

Financial Management Number: 432639-6-22-01

Federal Aid Project Number: 0202-054-P

Efficient Transportation Decision Making Number: 14230

Project Development & Environment (PD&E) Study

SR 90 (SW 8th Street and SW 7th Street)

From SR 9/SW 27th Avenue to SR 5/US-1/Brickell Avenue



Presentation Outline

- Meeting Goals
- Project Status
- Alternative Analysis
- Traffic Operations and Safety
- Environmental Analysis
- Alternatives Evaluation Matrix
- Next Steps



Meeting Goals

Meeting Goals

- Benefits/Concerns of each alternative under evaluation
- Update on Engineering & Environmental analysis
- Alternative Evaluation Matrix



Project Status

- Two alternatives added for evaluation
 - Alternative 5- Reverse Flow
 - Alternative 6-3 lanes one-way SW 8th Street
 - 2 lanes one-way SW 7th Street
- Comparative Alternatives Evaluation Matrix



Alternative Analysis

No Build

Transportation Systems Management and Operations (TSM&O)

Build Alternatives

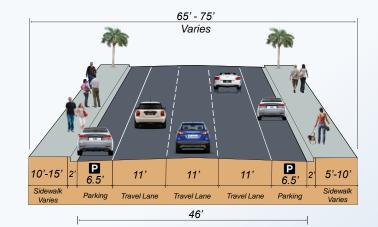
- Alternative 1: Two Lane Two Way Alternative
- Alternative 2: Two Lane Two Way + Transit Alternative
- Alternative 2A: Two Lane Two Way + Bicycle Alternative
- Alternative 3: Two Lane One Way Alternative
- Alternative 3A: Three Lane Shared Parking and Travel Lane
- Alternative 4: Three Lane One Way Alternative- Existing Flow
- Alternative 5: Three Lane One Way Alternative Reverse Flow
- Alternative 6: Three Lane- One Way on SW 8th Street + Shared Parking
 - Two Lane- One Way on SW 7th Street



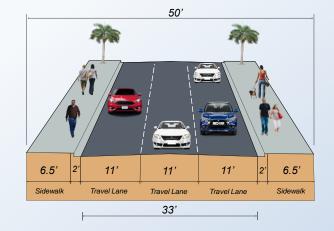
No Build

SW 8TH/SW 7TH STREET

SW 8TH STREET



SW 7TH STREET



NO EXPENDITURE OF FUNDS

BENEFITS

- MAINTENANCE OF TRAFFIC
- ENVIRONMENTAL

CONCERNS-NO IMPROVEMENTS

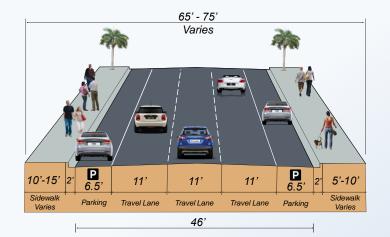
- SAFETY
- MULTIMODAL LEVEL OF SERVICE
- ACCESS IMPROVEMENTS
- COMPLETE STREETS



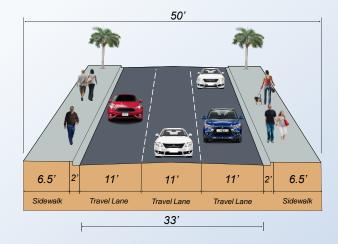
TSM&O

TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS (TSM&O) ALTERNATIVE –SW 8TH/SW 7TH STREET

SW 8TH STREET



SW 7TH STREET



BENEFITS

- MINOR SAFETY IMPROVEMENTS
- MULTIMODAL LEVEL OF SERVICE Improvements to Automobiles
- MAINTENANCE OF TRAFFIC
- NO ENVIRONMENTAL IMPACTS

