

Project Development and Environment (PD&E) Study Fletcher Avenue from Bruce B. Downs Boulevard to I-75



Hillsborough County

CIP No. 69606



11/9/2011



Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion



ETDM

Efficient Transportation Decision Making

History

- Planning Screen Limits: I-275 to I-75
- Programming Screen Limits: Bruce B. Downs to I-75
- **Purpose and Need:** Regional Connectivity, Plan Consistency, Emergency Evacuation, Future Traffic, Safety/Crash Rates, Transit Accommodations, Access to USF, UCH and Medical Facilities, Relief to parallel facilities, Bike/Ped Accommodations
- Environmental Project Effects: Minimal
- Class of Action: **Type 2 Categorical Exclusion(CE)**



Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion

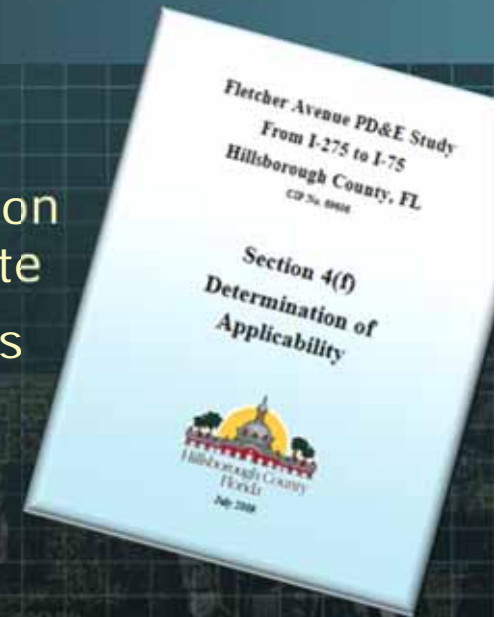
RS&H
IMPROVING YOUR WORLD

NEPA

The "Strings" Attached to Federal Funding

Follow the Process to be Eligible for Funding

- **Federal Funding means Federal process**
- Section 4(f) - Publicly owned park/recreation area, wildlife refuge, significant historic site
- Section 106 Process for Cultural Resources
- Endangered Species Act
- Uniform Relocation Act
- Environmental Justice – disproportionate impacts
- Type 2 CE = **no significant impacts**





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

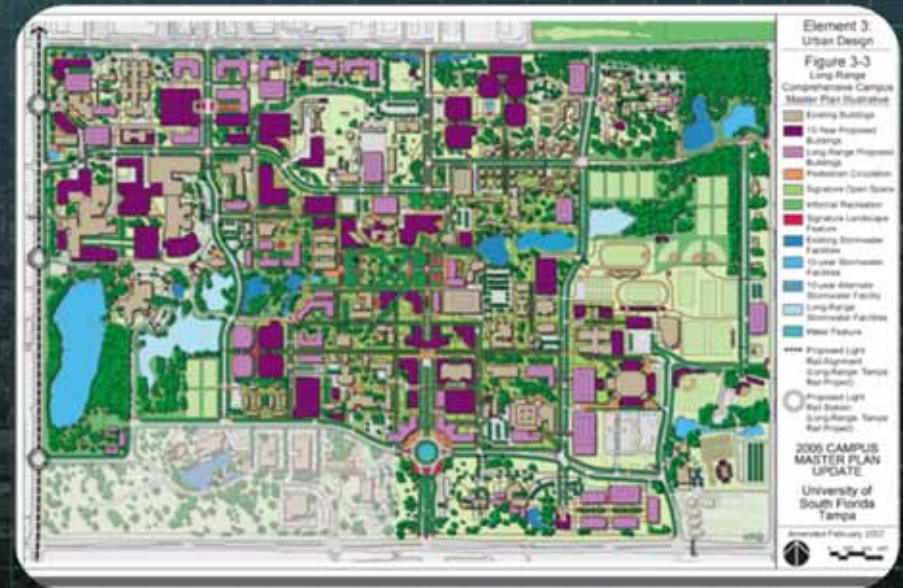
Environment

Conclusion



Stakeholder Input

- USF
 - Traffic congestion adjacent to campus
 - Utility impacts
 - Pedestrian Safety
 - Entrance Features





