

Value Planning for Transit Improvements on Orange Blossom Trail (Orlando, Florida)

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Toronto, Ontario
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Thomas W. Williams

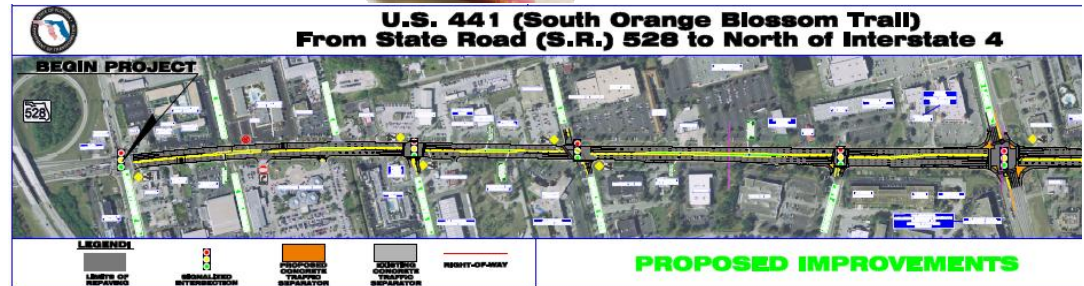
Topic Overview

- *Florida Department of Transportation (FDOT) requested a value engineering study for Orange Blossom Trail. Two phases for the project were underway: Preliminary Design for Safety Improvements, and Concept Planning for Transit Improvements. The study touched upon safety, pedestrians, cyclists, transit, auto movement, freight movement, land use and more, making for an interesting study week.*

Orlando



Orlando VE Study



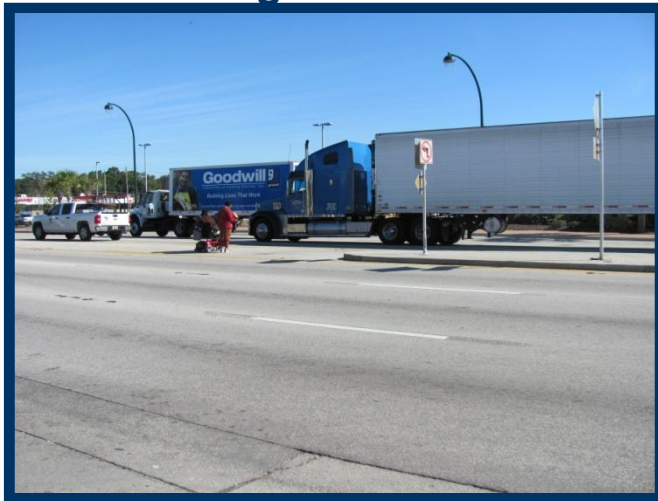
Orange Blossom Trail

Project Limits - From SR 528 to north of I-4



Issues

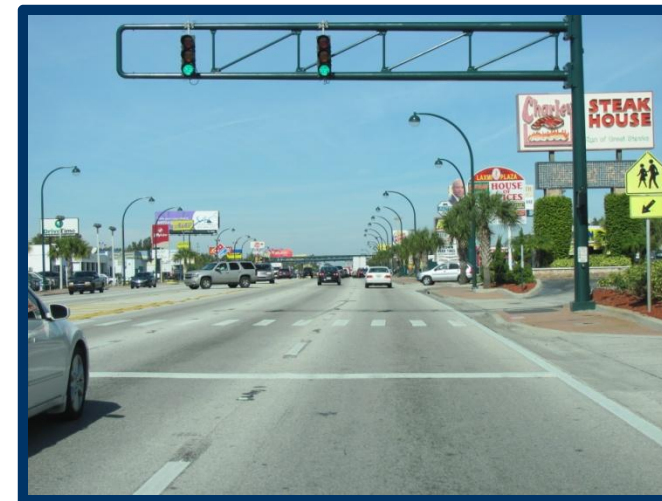
Freight Traffic



Pedestrians Crossing



Minimal Transit Amenities



Access Management

Issues (Continued)

