• Provides technical and data collection support for transit corridor studies
  – Program initiated in FY 2012
  – Focus on pre-planning: Moved data collection and model development outside of the corridor study
  – Six such corridors in Broward County covered under multi-modal modeling support contract so far
Corridor-focused surveys provide focused understanding of travel patterns in individual corridors: travel flows, transfer movements, and demographic information

- Data-Driven Tool #1: Route Scenario Planning Database [in Excel – Discussed Today]

- Data-Driven Tool #2: Ridership Estimation Tool [in Cube Voyager]

APC data for Palm Tran routes

- Data-Driven Tool #3: APC data analysis tool [in Excel]
## Surveys in the Database

<table>
<thead>
<tr>
<th>Corridor*</th>
<th>Routes Surveyed</th>
<th>Weekday Boardings</th>
<th>Survey Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oakland Park Blvd</td>
<td>Route 72</td>
<td>~9,000</td>
<td>Apr-May 2012</td>
</tr>
<tr>
<td>SR-7</td>
<td>Route 18, 441 Breeze</td>
<td>~16,300, ~2,700</td>
<td>Nov-Dec 2012</td>
</tr>
<tr>
<td>University Drive</td>
<td>Route 2, University Breeze</td>
<td>~7,100, ~1,000</td>
<td>Jan-Feb 2013</td>
</tr>
<tr>
<td>US-1</td>
<td>Route 1, US-1 Breeze</td>
<td>~7,150, ~1,050</td>
<td>Sep-Oct 2013</td>
</tr>
<tr>
<td>Hollywood Blvd</td>
<td>Route 7</td>
<td>~5,200</td>
<td>Oct-Nov 2013</td>
</tr>
<tr>
<td>Sunrise Blvd</td>
<td>Route 36</td>
<td>~6,100</td>
<td>May-Jun 2015</td>
</tr>
<tr>
<td>Sample Blvd</td>
<td>Route 34</td>
<td>~4,000</td>
<td>To be determined</td>
</tr>
</tbody>
</table>

*Corridors with high ridership*
Corridor-focused Surveys

• **Ons and offs counts** provides
  – Number of boarding/alighting activities at each stop along the route for each bus run

• **Boarding-to-Alighting survey** provides
  – Boarding and alighting stop locations of the riders
  – Distance and time traveled by riders on the bus

• **Origin-destination survey** provides
  – Trip origin and destination locations of the riders
  – Purpose of the trip
  – Transfer information

• **Platform survey** provides
  – Understanding location-specific issues
• Consistently strong ridership
• O&M costs always rising
• Adjust routes to:
  – Minimize less productive segments
  – Better serve more productive segments
  – Easier driver shift changes / shift lengths
  – Maintain O&M costs at constant level YOY
An Improved Analysis Process

1. Receive driver input and review corridor data
2. Determine potential scenarios
3. Compute impacts
4. Implement best solution
### Computing Impacts: using data-driven tools

<table>
<thead>
<tr>
<th>Data-Driven Tool</th>
<th>Types of Reports / Adjustment Scenarios</th>
<th>Turnaround Time</th>
</tr>
</thead>
</table>
| Data-driven scenario planning database | • Rider and travel characteristic summary  
• Stop-level activity summary  
• Travel flow visualizer  
• Truncate route  
• Subdivide route  
• Frequency adjustments | < 1 min |
| Data-driven Ridership model | • Cumulative ridership impacts:  
• Buses along same roadway  
• Systemwide changes  
• Inter-lining or merging routes  
• New service or stop patterns | 2 hours |
“Real-Time” Analysis: using Data-Driven Scenario Planning Database