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

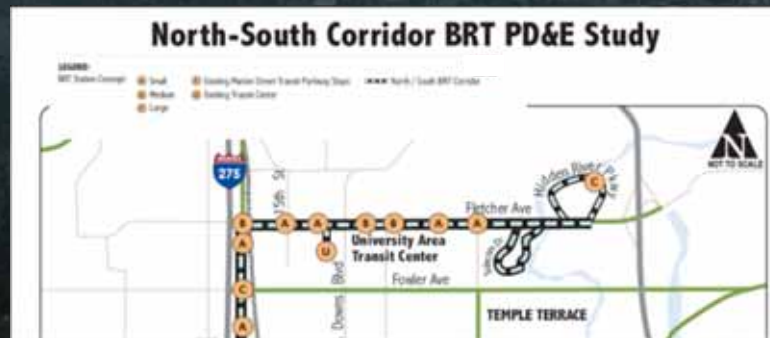
Environment

Conclusion

RS&H
IMPROVING YOUR WORLD

Stakeholder Input

- HART
 - BRT Accommodations
 - Support Transit
 - Shared study data to minimize rework





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion



Stakeholder Input

- UCH and Pepin Heart Center
 - Traffic Operations
 - Hospital Expansion
 - Arrival Experience
 - Connectivity





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

- Introduction
- ETDM
- Community**
- Engineering
- Environment
- Conclusion

Stakeholder Input Matrix

Stakeholders	NEPA Standards	Cost Minimization	Under Two Year Schedule	Bike/Pedestrian Accomodation	Supports Transit	Utility Impacts	Traffic Congestion	Neighborhood Investment	MMTD Amenities	L RTP Consistency	Access Management	Signage	Cut-thru Traffic	Connectivity
Hillsborough County	✓	✓	✓	✓	✓	✓					✓			
USF				✓	✓	✓					✓			
Hillsborough County Commissioner Kevin White				✓				✓						
HART					✓									
University Area Community Development Corporation				✓			✓	✓						
UCH/PEPIN Heart Institute				✓			✓				✓	✓	✓	✓
New North Transportation Alliance				✓	✓									
MPO/Planning Commission				✓				✓	✓					
City of Temple Terrace				✓				✓					✓	



Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction
ETDM
Community
Engineering
Environment
Conclusion

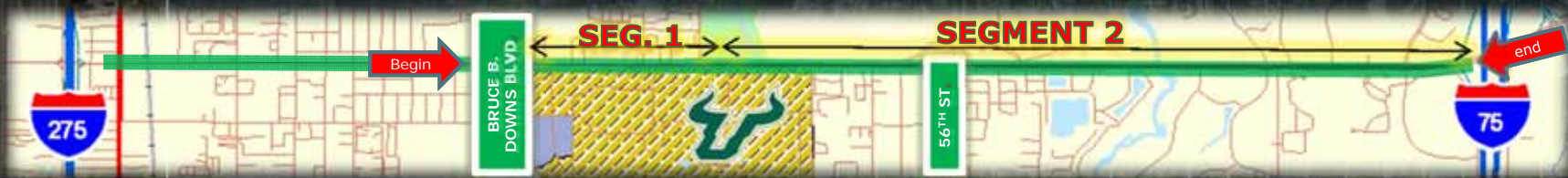
Traffic Modeling

2040 Volumes By Segment

Estimated AADT Volumes in Year 2040 (Based on TBRPM Traffic Forecast)

Note: LOS "C" AADT for Four-Lane Facility = 34,700

- Segment 1 – 73,760 AADT (currently 42,150 AADT)
- Segment 2 – 81,430 AADT (currently 46,530 AADT)



RS&H
IMPROVING YOUR WORLD



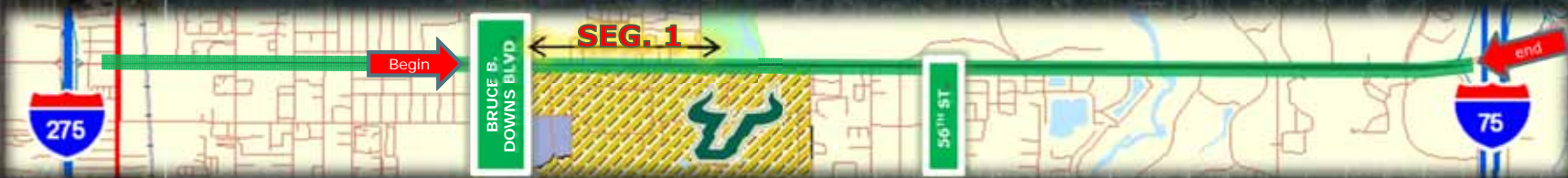
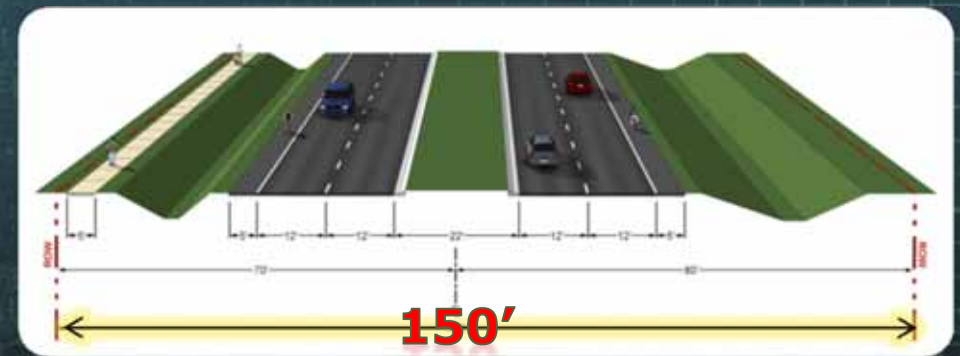
Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction
ETDM
Community
Engineering
Environment
Conclusion