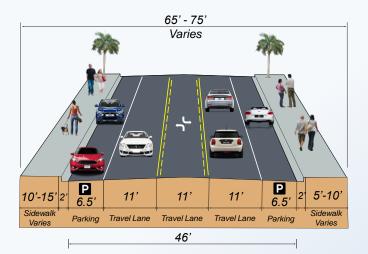
CONCERNS

NO ACCESS IMPROVEMENTS
AT 1-95

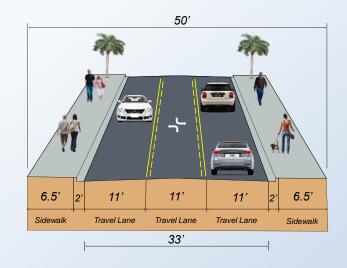


ALTERNATIVE 1 – SW 8TH/SW 7TH STREETS TWO LANES - TWO WAY

SW 8TH STREET



SW 7TH STREET



BENEFITS

- IMPROVED ACCESS
 Better access during off-peak
- IMPROVEMENTS AT I-95

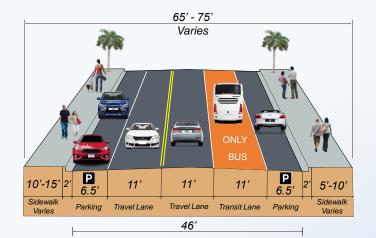
CONCERNS

- SAFETY
- MULTIMODAL LEVEL OF SERVICE Impacts to automobiles
- HIGH COST
- MAINTENANCE OF TRAFFIC
- ENVIRONMENTAL- Contamination

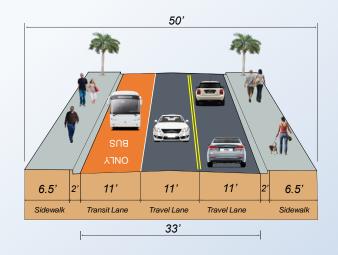


ALTERNATIVE 2 – SW 8TH/SW 7TH STREET TWO LANES - TWO WAY + TRANSIT

SW 8TH STREET



SW 7TH STREET



BENEFITS

- MULTIMODAL LEVEL OF SERVICE Improvements to transit
- IMPROVEMENTS AT I-95

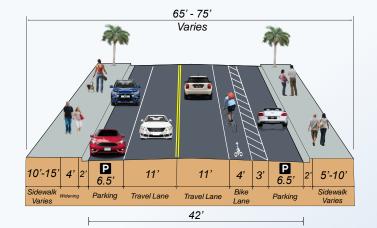
CONCERNS

- SAFETY
- MULTIMODAL LEVEL OF SERVICE Impacts to automobiles
- PARKING Impacts at intersections
- HIGH COST
- MAINTENANCE OF TRAFFIC
- ENVIRONMENTAL- Contamination

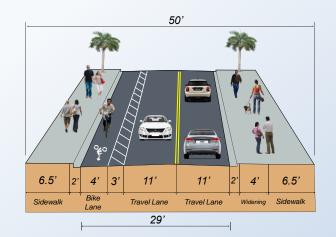


ALTERNATIVE 2A – SW 8TH/SW 7TH STREET TWO LANES - TWO WAY + BIKES

SW 8TH STREET



SW 7TH STREET



BENEFITS

- MULTIMODAL LEVEL OF SERVICE
 Improvements to bikes/pedestrians
- IMPROVEMENTS AT I-95

CONCERNS

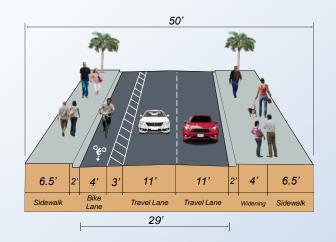
- SAFETY
- MULTIMODAL LEVEL OF SERVICE Impacts to automobiles
- PARKING- Impacts at intersections
- HIGH COST
- MAINTENANCE OF TRAFFIC
- ENVIRONMENTAL- Contamination



ALTERNATIVE 3 – SW 8TH/SW 7TH STREET TWO LANES - ONE WAY + BIKES

SW 8TH STREET

SW 7TH STREET



BENEFITS

- MULTIMODAL LEVEL OF SERVICE Improvements to bikes
- IMPROVEMENTS AT I-95

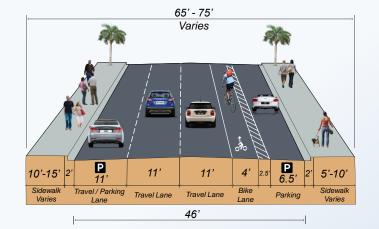
CONCERNS

- SAFETY
- MULTIMODAL LEVEL OF SERVICE Impacts to automobiles
- MEDIUM COST
- MAINTENANCE OF TRAFFIC
- ENVIRONMENTAL- Contamination

