

# ERP Final Report Appendix G: Case Study of I-95 Express Lanes in Miami

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## Project Goals:

- Maximize throughput along the I-95 corridor between Miami and Ft. Lauderdale.
- Maintain free flow speed, a minimum speed of 45 miles per hour, on the Express Lanes and travel time savings.
- Increase trip reliability.
- Incentivizing transit and carpooling.
- Reduce congestion through diverting traffic to non-peak period.
- Meet increasing travel demand in the future.
- Facilitate trip-reducing commuter carpool formations (as opposed to “fampools”).



## Project Description:

### 1. Existing Facility before Conversion:

- I-95 from I-395 in Downtown Miami to I-595 in Broward County was comprised of 4 general purpose lanes and a single HOV lane.
- HOV lanes were enforced during peak hours only. 7-9 AM and 4-6 PM. Occupancy requirement was 2+.
  - a. Separation of the HOV lane and the general purpose lanes was via striping only.

## 2. Phasing of Facility for Conversion:

- Phase 1A was comprised of a 6.2 mile northbound only segment from SR 112 to Golden Glades Interchange. The existing HOV lane was converted to a HOT lane, and a second HOT lane was added by restriping the entire facility (meaning no new pavement added). Tolling commenced on December 5, 2008.
- Phase 1B was comprised of a 7.3 mile southbound segment from the Golden Glades Interchange to SR 836. The existing HOV lane was converted to a HOT lane (no new pavement), and a second HOT lane was added by restriping the entire facility. Tolling commenced on January 15<sup>th</sup>, 2010. Additionally, the northbound segment was further extended to I-395 for a full length of 7.3 miles effective March 10, 2010.
- The separation of the HOT lanes and the general purpose lanes for Phase 1A and 1B is via delineators spaced 10 feet apart within a 1 foot painted buffer.
- Phase 2 is currently under procurement for a Design Build team to extend the facility from the Golden Glades Interchange to I-595. Anticipated open to tolling date is currently late 2013.
- The separation of the HOT lanes and the general purpose lanes will be via delineators spaced 10 feet apart within a variable width buffer (varies from 2 to 18 feet).

### *Funding*

The 95 Express lanes project from I-395 in downtown Miami to I-595 in Broward County was fully funded by a combination of different funding sources.

#### 1. Phase 1A and 1B Total: \$121 million (original capital cost)

- UPA Funds: UPA: \$45 million (highway)
- State: \$41 million
- Legislative earmark: \$35 million

#### 2. Phase 2 Total: \$106.1 million

- Federal Stimulus: \$96.6 million
- State: \$5.2 million
- Federal Safety: \$4 million
- Local: \$300K

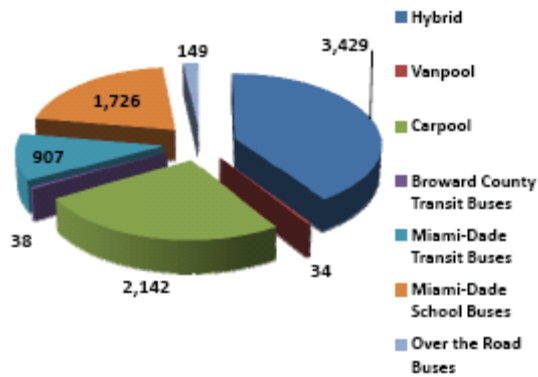
### *Operational Characteristics of 95 Express*

Prior to 95 Express implementation the existing HOV and general purpose lanes on I-95 was operating at LOS F during peak periods. The violation rates on the existing facility were very high exceeding 30% in many segments.

The decision was made by Florida Department of Transportation to raise the occupancy limit from 2+ to 3+ during the conversion. Traffic forecasts for latter years reflected an oversaturation of traffic under the 2+ scenario.

The carpool registration component of 95 Express was developed due to the right of way constraints prohibiting a dedicated declaration lane (for occupancy verification). Additionally, the carpool registration requirement further encourages an increase in commuter-based carpools for trip reduction. The ability to leverage Florida Turnpike Enterprises electronic violation enforcement system also provided the Department with the opportunity to reduce the scope of FHP enforcement in the lanes.

## Registrations To Date



Data from D6 September 2010 monthly report

1. The 2 HOT lanes are dynamically tolled 24 hours a day, 7 days a week.
2. Trucks (3or more axles) are not allowed in the facility.
3. Toll Exempt users include:
  - 3+ carpools.
  - Transit Buses.
  - Registered vanpools.
  - County school buses
  - Hybrid vehicles.
  - Motorcycles (do not have to register)
  - Registered carpools (registration provided by South Florida Commuter Services)
4. Motorists with valid SunPass transponders are allowed to use the lanes at any time regardless of occupancy.
5. 95 Express is managed to maintain a minimum speed of 45 MPH.
6. Enforcement:
  - a. Tolls are enforced via FTE's electronic violation enforcement system.
  - b. Occupancy is enforced during peak hours by Florida Highway Patrol officers.
7. Customer Service:
  - a. South Florida Commuter Service handles the registration of toll exempt users, and all calls from website phone number.
  - b. Florida's Turnpike Enterprise handles all calls related to SunPass customer accounts.