Existing Project Character by Segment

Segment 1 (Bruce B. Downs Boulevard to 46th Street)

- Dominated by USF, Off-Campus Housing, UCH and Medical Facilities
- Access Management/Operational Issues
- Existing ROW 150'





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion

Existing Project Character by Segment

Segment (Bruce B. Downs Boulevard to 46th Street)

- High Bike / Pedestrian Traffic Associated with USF
- Pedestrian Counts 2009
 - 160 crossings at Palm Dr. in peak hour



RS&H
IMPROVING YOUR WORLD



Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

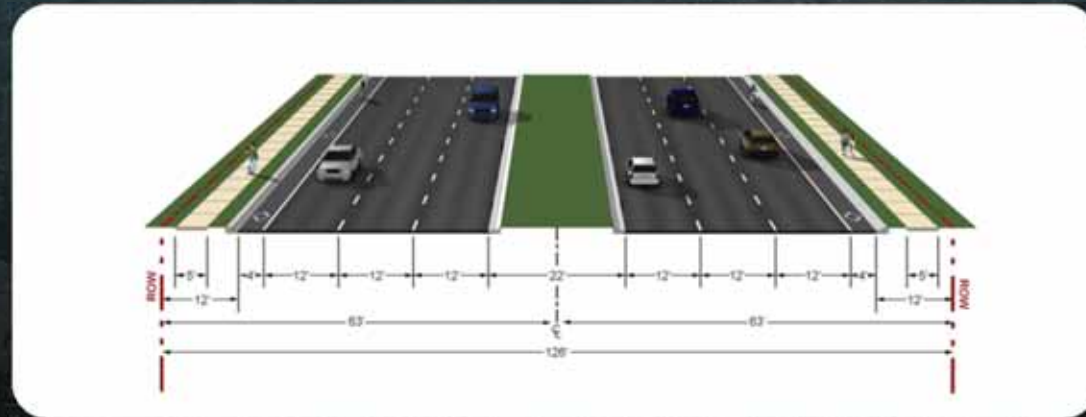
Conclusion

RS&H
IMPROVING YOUR WORLD

Fletcher Ave Improvements

Segment 1 (Bruce B. Downs Boulevard to 46th Street)

- Segment 1 – Alternative 1
 - Proposed 6L Urban Typical Section
 - (126' Minimum ROW)
 - Minimal ROW Required
 - 2 Business Relocations Expected





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

- Introduction
- ETDM
- Community
- Engineering**
- Environment
- Conclusion



Fletcher Ave Improvements

Segment 1 (Bruce B. Downs Boulevard to 46th Street)

Segment 1

Widen Both
Sides

Minimal
Additional
ROW (3'-8')