Route Planning

 impacts of splitting route here

Analysis Output

University Drive Transit Survey

Transit Route Split Analysis

Select Route

Select Intersection to Split the Route

Select Stops to Split the Route

Ridership Analysis

<table>
<thead>
<tr>
<th>Split Location of the Route</th>
<th>Boarding-to-Alighting Survey Data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impacts of splitting Route #2 on the existing riders</td>
</tr>
<tr>
<td></td>
<td>DRAFT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>South of West Terminal</th>
<th>North of West Terminal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>South of West Terminal</td>
<td>2,466</td>
<td>635</td>
<td>3,101</td>
</tr>
<tr>
<td>North of West Terminal</td>
<td>759</td>
<td>3,123</td>
<td>3,882</td>
</tr>
<tr>
<td>Total</td>
<td>3,225</td>
<td>3,858</td>
<td>7,083</td>
</tr>
</tbody>
</table>

Percent of current riders impacted: 21%
Detailed Analysis: using Data-Driven Ridership Model

Route Planning, with some pre-planning done in real-time

Data-Driven Ridership Model

US-1 SFSTM (Southeast Florida Simplified Transit Model)
6/16/2014

<table>
<thead>
<tr>
<th>Alt Name</th>
<th>Year</th>
<th>Alternative</th>
<th>Weekday Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Local</td>
</tr>
<tr>
<td>A</td>
<td>2013</td>
<td>Local - 17/17; Breeze - 36/0 (Existing Conditions)</td>
<td>6,930</td>
</tr>
<tr>
<td>A2</td>
<td>2013</td>
<td>Local - 15/15; Breeze - 36/36</td>
<td>6,716</td>
</tr>
<tr>
<td>A3</td>
<td>2013</td>
<td>Local - 15/15; Breeze - 15/15</td>
<td>5,503</td>
</tr>
<tr>
<td>A4</td>
<td>2013</td>
<td>Local - 10/10; Breeze - 0/0</td>
<td>9,177</td>
</tr>
<tr>
<td>A5</td>
<td>2013</td>
<td>Local - 20/20; Breeze - 20/20</td>
<td>5,080</td>
</tr>
<tr>
<td>A6</td>
<td>2013</td>
<td>Local - 15/15; Breeze - 36/0 (terminate at Terminal)</td>
<td>7,277</td>
</tr>
</tbody>
</table>

Less productive segment for the Breeze route, so test alternatives that reduce service in this area & minimize ridership impacts.

Quantify the impacts of various service levels

Analysis Output
• Positively received by BCT and Palm Tran
ROUTE 18
Golden Glades Park & Ride to Sandalfoot Cove Boulevard and Highway 441

POINTS OF INTEREST
- Lauderhill Mall
- Sunshine Plaza
- Northwest Medical Center
- Plantation General Hospital
- Central Broward Regional Park
- Coconut Creek Casino
- Seminole Hard Rock Hotel & Casino
- Seminole Indian Bingo & Casino
- Greyhound Bus Terminal

LEGEND
- Connecting Routes
- MAIN ROUTE
- TIMEPOINTS
- The Breeze stop location
- E Express

ROUTE 441 Breeze WEEKDAY Limited Service Stops:
- Sample Rd.
- Copans Rd.
- Coconut Creek Pkwy.
- Atlantic Blvd.
- Kimberly Blvd.
- Commercial Blvd.
- Oakland Park Blvd.
- Lauderdale Mall Stop on U.S. 441 at N.W. 12 St.
- Broward Blvd.
- Dave Blvd.
- Riverland Rd.
- Griffin Rd.
- Stirling Rd.
- Sheridan St.
- Hollywood Pkwy.
- Pembroke Rd.
- Hallandale Beach Blvd. Eastbound Miramar Pkwy. Westbound
- 215 ST / County Line Road
- 1991 St / Andrews Rd.
- 103 St / Miami Gardens Dr.
- Golden Glades Park & Ride/Train

Pick up a 441 Breeze Timetable for more information

PROTECTIONS OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 AS AMENDED
Any person(s) or group(s) who believes that they have been subjected to discrimination because of race, color, or national origin, under any transit program or activity provided by Broward County Transit (BCT), may call 954-357-4461 to file a Title VI discrimination complaint or write to Broward County Transit, Compliance Manager, 1 N. University Drive, Suite 310WA, Plantation, FL 33324.