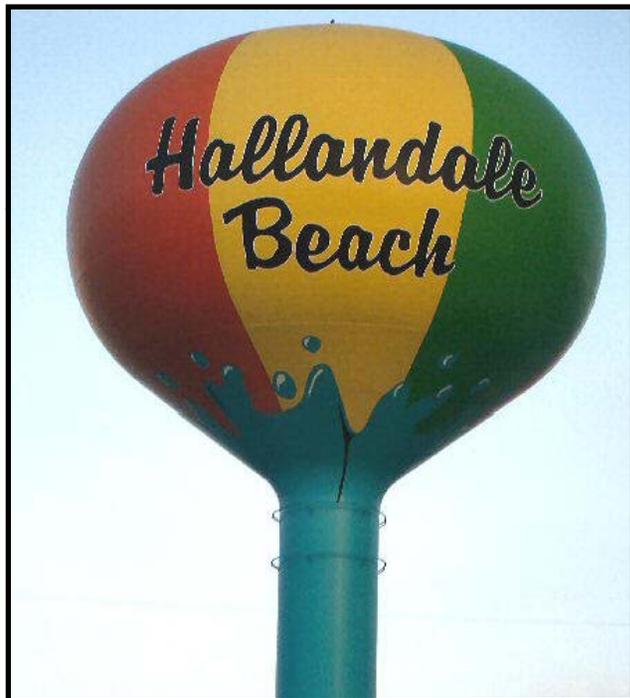
❑ Transit Improvements

- **Begin** Connector Shuttles from SFRTA Tri-Rail & Future Park & Ride Lots
- **Begin** Transit Super Stops on US-1 at Pembroke Rd. (Mardi Gras) & Gulfstream Park
- **Begin** Land Use/TOD Regulations for Future Development

❑ Bicycle/Pedestrian Improvements

- Bike Lanes & Sidewalks included with Future Roadway Improvements on all Arterials and Collectors
- Implementation of Crossing Countdown Signal Heads at all Traffic Signals with more than 2 Lanes
- Bike Parking at Public Buildings & Major Destinations
- Instillation of Adequate Lighting along Bike/Pedestrian Routes

RECOMMENDED SHORT-TERM IMPROVEMENTS (2009-2013)



Regional Coordination

- Establishment of a Transportation Management Association (TMA)



RECOMMENDED MID-TERM IMPROVEMENTS (2014-2019)

❑ Major Capital Roadway Improvements

- PD&E Study-Grade Separation: Hallandale Beach Blvd. @ Dixie Hwy
- Complete Feasibility Study on County Line Road: Dixie Hwy to I-95

❑ TSM Improvements

- Complete SE 3rd St. Alternate Corridor Bypass: SE 1st Ave. to US1
- Complete SE 9th St. Corridor Improvements
- Begin Dixie Hwy/E. 1st Ave. Corridor Improvements

❑ ATMS(ITS) Improvements

- Fiber Optic - Interconnect Signalization



RECOMMENDED MID-TERM IMPROVEMENTS (2014-2019)

❑ Transit Improvements

- **Complete** Connector Shuttles from SFRTA Tri-Rail & Future Park & Ride Lots
- **Complete** Transit Super Stops on US-1 at Pembroke Rd. (Mardi Gras) & Gulfstream Park
- Dedicated Bus Stop Bays on Major Arterial Routes
- **Complete** Land Use/TOD Regulations for Future Development

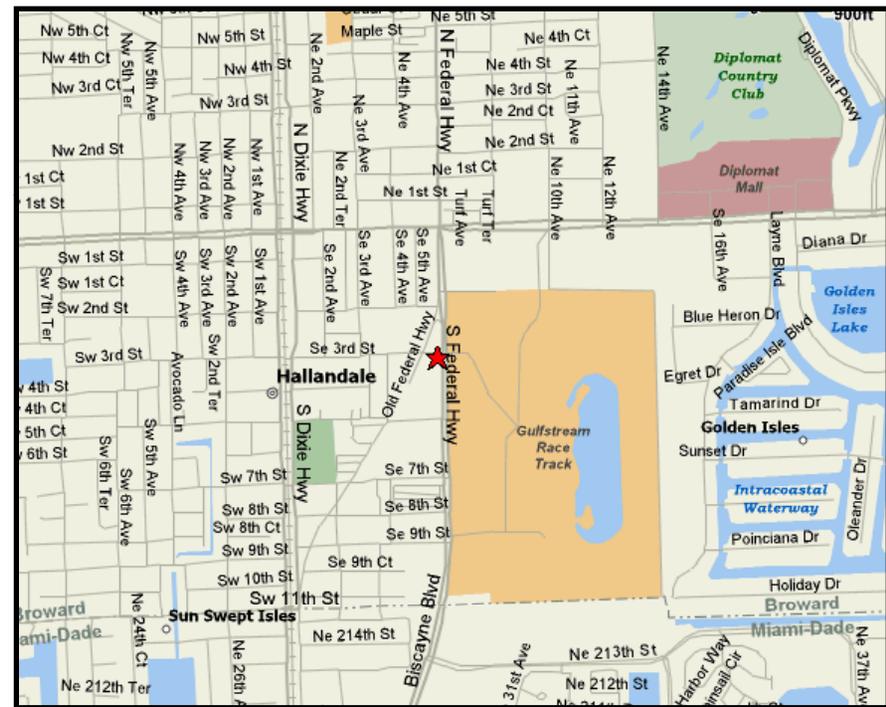
❑ Alternate Circulation Routes

- **Begin** Reassignment of Traffic away from Major Arterials during Major Events at Gulfstream Park and Mardi Gras



RECOMMENDED MID-TERM IMPROVEMENTS (2014-2019)