UNIVERSITY
COMMUNITY
HOSPITAL



Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

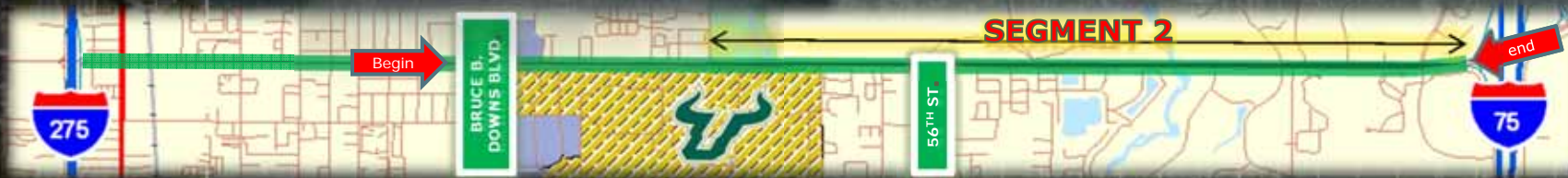
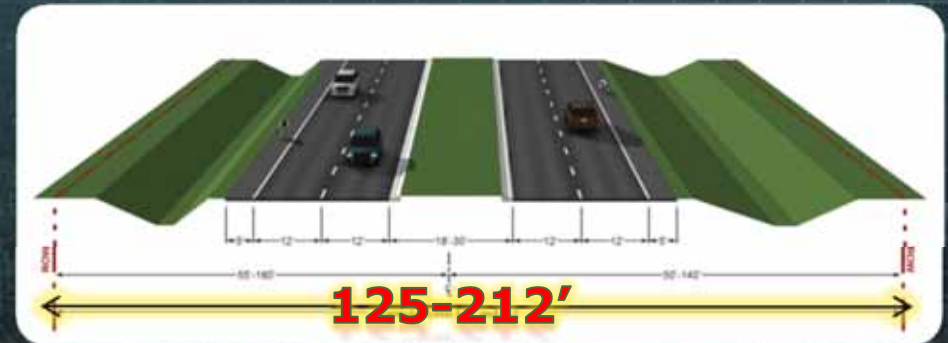
Environment

Conclusion

Existing Project Character by Segment

Segment 2 (46th Street to east of I-75)

- Existing ROW 125'-212'
- Wildwood Acres on the South





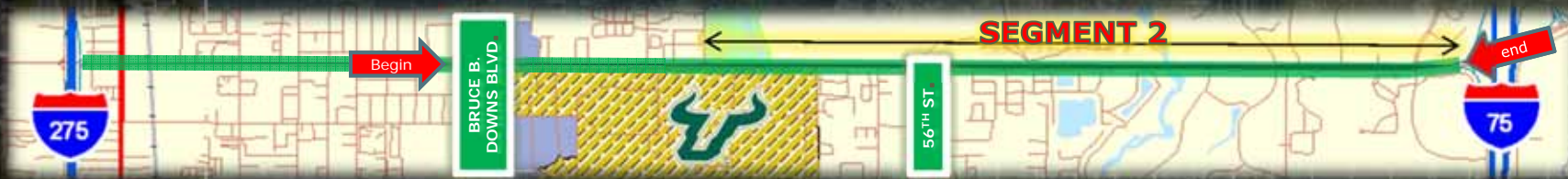
Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction
ETDM
Community
Engineering
Environment
Conclusion

Existing Project Character by Segment

Segment 2 (46th Street to east of I-75)

- The Claw Golf Course
- USF Ecological Research Area (EcoArea)
- USF Riverfront Park
- Lettuce Lake Park





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

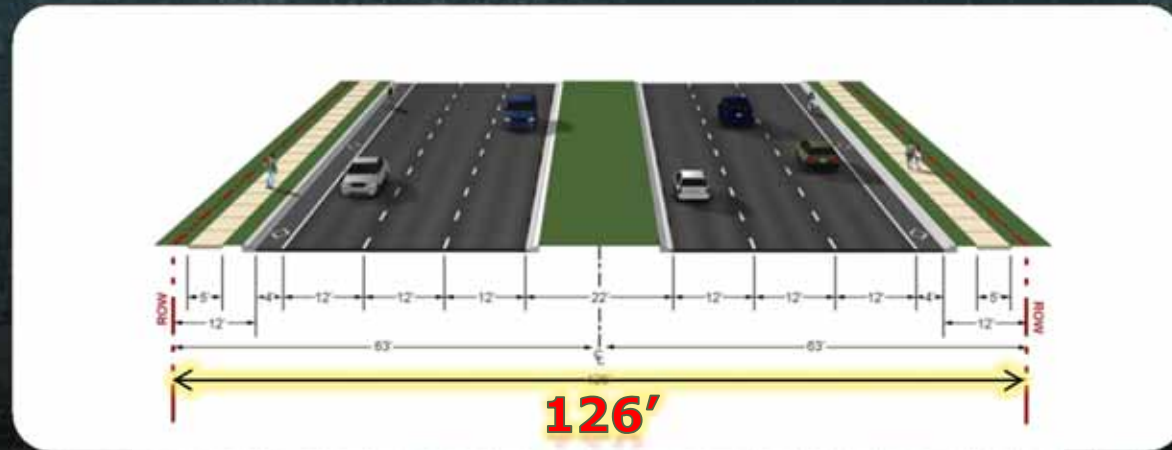
Conclusion

RS&H
IMPROVING YOUR WORLD

Fletcher Ave Improvements

Segment 2 (46th Street to east of I-75)