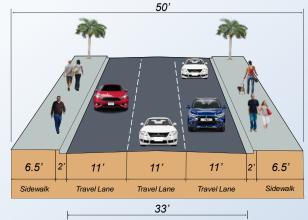


ALTERNATIVE 3A – SW 8TH/SW 7TH STREET THREE LANES - SHARED PARKING AND TRAVEL LANE

SW 8TH STREET



SW 7TH STRFFT



BENEFITS

- **MULTIMODAL LEVEL OF SERVICE** Improvements to bikes/automobiles
- **IMPROVEMENTS AT 1-95**

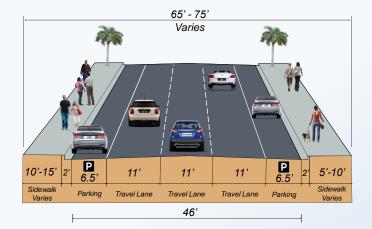
CONCERNS

- **MEDIUM COST**
- **MAY REQUIRE RECONSTRUCTION**
- **MAINTENANCE OF TRAFFIC**



ALTERNATIVE 4 – SW 8TH/SW 7TH STREET THREE LANES - ONE WAY

SW 8TH STREET



6.5' 2' 11' 11' 11' 2' 6.5'
Sidewalk Travel Lane Travel Lane Sidewalk

SW 7TH STREET

BENEFITS

- MULTIMODAL LEVEL OF SERVICE Improvements to automobiles
- IMPROVEMENTS AT I-95

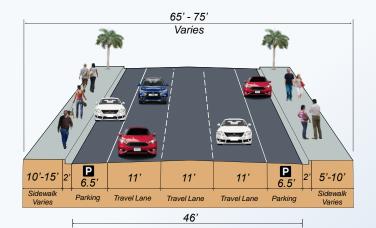
CONCERNS

- MEDIUM COST
- MAINTENANCE OF TRAFFIC

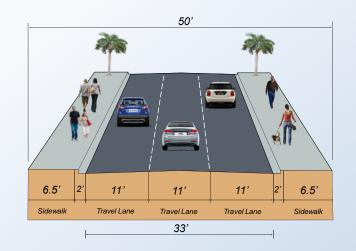


ALTERNATIVE 5 – SW 8TH/SW 7TH STREET THREE LANES - ONE WAY – REVERSE FLOW

SW 8TH STREET



SW 7TH STREET



BENEFITS

- MULTIMODAL LEVEL OF SERVICE Improvements to automobiles
- IMPROVEMENTS AT I-95

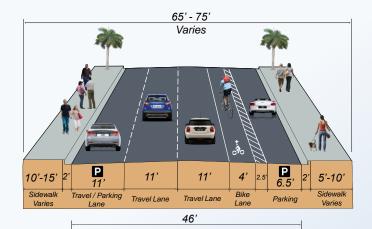
CONCERNS

- HIGHEST COST
- MAINTENANCE OF TRAFFIC

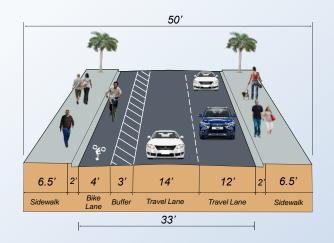


ALTERNATIVE 6 SW 8TH STREET- THREE LANES - ONE WAY + SHARED PARKING SW 7TH STREET- TWO LANES - ONE WAY

SW 8TH STREET



SW 7TH STREET



BENEFITS

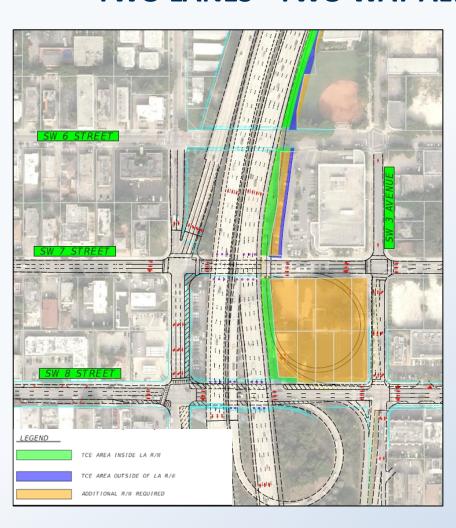
- Improvements to bikes
 Improvements to automobiles
 on SW 8th Street
- IMPROVEMENTS AT I-95