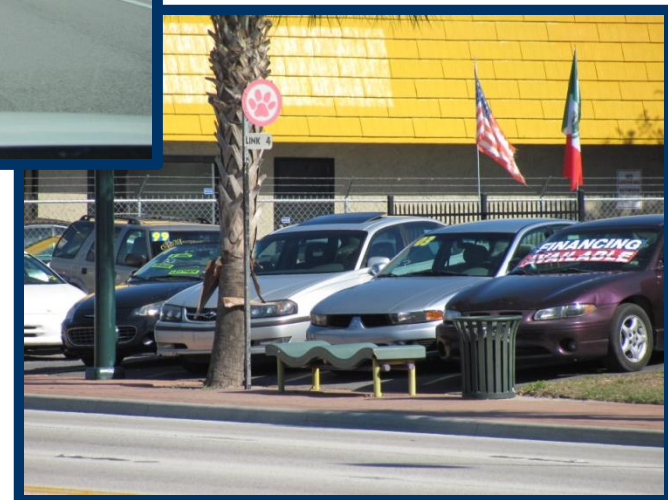
Wide Mix of Land Uses



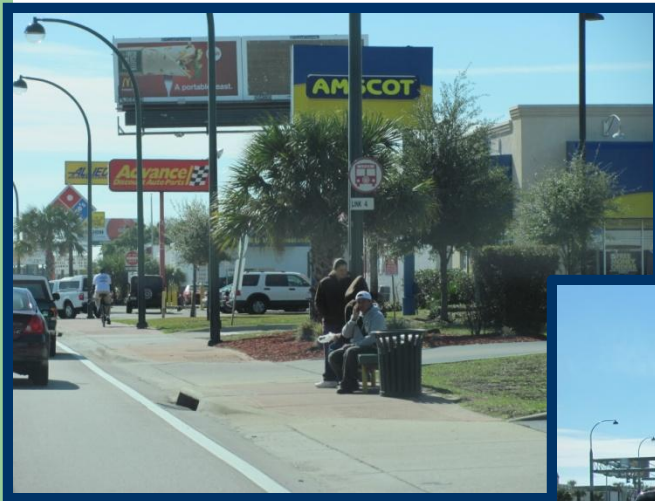
Large Intersections



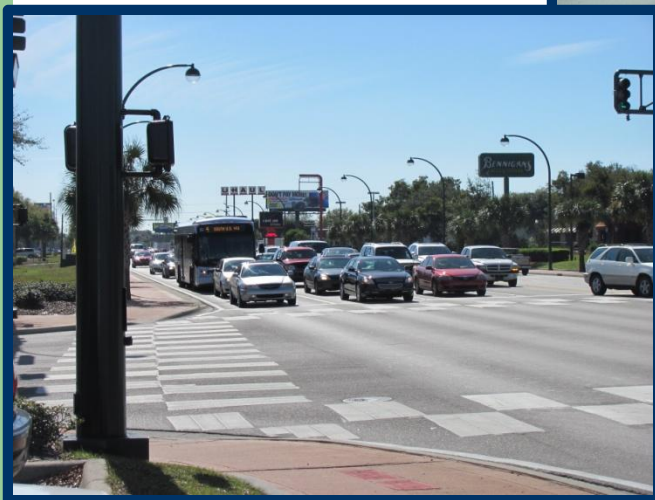
Minimal ROW



Lack of Transit Identity



Auto Congestion



Proposed FDOT Safety Improvements

- Orange Blossom Trail (US 441) is listed as a high crash segment for the years 2005, 2006, and 2007.
- 16.5 foot raised grass median was proposed
 - Require that the width of the inside and middle through lanes be reduced to 10.25 feet and the outside through lanes be reduced to 11.25 feet.
 - 4 foot raised concrete separator and an 11 foot turn lane at intersections.
 - Install signing and pavement marking, traffic signal, and count station improvements
 - The traffic signal timings in the corridor should be reviewed and optimized