- **Regional Coordination**
 - **Expand** Transportation Management Association (TMA) to include Neighboring Communities and develop multi agency transit system (Bus/Trolley)



RECOMMENDED LONG-TERM IMPROVEMENTS (2020-2030)

❑ Major Capital Roadway Improvements

- Construct Grade Separation: Hallandale Beach Blvd. @ Dixie Hwy.
- Construct Road Access to I-95 from Dixie Hwy on County Line Road

❑ TSM Improvements

- Complete Dixie Hwy/E. 1st Ave. Corridor Improvements

❑ ATMS(ITS) Improvements

- Locally Controlled Traffic Center

❑ Transit Improvements

- New FEC Commuter Rail Service with Dedicated Shuttle to Gulfstream



RECOMMENDED LONG-TERM IMPROVEMENTS (2020-2030)

- ❑ **Bicycle/Pedestrian Improvements**
 - Implementation of Citywide Bike and Pedestrian Signage
 - Implementation of Bike Detectors at all Minor Street Intersection
- ❑ **Alternate Circulation Routes**
 - Complete Reassignment of Traffic Off of Major Arterials during Major Events at Gulfstream Park and Mardi Gras
- ❑ **Regional Coordination**
 - Maintain Transportation Management Association (TMA)



SUMMARY OF RECOMMENDATIONS – MAJOR CAPITAL ROADWAY IMPROVEMENTS

ID/ALTERNATIVE	INCL. IN TMP	COMMENTS	COST
A1- Exclusive Lanes on HBB	No	No appreciable improvement in 2030 LOS with this improvement, so alternative not recommended.	N/A
A2 - Fly-Over US1 @ HBB	No	No appreciable improvement in 2030 LOS with this improvement, so alternative not recommended.	N/A
A3 - Fly-Over Dixie Hwy @ HBB	Yes		\$33,700,000
A4 - Church Rd extension to Gulfstream	Yes		\$2,060,000
A5 - Countyline Rd Extension thru I-95	Yes		\$26,700,000



SUMMARY OF RECOMMENDATIONS – TSM IMPROVEMENTS

ID/ALT.	INCL. IN TMP	COMMENTS	COST
B1 - Single Point intersection: HBB @ Dixie Hwy	Yes		\$0
B2 - SE 3 St Improvements	Yes		\$475,000
B3 - New Signal: SE 9 St @ US1; RR Xing and SE 9 th Street Improvements	Yes	Signal already installed. SE 9 th Street improvements approved for plan, however RR crossing relocation not included in plan.	\$2,700,000
B4 - Managed Lanes on NE 10 Ave	No	No appreciable improvement in 2030 LOS with this improvement, so alternative not recommended.	N/A
B5 – Improvements of Dixie Hwy / E 1 Ave as alternate corridors	Yes		\$4,325,000
B6 - Remove Diagonal Parking on Atlantic Shores Blvd and NE 14 th Avenue	No	Not recommended at the request of the City Staff	N/A

SUMMARY OF RECOMMENDATIONS – ATMS (ITS) IMPROVEMENTS

ID/ALT.	INCL. IN TMP	COMMENTS	COST
C1- Locally Controlled Traffic Center	Yes		\$4,325,000
C2 - Signal Interconnect: US 1 & HBB	Yes		\$2,410,000
C3 - Emergency Vehicle Pre-emption System	Yes		\$475,000
C4 - Video Detection System	Yes		\$1,370,000



SUMMARY OF RECOMMENDATIONS – TRANSIT IMPROVEMENTS

ID/ALT.	INCL. IN TMP	COMMENTS	COST
D1 - New FEC Commuter Rail w/ Shuttle	Yes		\$0
D2 - New Tri-Rail Station S of Hollywood Blvd w/ Shuttle	Yes		\$890,000
D3 - Transit Super Stops: US1 @ Pembroke Rd & Gulfstream	Yes		\$0
D4 - Bus Stop Bays on Major Arterial Routes	Yes		\$410,000
D5 - Land Use/TOD Regulations for Future Development	Yes		\$0



SUMMARY OF RECOMMENDATIONS – BICYCLE/PEDEDSTRIAN IMPROVEMENTS

ID/ALT.	INCL. IN TMP	COMMENTS	COST
E1 - Bike Lanes & Sidewalks	Yes		\$0
E2 - Countdown Signals @ All Intersection w/ 2+ Lanes	Yes		\$55,000
E3 - Bike Parking: Public Buildings, Major Destinations	Yes		\$55,000
E4 - Lighting along Bike/Ped Routes	Yes		\$2,703,750
E5 - City-Wide Bike and Pedestrian Signage	Yes		\$55,000
E6 - Bike Detectors at All Minor Intersections	Yes		\$210,000



SUMMARY OF RECOMMENDATIONS – ALTERNATE CIRCULAR ROUTES AND REGIONAL COORDINATION

ID/ALT.	INCL. IN TMP	COMMENTS	COST
F1 - Low Reassignment of Traffic to Local Streets	Yes		\$247,000
G1 - Establishment of a Transportation Management Association	Yes		\$285,000



DEVELOPMENT COST TRIP ALLOCATION MODEL

- ❑ Institute of Transportation Engineers Trip Rate Factors**
- ❑ Objective Trip Generation formula system leads to consistent Development Traffic Costs application**
- ❑ Support for City's Development Traffic Impact Negotiations**
- ❑ Manageable and executable by City Planning Staff**
- ❑ Demonstration of Model Usage**



NEXT STEPS

- Adopt Transportation Master Plan**
- Develop Project Implementation Strategy**
- Training and Implementation of Cost Allocation Model**
- Continued partnering with neighboring communities**
- Coordination with Broward County MPO and FDOT for project implementation support**
- Monitoring and update of Transportation Master Plan on a recurring basis**



THANK YOU / QUESTIONS