CONCERNS

- MEDIUM COST
- MAY REQUIRE RECONSTRUCTION
- MAINTENANCE OF TRAFFIC



I-95 INTERCHANGE TWO LANES - TWO WAY ALTERNATIVES + REVERSED FLOW



BENEFITS

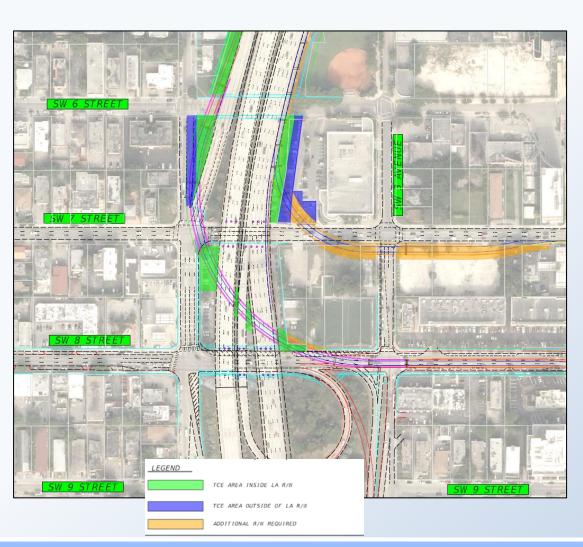
- SAFETY IMPROVEMENTS
- ACCESS to I-95
 From SW 8th Street, SW 7th Street
 and Brickell

CONCERNS

- RIGHT OF WAY IMPACTS
- HIGH COST
- ENVIRONMENTAL- Contamination



I-95 INTERCHANGE ONE WAY ALTERNATIVES- SW 8TH STREET EB & SW 7TH STREET WB



BENEFITS

- SAFETY IMPROVEMENTS
- ACCESS TO I-95
 From SW 7th Street
- ACCESS FROM I-95 SOUTHBOUND Exit to SW 8th Street