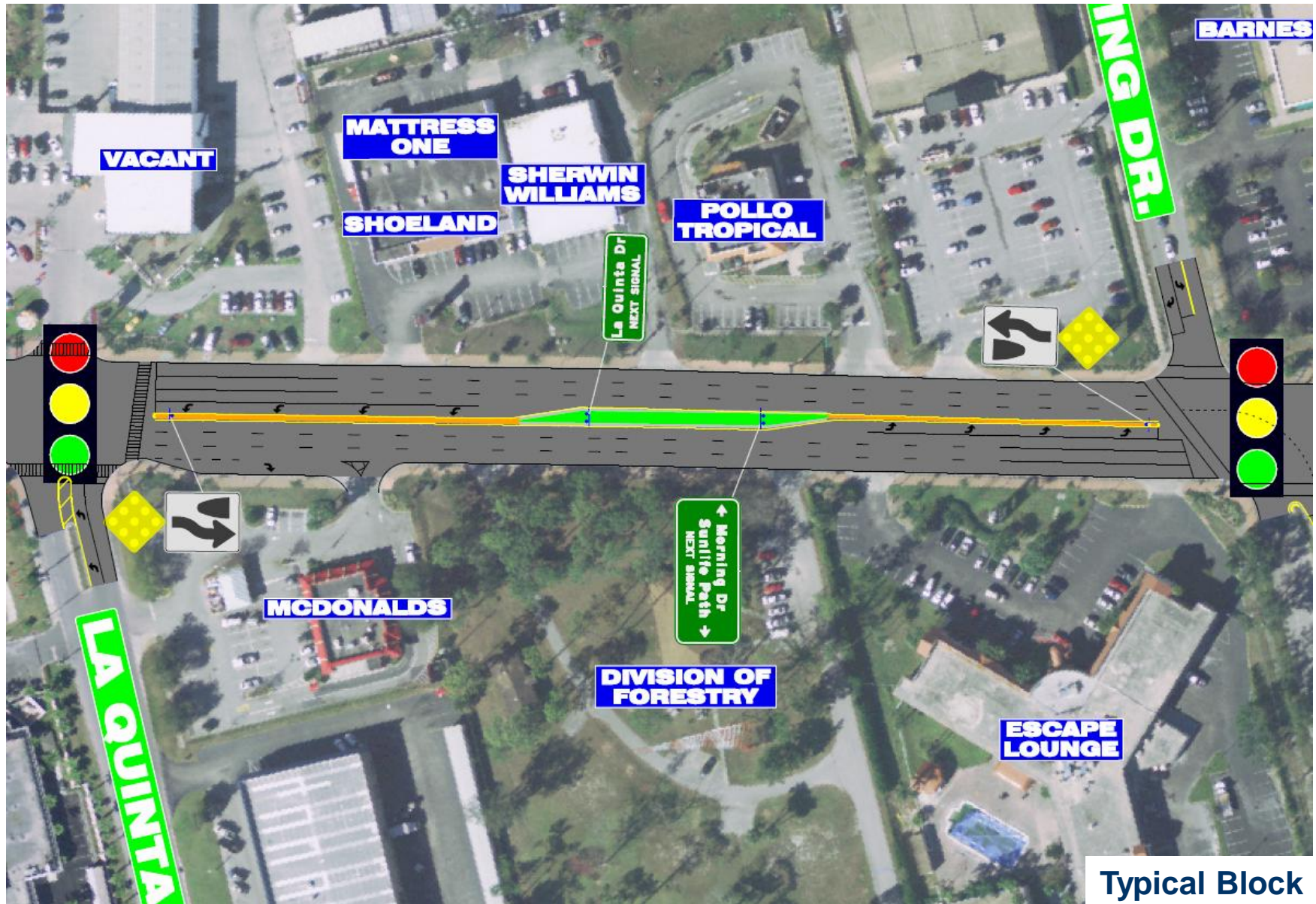


Raised Grassy Median

Common in the Orlando Area



Proposed FDOT Safety Improvements



Schedule

- February 14 - 16, 2011 Workshop #1
- February 16 – March 11, Evaluation of Alternatives
- March 14 - 16, Workshop #2
- March 16 – April 15, Final Evaluation of Recommendations and Documentation

Stakeholder Participation

- FDOT (Multiple Departments)
- Lynx (Orlando Transit)
- SunRail (Commuter Rail)
- City of Orlando
- Orange County
- Bicycle Group
- Orange Blossom Trail Development Board