- Segment 2 – Alternative 1
 - Proposed 6L Urban Typical Section with 22' median
 - 126' Minimum ROW – best fit alignment
 - Lowest ROW Acquisition Required
 - No Residential or Business Relocations Required





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

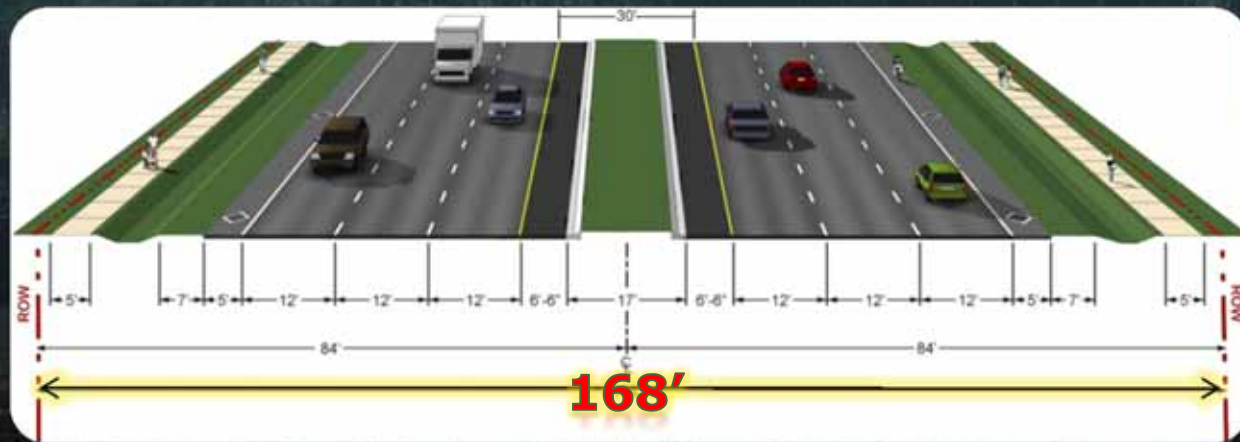
Introduction
ETDM
Community
Engineering
Environment
Conclusion

RS&H
IMPROVING YOUR WORLD

Fletcher Ave Improvements

Segment 2 (46th Street to east of I-75)

- Segment 2 – Alternative 2
 - Proposed 6L Suburban Typical Section with 30' median
 - 168' Minimum ROW – best fit alignment
 - Highest ROW Required
 - 4 Business and 0 Residential Relocations Required





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

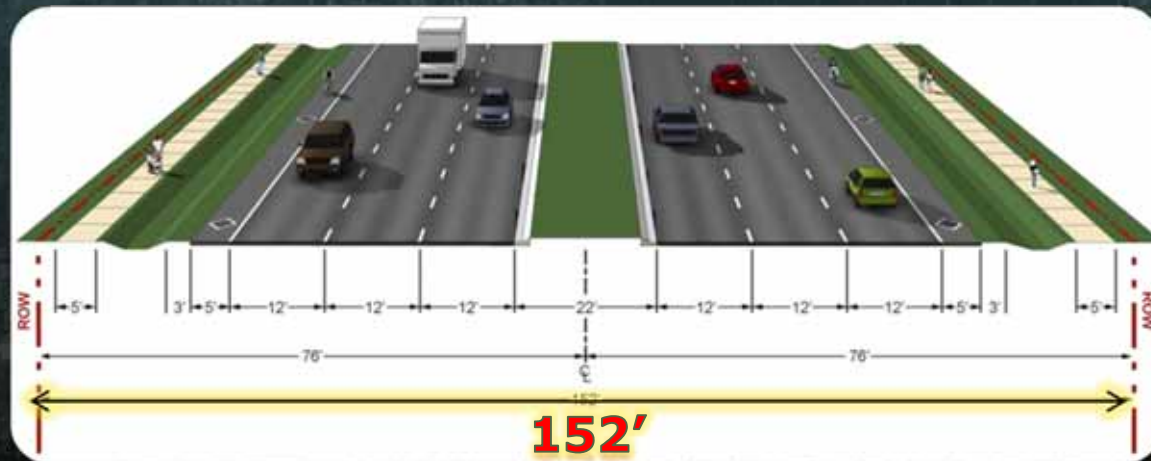
Conclusion

RS&H
IMPROVING YOUR WORLD

Fletcher Ave Improvements

Segment 2 (46th Street to east of I-75)