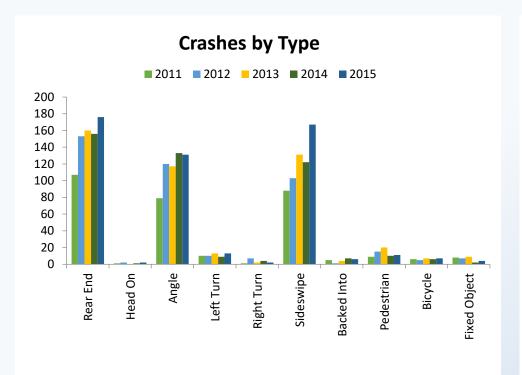
CONCERNS

- RIGHT OF WAY IMPACTS
- CONTAMINATION
- HIGH COST

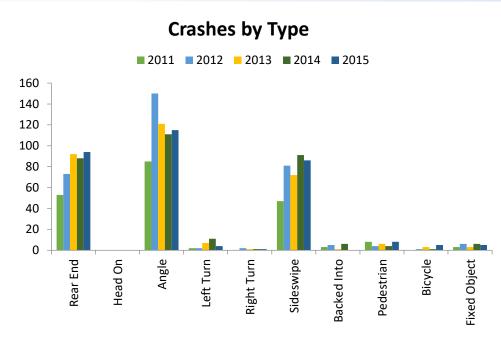


Traffic Operations and Safety

SW 8TH STREET



SW 7TH STREET





Intersection Level of Service - AM Peak Hour

Intersection	No-Build	Alternative 1	Alternative 2/2A	Alternative 3	Alternative 3A/4	Alternative 5	Alternative 6
	Delay (sec/veh)						
SW 8 th St. & SW 27 th Ave.	<mark>207.5</mark>	<mark>212.9</mark>	<mark>351.7</mark>	<mark>209.8</mark>	<mark>207.5</mark>	<mark>568.8</mark>	<mark>207.5</mark>
SW 8 th St. & SW 24 th Ave.	20.3	23.2	18.0	23.8	20.3	23.1	20.3
SW 8 th St. & SW 22 nd Ave.	83.8	146.0	145.5	173.5	83.8	123.7	83.6
SW 8 th St. & SW 21 st Ave.	20.3	10.9	13.5	43.0	20.3	8.9	20.3
SW 8 th St. & SW 19 th Ave.	44.3	39.8	38.5	85.0	45.7	50.0	45.7
SW 8 th St. & SW 17 th Ave.	75.3	133.9	136.7	153.7	75.3	110.6	75.3
SW 8 th St. & SW 12 th Ave.	29.4	92.4	96.4	122.2	29.6	33.9	33.0
SW 8 th St. & SW 11 th Ave.	6.8	8.4	11.0	10.6	6.8	34.8	6.8
SW 8 th St. & SW 8 th Ave.	25.0	60.8	68.5	92.9	25.1	52.4	24.6
SW 8 th St. & SW 5 th Ave.	73.7	35.9	47.6	132.6	73.7	33.2	73.7
SW 8 th St. & SW 4 th Ave.	56.7	<mark>252.6</mark>	<mark>247.7</mark>	98.5	55.9	22.5	60.2
SW 8 th St. & SW 3 rd Ave.	43.2	<mark>256.7</mark>	<mark>256.2</mark>	23.5	16.5	17.4	15.8
SW 8 th St. & SW 2 nd Ave.	153.2	<mark>301.8</mark>	<mark>309.1</mark>	<mark>229.7</mark>	117.4	45.2	118.0
SW 8 th St. & SW 1 st Ave.	71.5	<mark>254.7</mark>	<mark>254.2</mark>	189.8	71.5	18.1	71.0
SW 8 th St. & S. Miami Ave.	46.5	65.4	64.6	89.6	48.8	19.8	48.8
SW 8 th St. & Brickell Ave.	176.2	113.7	157.5	<mark>297.2</mark>	185.2	154.8	185.2
SW 7 th St. & Brickell Ave.	37.1	69.2	61.1	27.2	37.1	<mark>243.8</mark>	37.1
SW 7 th St. & S. Miami Ave.	9.2	39.5	80.9	9.6	9.7	38.9	11.4
SW 7 th St. & SW 1 st Ave.	31.8	184.7	<mark>319.9</mark>	30.8	31.0	45.4	33.7
SW 7 th St. & SW 2 nd Ave.	32.7	104.2	<mark>331.7</mark>	65.8	31.0	275.0	51.2
SW 7 th St. & SW 3 rd Ave.	37.4	29.5	186.8	34.6	29.8	57.4	28.9
SW 7 th St. & SW 4 th Ave.	94.2	<mark>342.2</mark>	<mark>783.2</mark>	51.1	30.8	116.6	46.3
SW 7 th St. & SW 8 th Ave.	24.9	133.4	<mark>339.9</mark>	47.8	25.6	119.1	40.2
SW 7 th St. & SW 12 th Ave.	45.3	125.3	<mark>312.2</mark>	108.1	45.8	107.5	100.2
SW 7 th St. & SW 16 th Ave.	29.2	4.5	51.7	38.0	29.2	48.8	33.0
SW 7 th St. & SW 17 th Ave.	70.9	175.7	<mark>348.8</mark>	125.0	70.9	149.4	124.5
SW 7 th St. & SW 19 th Ave.	19.6	22.3	135.2	25.7	19.9	70.2	23.0
SW 7 th St. & SW 22 nd Ave.	39.5	142.0	<mark>316.6</mark>	68.8	39.5	50.4	67.4
SW 7 th St. & Beacom Blvd.	45.7	180.9	<mark>357.4</mark>	99.7	48.4	50.6	95.1
SW 7 th St. & SW 27 th Ave.	33.7	66.1	90.3	17.8	13.6	45.7	13.6