23 Participants!

FDOT Level of Interest

- High level of interest and participation in the study
 - The FDOT Manager of Engineering participated for the entire 5 days
 - A former Commissioner participated for one day

Process

PRE-WORKSHOP

Project Coordination
Data Preparation

WORKSHOP

Information Phase
Analysis (Function) Phase
Creative Phase
Evaluation Phase
Development Phase

POST-WORKSHOP

Presentation of Results
Draft and Final Report
Project Follow-up
Implementation



Information Phase included a bus tour of the corridor

Function

Orange Blossom Trail (SR 500/US441) - Multi-Modal VE from Sand Lake Road to N of I-4

MOBILITY

SAFETY

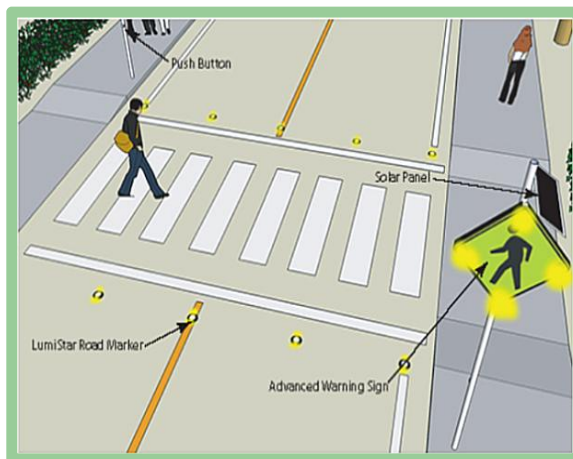
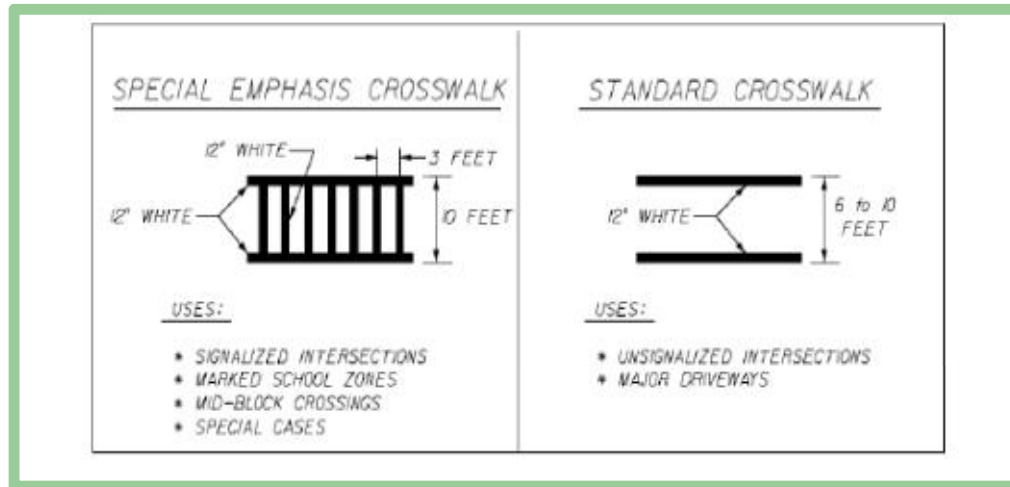
Recommendations

- Three Categories:
 - Near-Term Implementation
 - *“Low Hanging Fruit”*
 - Mid-Term
 - Long-Term “Policy” Items
- FDOT also wanted to see how recommendations could be used on similar studies elsewhere

Near-Term “Quick Win” Items

- Use consistent bus stop design
- Improve mid-block pedestrian crossings
- Implement transit signal priority (TSP)
- Implement queue jump lanes with TSP
- Use “smart” bus bay – combine bus bays with pedestrian signals
- Implement interactive wayfinding
- Use limited stop buses in addition to local service buses
- Reduce traffic speeds