- Segment 2 – Alternative 3
 - Proposed 6L Suburban Typical Section with 22' median
 - 152' Minimum ROW – widening to the south
 - Moderate ROW Acquisition Required
 - 17 Business and 38 Residential Relocations Required





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

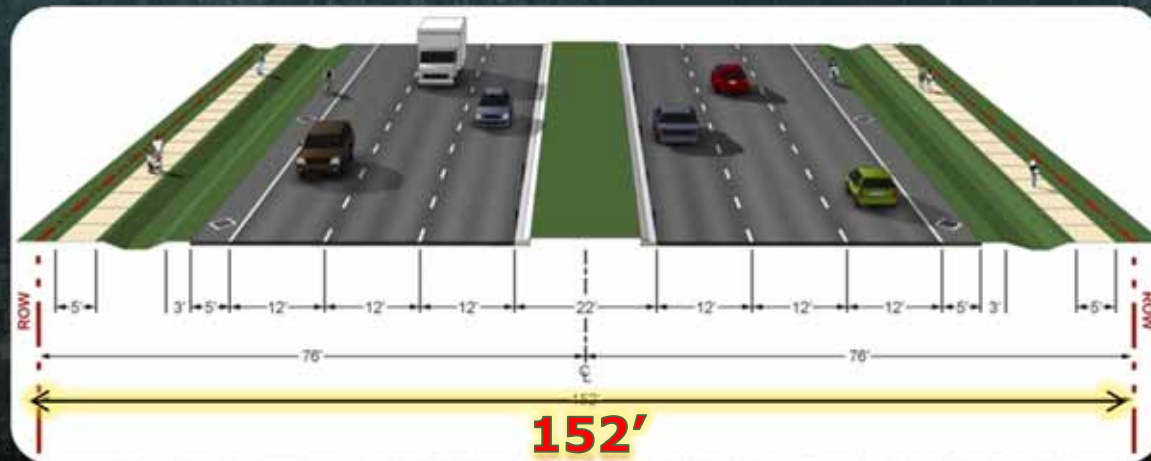
Conclusion

RS&H
IMPROVING YOUR WORLD

Fletcher Ave Improvements

Segment 2 (46th Street to east of I-75)

- Segment 2 – Alternative 4
 - Proposed 6L Suburban Typical Section with 22' median
 - 152' Minimum ROW – best fit alignment
 - Moderate ROW Acquisition Required
 - 4 Business and 0 Residential Relocations Required





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

- Introduction
- ETDM
- Community
- Engineering**
- Environment
- Conclusion



Fletcher Ave Improvements

Segment 2 (46th Street to east of I-75)

Segment 2
Widen Both Sides
Additional ROW
Required





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion

RS&H
IMPROVING YOUR WORLD

Hillsborough River Bridge

Segment 2 (46th Street to east of I-75)

- Existing Bridge Condition
 - Year Constructed: 1961 / 1989
 - Sufficiency Rating: 96.0
 - National Bridge Inventory:
 - Superstructure – 7 good
 - Substructure – 5 fair
 - Health Index: 94.59
 - Load Rating:
 - Operating – 43.5
 - Inventory – 39.0





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion

RS&H
IMPROVING YOUR WORLD

Hillsborough River Bridge

Segment 2 (46th Street to east of I-75)

- Existing Bridge Typical Section
 - Four 12-foot lanes
 - Raised median separator
 - 10-foot outside shoulders
 - 5-foot sidewalks
 - Direct discharge scuppers
 - Utilities attached





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

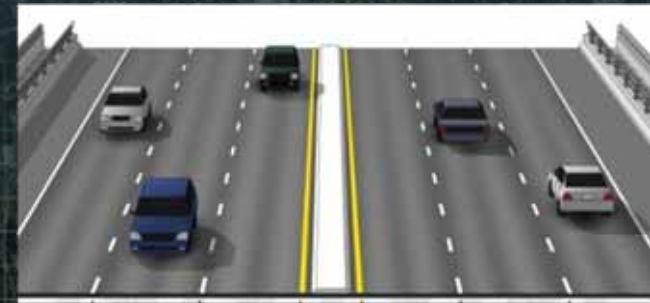
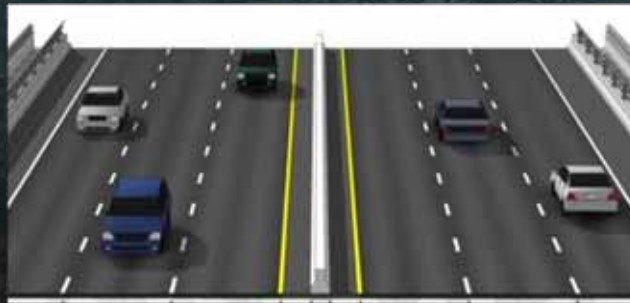
Conclusion