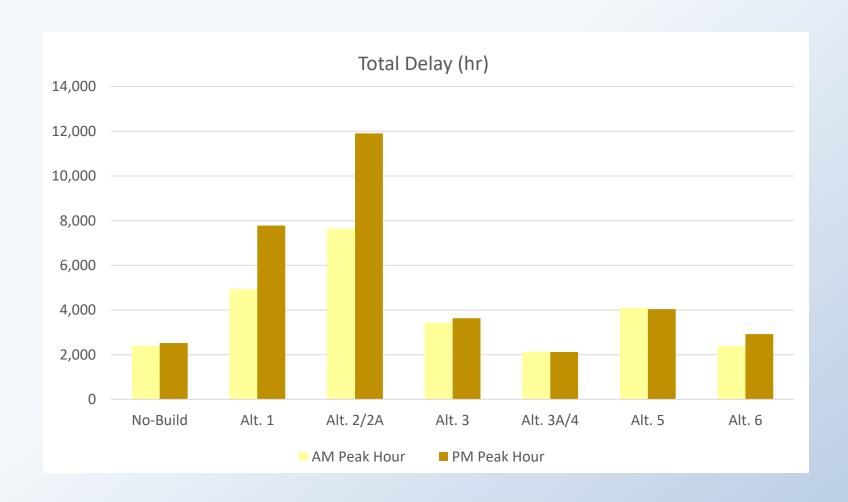


Intersection Level of Service - PM Peak Hour

Intersection	No-Build	Alternative 1	Alternative 2/2A	Alternative 3	Alternative 3A/4	Alternative 5	Alternative 6
	Delay (sec/veh)	Delay (sec/veh)	Delay (sec/veh)	Delay (sec/veh)	Delay (sec/veh)	Delay (sec/veh)	Delay (sec/veh)
SW 8 th St. & SW 27 th Ave.	159.9	163.6	354.8	153.0	154.7	<mark>474.6</mark>	153.3
SW 8 th St. & SW 24 th Ave.	20.9	43.8	65.4	28.3	17.7	24.2	16.6
SW 8 th St. & SW 22 nd Ave.	43.9	154.9	166.4	144.5	58.1	159.4	58.8
SW 8 th St. & SW 21 st Ave.	16.3	15.4	22.3	32.6	18.3	34.0	19.5
SW 8 th St. & SW 19 th Ave.	52.4	47.5	47.5	101.8	52.4	52.0	55.8
SW 8 th St. & SW 17 th Ave.	64.4	177.6	180.3	119.4	54.9	129.8	55.3
SW 8 th St. & SW 12 th Ave.	77.0	166.7	168.0	134.8	44.9	116.0	50.1
SW 8 th St. & SW 11 th Ave.	8.0	8.3	8.3	11.6	8.5	47.6	9.0
SW 8 th St. & SW 8 th Ave.	12.9	87.1	99.2	31.2	13.2	36.0	21.2
SW 8 th St. & SW 5 th Ave.	37.4	125.1	145.0	79.4	40.9	116.1	61.6
SW 8 th St. & SW 4 th Ave.	51.9	146.3	155.7	63.6	60.1	67.6	55.9
SW 8 th St. & SW 3 rd Ave.	45.6	193.1	<mark>222.6</mark>	29.5	25.3	39.0	23.3
SW 8 th St. & SW 2 nd Ave.	55.6	<mark>314.0</mark>	<mark>311.2</mark>	95.3	42.8	113.8	39.2
SW 8 th St. & SW 1 st Ave.	56.6	152.2	146.7	89.0	58.8	20.6	60.6
SW 8 th St. & S. Miami Ave.	45.7	58.2	59.3	57.1	49.3	22.3	52.9
SW 8 th St. & Brickell Ave.	195.0	96.2	123.2	<mark>202.9</mark>	125.1	82.0	120.1
SW 7 th St. & Brickell Ave.	75.7	135.5	139.7	72.7	75.9	<mark>406.7</mark>	72.7
SW 7 th St. & S. Miami Ave.	16.2	36.4	78.7	20.9	16.2	36.3	18.6
SW 7 th St. & SW 1 st Ave.	25.2	121.3	<mark>338.2</mark>	48.8	27.4	41.1	50.7
SW 7 th St. & SW 2 nd Ave.	115.3	120.3	<mark>326.6</mark>	108.6	127.2	164.0	108.6
SW 7 th St. & SW 3 rd Ave.	76.2	43.0	310.1	43.5	38.4	49.5	43.8
SW 7 th St. & SW 4 th Ave.	<mark>226.8</mark>	<mark>268.9</mark>	<mark>1,355.2</mark>	<mark>231.1</mark>	96.8	<mark>231.1</mark>	<mark>214.0</mark>
SW 7 th St. & SW 8 th Ave.	55.0	107.9	<mark>350.6</mark>	174.8	62.3	70.2	153.7
SW 7 th St. & SW 12 th Ave.	124.5	126.5	<mark>392.5</mark>	<mark>280.1</mark>	181.2	124.4	302.4
SW 7 th St. & SW 16 th Ave.	34.0	5.4	80.8	51.4	37.3	47.8	51.4
SW 7 th St. & SW 17 th Ave.	105.3	180.0	<mark>374.6</mark>	194.3	106.7	106.7	194.3
SW 7 th St. & SW 19 th Ave.	42.5	16.9	178.8	67.4	45.2	77.8	67.6
SW 7 th St. & SW 22 nd Ave.	62.9	<mark>204.6</mark>	<mark>394.1</mark>	127.6	64.0	46.0	128.4
SW 7 th St. & Beacom Ave.	143.9	161.6	<mark>429.4</mark>	113.8	46.3	10.9	113.8
SW 7 th St. & SW 27 th Ave.	33.1	46.8	86.1	25.2	22.7	20.4	24.8