Improve mid-block pedestrian crossings

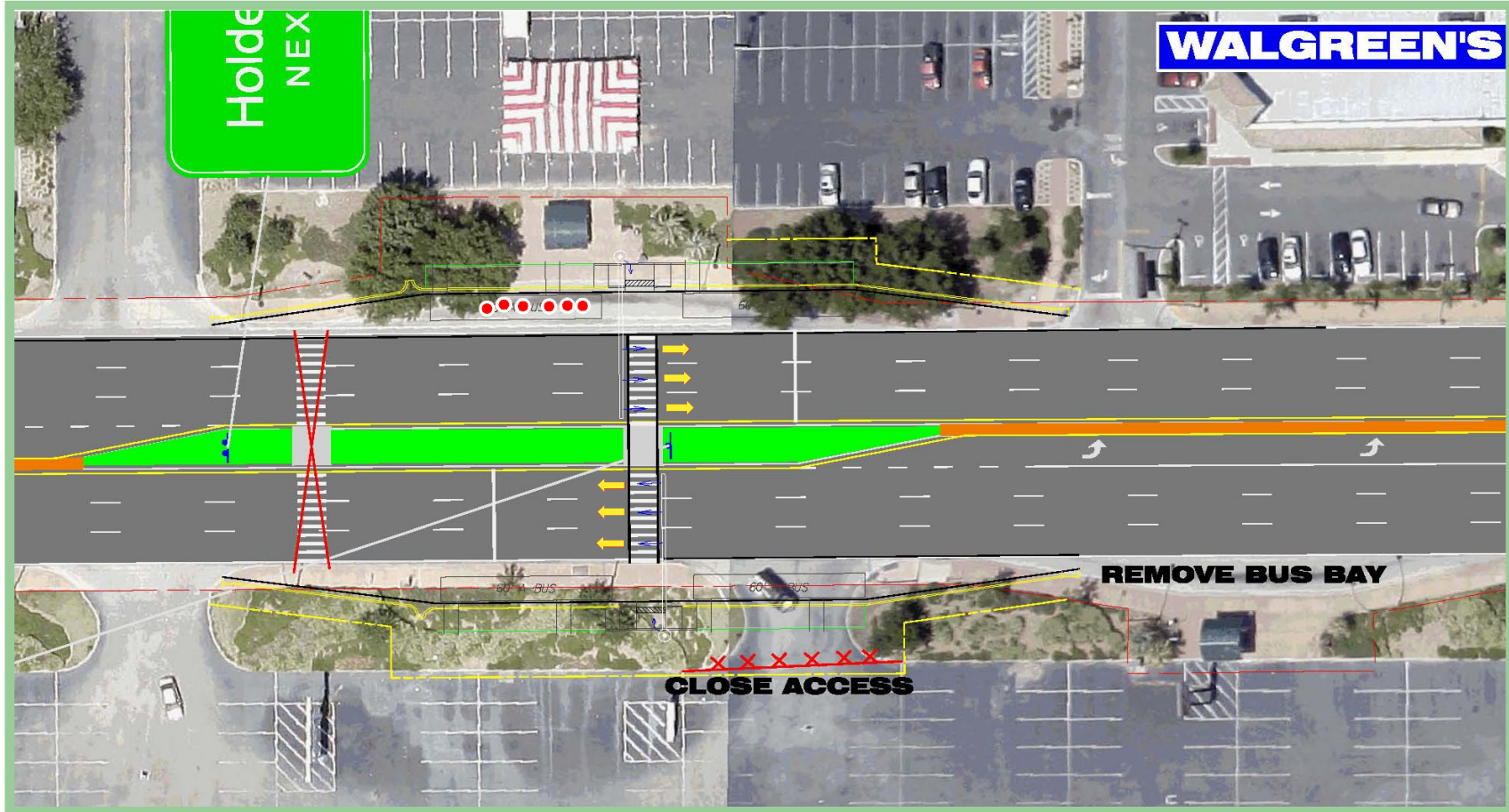


Implement queue jump lanes with transit signal priority

Illustration of Queue Jump



“Smart” Bus Bay



Implement interactive wayfinding

- Implement an interactive wayfinding system at major bus stops that provides useful information to users
- LYNX will be the first transit system in the nation to Quick Response (QR) Codes technology
- This technology will be tested at still-to-be-determined stops along LYNX routes.