### Toll Rates

1. Toll Rate Setting:
  - Minimum toll rate for existing facility is \$0.25.
  - Maximum toll rate for existing facility \$7.10 (7.3 mile maximum trip length).
  - Phase 1A (northbound) and Phase 1B (southbound) are each comprised of 1 tolling segment (each 7.3 miles long).
    - a. There is more than one access point for the northbound direction. Mainline along I-95 at I-395 and also a direct connection at SR 112 flyover.

- b. There is more than one egress point for the southbound direction. At the SR 112 flyover and the I-95 mainline down near I-395.
- Phase 2 will add 2 tolling segments in each direction between the Golden Glades Interchange and I-595.

2. Toll Rate Changes:

- Toll rates are set through a public notice process per Florida Statutes, and are adopted by rule.

**Traffic and Revenue:**

Data below obtained from the “D6 Monthly Report” (September, 2010).

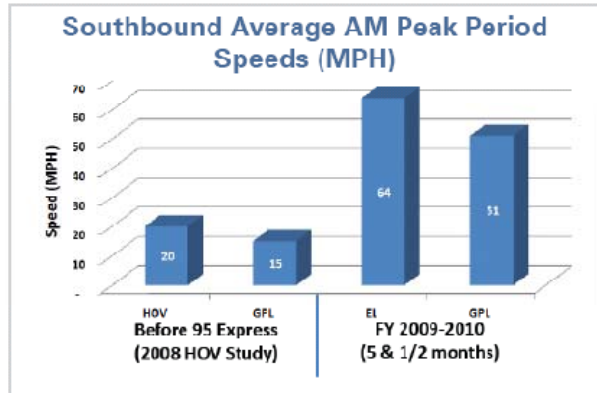
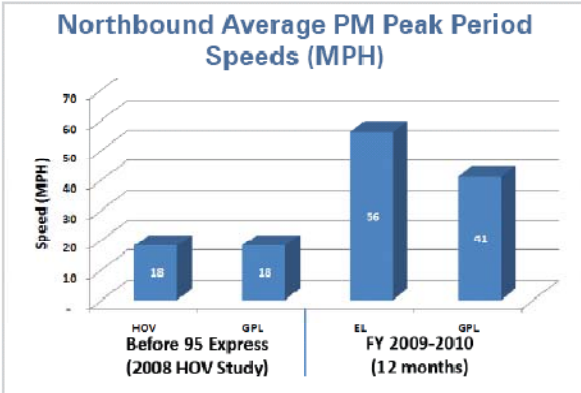
Inception to Date averages are reflected below.

- Northbound 95 Express opened to tolling December 5, 2008.
  - Southbound 95 Express opened to tolling January 15<sup>th</sup>, 2010.
1. Average Weekday Traffic and Revenue:
    - a. Northbound: 24,500 vehicles/\$20,600.
    - b. Southbound: 26,200 vehicles/\$22,300.
  2. Average Weekend Traffic:
    - a. Northbound: 14,300 vehicles/\$3,200.
    - b. Southbound: 15,100 vehicles/\$3,700.
  3. Average Peak Period Traffic: (northbound 4-7 PM, southbound 6-9 AM)
    - a. Northbound: 7,300 vehicles/\$12,800.
    - b. Southbound: 7,500 vehicles/\$11,000.
  4. Average Monthly Toll Exempt Trips:
    - a. Northbound: 8,900 vehicles.
    - b. Southbound: 9,500 vehicles.
  5. The variance rate reported for FY 2010 to the Florida Transportation Commission as part of the Department’s annual performance measure update is 5% for Northbound and 6% for Southbound. The variance rate is defined as the indicated revenue based upon the tolled traffic and the toll rates in effect compared to the actual revenues collected. (FY 2010 for northbound 95 Express is July 1st, 2009 through June 2010. Southbound opened to tolling January 15<sup>th</sup>, 2010).

**Speed Data:**

95 Express has improved overall traffic conditions along the project corridor since its inception. The below graphs depict the travel speeds before and after tolling was implemented. These graphs are excerpted from the District 6 ITS Annual Report for FY 10.

- Northbound 95 Express opened to tolling December 5, 2008.
- Southbound 95 Express opened to tolling January 15<sup>th</sup>, 2010.



HOV=High Occupancy Vehicle Lane  
 GPL=General Purpose Lane  
 EL= Express Lane