RS&H
IMPROVING YOUR WORLD

Hillsborough River Bridge

Segment 2 (46th Street to east of I-75)

- Proposed Typical Section
 - Lanes: Six 11-foot Lanes
 - Median Separator: Concrete Barrier or Traffic Separator
 - Outside Shoulders: 6'-6"
 - Sidewalk Width: 5'-0" each side
 - Traffic Barrier separating Traffic/Pedestrians





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion

RS&H
IMPROVING YOUR WORLD

Hillsborough River Bridge

Segment 2 (46th Street to east of I-75)

- Benefits to No Widening
 - Reduced construction cost
 - Avoids outside battered piles
 - Maintains utilities on bridge





Fletcher Avenue
 PD&E Study
 From I-275 to I-75
 CIP No. 69606

- Introduction
- ETDM
- Community
- Engineering
- Environment
- Conclusion



Fletcher Ave Improvements Evaluation Matrix

EVALUATION FACTORS	SEGMENT 1		SEGMENT 2		
	ALTERNATIVE 1	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
POTENTIAL BUSINESS AND RESIDENTIAL IMPACTS					
NUMBER OF BUSINESS IMPACTS (PARCELS)	10	4	9	11	9
NUMBER OF BUSINESS RELOCATIONS (NUMBER)	2	0	4	17	4
NUMBER OF RESIDENTIAL IMPACTS (PARCELS)	0	0	0	2	0
NUMBER OF RESIDENTIAL RELOCATIONS (NUMBER)	0	0	0	38	0
POTENTIAL RIGHT OF WAY IMPACTS					
ANTICIPATED RIGHT OF WAY ACQUISITION (Total Acres)	10.10	21.74	33.82	28.09	28.92
NATURAL/CULTURAL/PHYSICAL ENVIRONMENTAL EFFECTS					
ARCHAEOLOGICAL SITES (NUMBER)	2	9	9	9	9
HISTORICAL SITES (NUMBER)	0	1	1	1	1
POTENTIAL SECTION 4(f) SITES (NUMBER)	0	2	3	3	3
NOISE SENSITIVE SITES (NUMBER)	None	Low	Medium	Low	Medium
WETLANDS (ACRES)	0	3.76	8.18	6.26	6.72
FLOODPLAINS (ACRES)	0	3.7	7.5	6.2	7.1
THREATENED AND ENDANGERED SPECIES (HIGH, MEDIUM, LOW)	Low	Medium	Medium	Medium	Medium
CONTAMINATED SITES (NUMBER)	0	3	3	3	3
ESTIMATES PRESENT DAY COSTS (\$ MILLIONS)					
CONSTRUCTION	\$8.13	\$22.70	\$21.40	\$19.30	\$19.30
UTILITIES	\$0.02	\$0.52	\$0.74	\$2.21	\$0.72
FINAL DESIGN (10% OF CONSTRUCTION)	\$0.91	\$2.27	\$2.14	\$1.93	\$1.93
CONSTRUCTION ENGINEERING INSPECTION	\$0.91	\$2.27	\$2.14	\$1.93	\$1.93
RIGHT OF WAY	\$34.53	\$12.24	\$17.75	\$34.86	\$16.61
WETLAND MITIGATION	\$0	\$0.40	\$0.87	\$0.66	\$0.71
TOTAL COSTS (\$ MILLIONS) BY SEGMENT	\$45.50	\$40.40	\$45.04	\$40.89	\$41.20



Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction
ETDM
Community
Engineering
Environment
Conclusion



Pedestrian Safety

Segment 1 (Bruce B. Downs Boulevard to 46th Street)

- Proposed Pedestrian Overpass or Tunnel





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

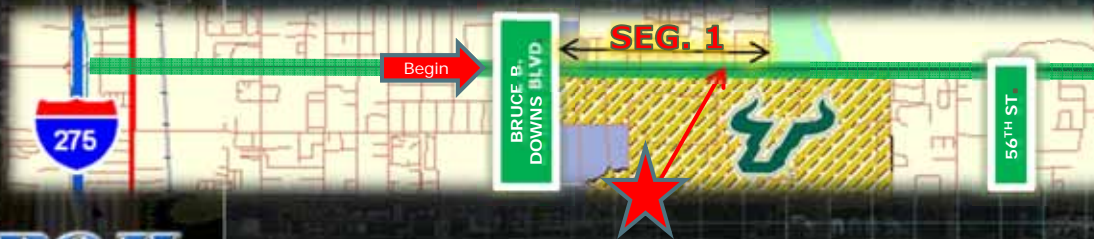
Environment

Conclusion

Fletcher Ave Improvements

Segment 1 (Bruce B. Downs Boulevard to 46th Street)