Mid-Term Implementation

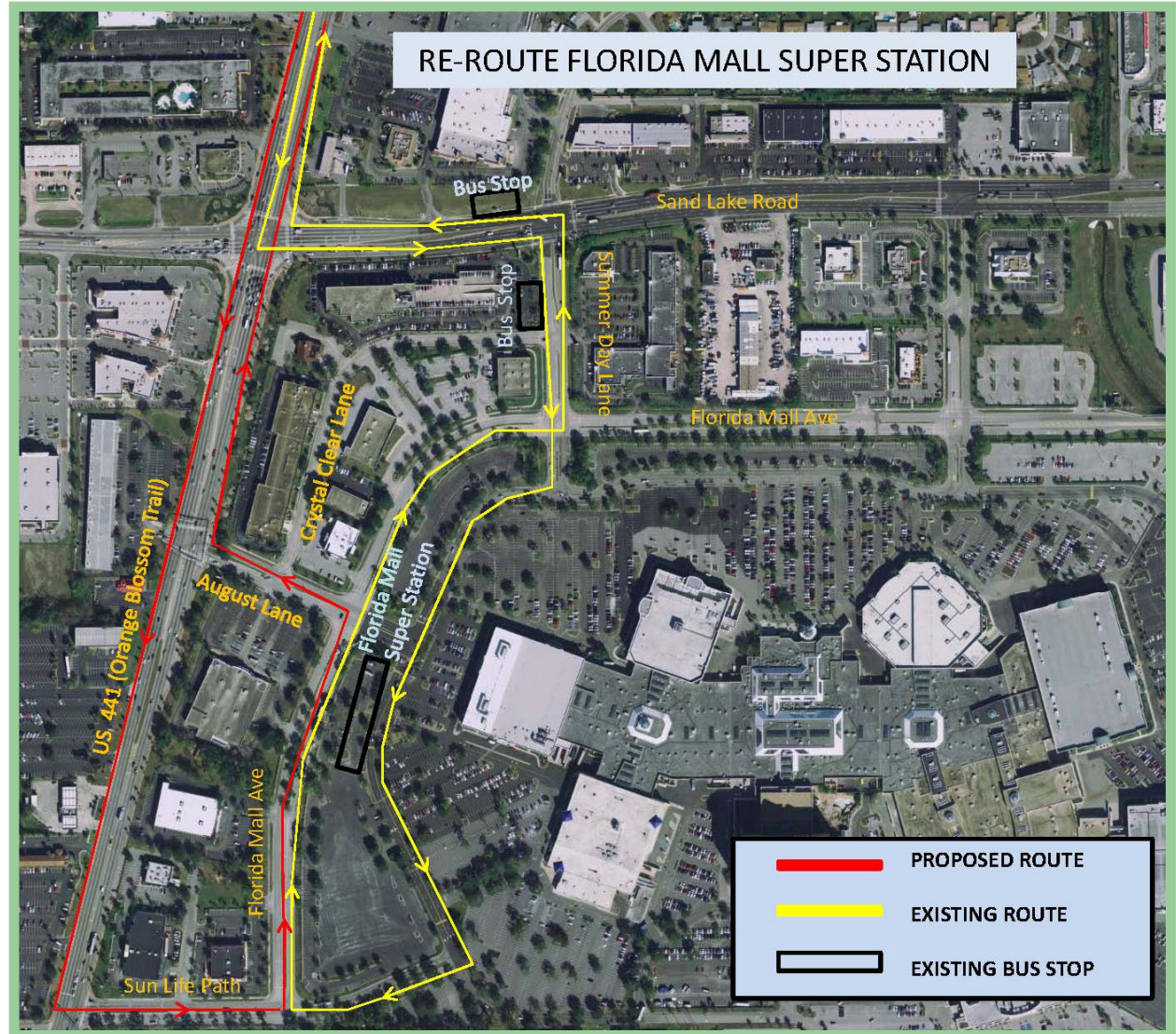
- Close Median except at Intersections (*ALREADY IN PROGRESS*)
- Reroute from Florida Mall “Super Station” to save departure time (*MOVE TO QUICK WIN PROPOSALS*)
- Anticipate First-Time SunRail riders and provide connectivity to SunRail for Orange Blossom Trail (OBT) route.
- Curb bus lanes
- Shorter Blocks (related to Land Use and to addressing mid-block crossings)