Network Statistics (Synchro Models)





Environmental Analysis

SOCIAL AND ECONOMIC

Social Services, Religious Centers and Group Care Facilities

CULTURAL

Historic Resources and Recreational, Section 4(f)

NATURAL

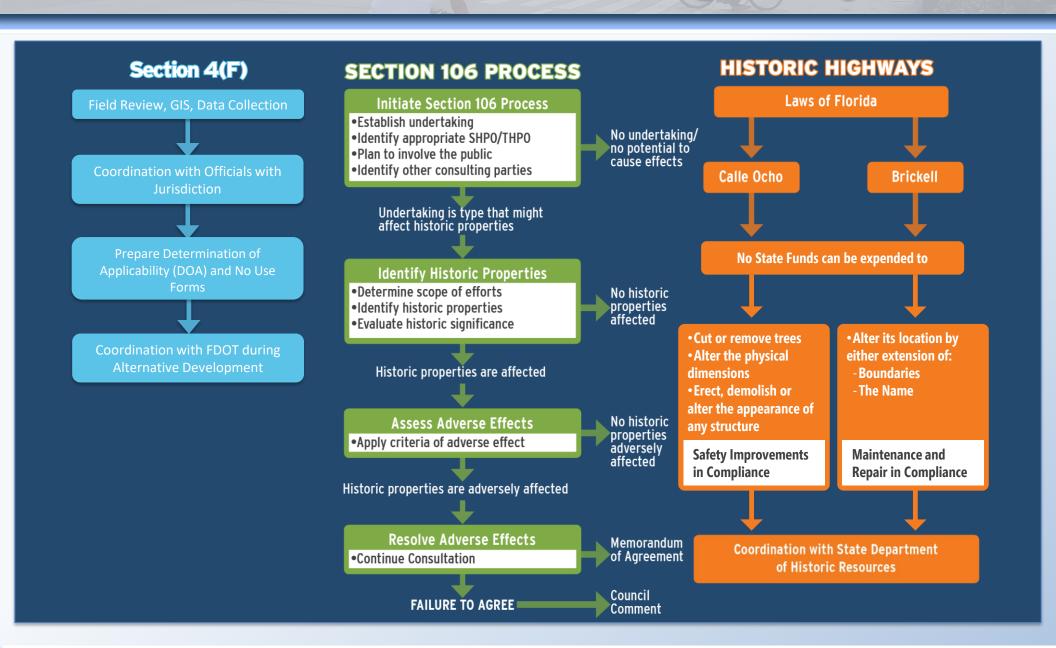
Water Quality, Wetlands, and Wildlife

PHYSICAL

Contamination, Air Quality, and Noise



Cultural and Historic Highway Laws





Potential Section 4(f) Resources

Section 4(f) is part of federal law that requires special effort be made to protect publicly owned parks and recreational lands.





Cultural Resources - Section 106

Historic Resources within the Area of Potential Effect

- 33 previously recorded buildings
- Possible historic district
- Over 400 unrecorded historic buildings
- National Register eligible
 FEC railway
- Two state historic highways:
 Calle Ocho and Brickell Avenue





Historic Highway Law - Calle Ocho

LAWS OF FLORIDA - July 1986 - CHAPTER 86-308 - Brickell Ave. to SW 74th Ave.

An act relating to preservation; designating Calle Ocho as a state historic highway; providing definitions; prohibiting the use of state funds for certain physical changes on or near Calle Ocho; requiring approval of the Division of Archives, History, and Records Management of the Department of State.