- Palm Drive Intersection (Existing)
 - Offset Intersection
 - High Pedestrian Traffic



RS&H
IMPROVING YOUR WORLD



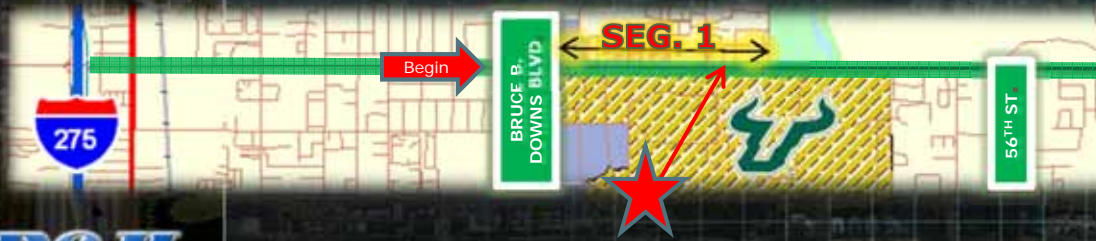
Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction
ETDM
Community
Engineering
Environment
Conclusion

Fletcher Ave Improvements

Segment 1 (Bruce B. Downs Boulevard to 46th Street)

- Palm Drive Option 1
 - 25 MPH Design Speed
 - Single Intersection
 - Removes Signal
 - No Change to TECO Substation





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

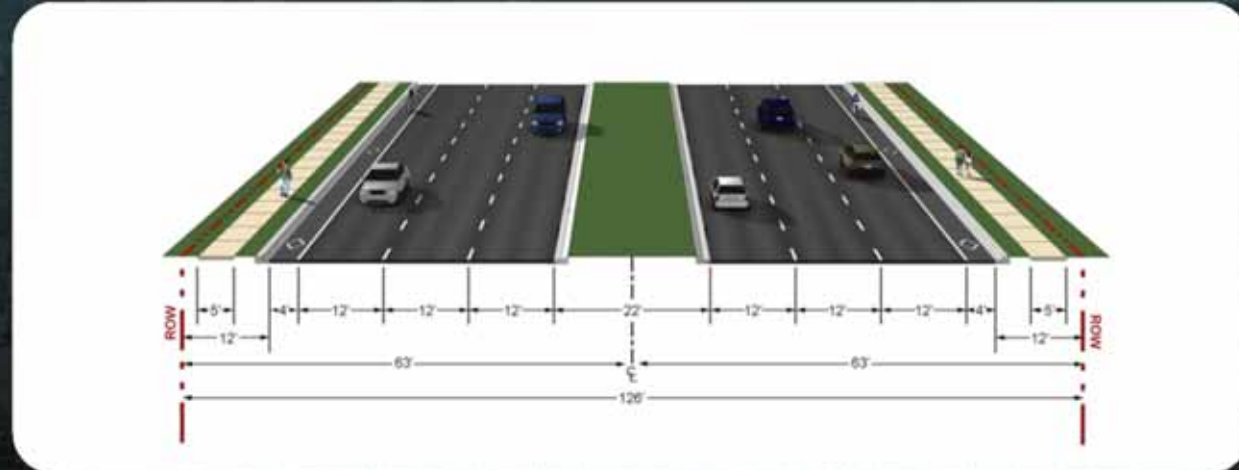
Conclusion

RS&H
IMPROVING YOUR WORLD

Preferred Alternative Recommendations

■ Preferred Roadway Alternatives

- Segment 1: Alternative 1A
- Segment 2: Alternative 1
- Outside lanes designated as BRT/HOV during peak hours





Fletcher Avenue
PD&E Study
From I-275 to I-75
CIP No. 69606

Introduction

ETDM

Community

Engineering

Environment

Conclusion

RS&H
IMPROVING YOUR WORLD

Preferred Alternative Recommendations

- Options to take to Public Hearing
 - 42nd Street/Palm Drive realignment
 - Pedestrian Crossing: No Build, Overpass, or Tunnel