Mid-Term Implementation

- Block mid-block pedestrian crossings
- Redistrict Schools along Orange Blossom Trail
– so that students do not need to cross Orange Blossom Trail (*Move to Policy Proposals*)
- Cameras for No Right Turns with Pedestrian violations
- Walks/Multi-use path

Reroute from Florida Mall “Super Station” to save departure time

- MOVE TO QUICK WIN PROPOSALS



Curb bus lanes



Arterial LOS Analysis	AM Peak Period			PM Peak Period		
	Travel Time (s)	Arterial Speed (mph)	Arterial LOS	Travel Time (s)	Arterial Speed (mph)	Arterial LOS
Alternative	Northbound US 441			Northbound US 441		
Existing	484.1	29.4	B	604.8	23.5	C
With Curb Lane BRT (4 Ln OBT)	526.3	27.1	C	708.1	20.1	D
Alternative	Southbound US 441			Southbound US 441		
Existing	492.5	28.6	B	599	23.5	C
With Curb Lane BRT (4 Ln OBT)	497.8	28.3	B	738.0	19.1	D

Block mid-block pedestrian crossings

- Pedestrians on Orange Blossom Trail (OBT) commonly cross mid-block
- Have pedestrians cross at safer locations



Longer-Term “Policy” Items

- Multi Modal Priority Plan For Corridors
- Outreach Policy Plan
- Create Community Vision