Be It Enacted by the Legislature of the State of Florida:

No state funds shall be expended by any public body or agency for any of the following:

- To alter the physical dimensions or location of Calle Ocho, except for the addition of primary or secondary roads intersecting the limits of Calle Ocho.
- To erect, demolish, or significantly alter the appearance of any structure, including but not limited to, walls, fences, sidewalks, and curbing, within 100 feet of either side of the paved surface of Calle Ocho.
- Nothing in this section shall be construed to prevent the ordinary maintenance and repair of Calle Ocho or structures adjacent thereto, provide the physical dimensions and location of Calle Ocho and the appearance of any such structure are preserved, nor to prevent any work that is necessary for the public health or safety as determined by the agency and local government having jurisdiction over the portion of Calle Ocho Involved.



Historic Highway Law - Brickell

Legislation signed on June 2007, declaring Brickell Avenue a state historic road and prohibiting the Brickell Avenue name to be extended beyond its Miami River north boundary.

The state historic designation of the roadway recognizes that Brickell Avenue, stretching from Miami River south to 25th Road, has distinct cultural, historic, architectural, recreational, natural and/or scenic resources value.

No state funds shall be spent by a government agency to alter Brickell Avenue's boundaries or extend its name.



Natural Environment

WATER QUALITY

Biscayne Aquifer is a sole source aquifer

No adverse health or environmental impacts to the aquifer system anticipated. Regulatory concurrence from EPA will be requested.

SPECIAL DESIGNATIONS

Biscayne Bay Aquatic Preserve;Outstanding Florida Waters

Note: Includes Miami River in vicinity of project – ETDM Moderate Degree of Effect, due primarily to proximity to Biscayne Bay

WETLANDS AND ESSENTIAL FISH HABITAT

No direct impacts expected

WILDLIFE AND HABITAT

Assessment of wildlife and habitat will be conducted





Physical Environment

CONTAMINATION IMPACT ASSESSMENT

Potential contamination sites:

- Gas stations, dry cleaners, light industry
- Typical for dense complex urban environment

Main area of concern: I-95 Interchange

- Subsurface construction may impact soil and/or groundwater
- Evaluate underground utility work, stormwater pond locations, ROW acquisition

AIR QUALITY

Air Quality Technical Memorandum

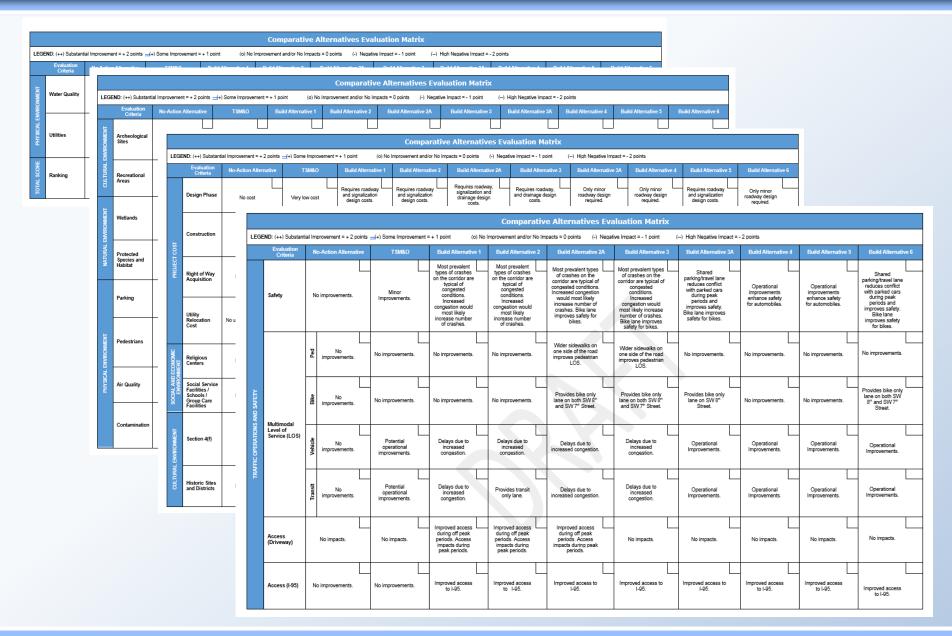
NOISE

Noise Study Report





Alternatives Evaluation Matrix





Next Steps

Alternatives Public Workshop

August 14, 2018

PAG Meeting

February 2019

Public Hearing

March 2019

Location Design Concept Acceptance

September 2019



Questions / Comments

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www.fdotmiamidade.com/CalleOchoStudy.html