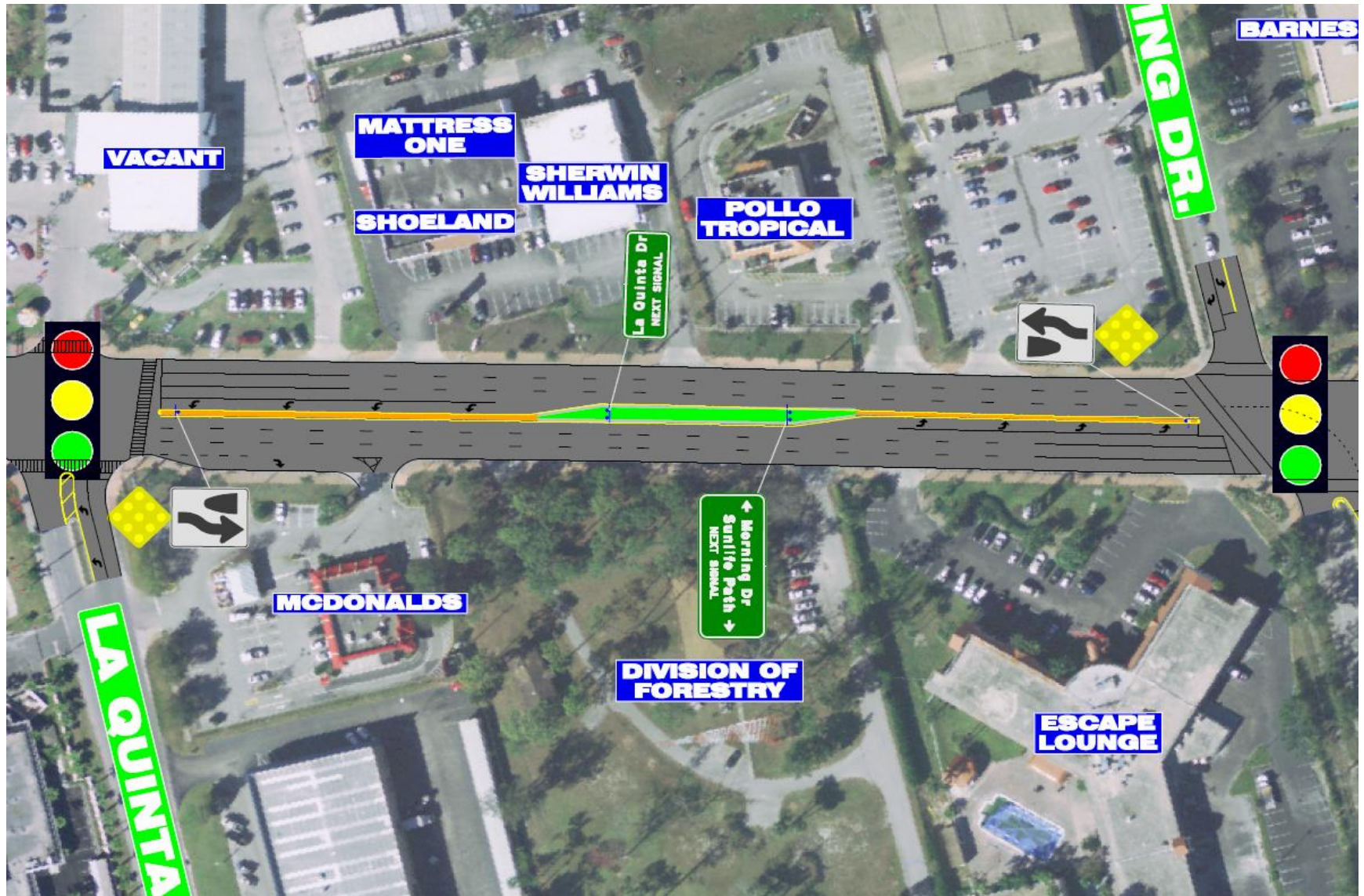
Create Community Vision

- Orange Blossom Trail Land Use and Design Standards do not currently lend themselves to a balanced, multi-modal, livable approach
- Adopt flexible ordinances to stimulate economy – Consider developing a Form Based Code for corridor.
- Increase densities to support Transportation Oriented Development (TOD) – Form Based Code
- Create Multi Modal Transportation District (MMTD) for Corridor
- Proactively work with local agencies/stakeholders, county, city, OBT, & FDOT
- Promote sustainable business by assisting in minimizing risk



Existing Land Uses

All Auto Oriented



Create Community Vision

- Basically, recognize how interrelated land use and transportation are!



Action Plan

Action Plan Form		
Action Item	By When	Status
Value Proposal #3: Implement transit signal priority		
<ul style="list-style-type: none"> Proposal is to consider this alternative only for busses that are behind schedule. Extend or provide early green indication for buses to allow them to get back on schedule. 		<ul style="list-style-type: none"> Lynx already coordinating with County and FDOT.
<ul style="list-style-type: none"> Analyze if traffic from side streets experience delays as a result of extended or early green conditions for buses. 	Now	<ul style="list-style-type: none">
<ul style="list-style-type: none"> Investigate locations where this could be implemented as a test project within the project limits 	Now	<ul style="list-style-type: none"> HNTB to investigate locations and identify modifications required to implement this
<ul style="list-style-type: none"> Verify equipment compatibility. 		<ul style="list-style-type: none"> Need coordination between LYNX, Orange County, City of Orlando and FDOT
<ul style="list-style-type: none"> For this to work, LYNX needs to be able to track current bus location compared to where it should be on scheduled route. Currently only by cellular call-ins by driver (every 15 mins) 	Now	<ul style="list-style-type: none"> Waiting for upgrade to Lynx Automatic Vehicle Location (AVL) operation.
<ul style="list-style-type: none"> Create technical working team with Lynx, FDOT, City of Orlando, and maintaining agency (Orange County). 	Spring 2011	<ul style="list-style-type: none"> Lynx to coordinate with FDOT. Lynx to talk to technical staff to see how far along they are to begin (FDOT is ready).
<ul style="list-style-type: none"> Review need for Leading Pedestrian Intervals (LPI) implementation after the "August Project" has been completed 	After construction of "August Safety Project"	<ul style="list-style-type: none"> FDOT to review operations after completion of safety project and once sufficient post construction operational data is available. Move this suggestion to Mid-term.

Contact Information

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