

# APPENDIX E

## Project Trips and Parking at Stations

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DISCUSSION OF PROJECT TRIPS AND PARKING AT STATIONS

This narrative provides a discussion of forecast project trips and station parking requirements as presented in the FEIS and in the FY 2009 New Starts submittals, and including the station parking spaces per the project design. It is noted that the changes in the transit trips by station, changes in the underlying demographic forecasts, and their relation to the parking spaces by station were all previously closely coordinated with FTA planning staff as the changes were identified and documented in reporting for the North Corridor project.

Table E-1 summarizes the relevant statistics as noted.

Table E-1  
Summary of Transit Trips, Parking Spaces, and Design Parking Spaces

Station	FEIS		Design Parking Spaces	FY 09 New Starts	
	Parking Spaces	Trips		Parking Spaces	Trips
NW 62nd Street	500	3,000	598	730	3,635
NW 119th Street	600	3,400	613	330	1,730
Veteran's Way	89	2,900	102	220	2,430
NW 163rd Street	543	700	498	625	2,435
NW 163rd Street	600	3,100	490	480	3,916
NW 199th Street	740	4,100	444	120	1,130
NW 216th Street	1,270	6,600	1,276	1,340	9,870
<b>Total</b>	<b>4,322</b>	<b>23,700</b>	<b>3,911</b>	<b>3,895</b>	<b>25,145</b>

Changes in the number of trips at the stations between the two versions are due to the following:

- Changes in demographic data and transit/highway assumptions, and
- Methodology in determining parking space requirement.

**Demographic and Network Changes**

The estimated parking spaces in the FEIS were based on 2025 demographic and transit/highway networks while the FY 2009 News Starts reporting and the project design numbers are based on 2030 data. The differences as summarized in the following sections.

## Demographic Data

As seen in Table E-2, the number of persons per household in Miami-Dade County is expected to increase by seven percent when comparing the 2030 vs. the 2025 forecast data, while population in the North Corridor is shown as decreasing by 18 percent with the 2030 forecast vs. 2025. On the employment side, overall County employment for the 2030 forecast is three percent greater than for the 2025 forecast, and there is an increase of 17 percent in the number of workers per household with the 2030 forecast as compared to the 2025 forecast. Employment in the North Corridor is shown as decreasing by 22 percent when comparing the 2030 forecast to the 2025 forecast.

Table E-2  
Comparison between 2025 and 2030 Demographics Data

	2025	2030	Percent Change
<b>Population</b>			
<b>Miami-Dade County</b>			
Number of Households	1,037,013	1,091,362	8%
Number of Vehicles in Households	2,087,664	2,196,488	8%
Number of Workers per household	1,369,132	1,592,386	17%
Number of Persons per households	2,966,862	3,169,286	7%
<b>North Corridor</b>			
Number of Households	35,870	34,261	-4%
Number of Vehicles in Households	78,937	66,229	-17%
Number of Workers per household	61,964	46,743	-10%
Number of Persons per households	122,624	101,036	-18%
<b>Employment</b>			
<b>Miami-Dade County</b>			
Industrial	140,990	120,853	-14%
Commercial	442,460	500,681	13%
Service	966,486	975,696	1%
Total	1,549,926	1,597,230	3%
<b>North Corridor</b>			
Industrial	6,172	4,878	-21%
Commercial	17,485	17,278	-1%
Service	30,367	19,796	-35%
Total	54,024	41,952	-22%

## Transit Network

Significant changes were also made to the transit network between the original travel demand modeling to the year 2025 and the subsequent modeling to the year 2030. As seen on Table E-3, close to 1,200 route-miles were added between 2025 and 2030 with the majority (983) added to the peak period network.

Table E-3  
Comparison of 2025 and 2030 Transit Networks

<b>Transit Network Statistics</b>	<b>2025</b>	<b>2030</b>
<b>Peak Period Route Miles</b>		
Local Bus	4,988	5,916
Metrorail	117	116
Express Bus	758	815
Tri-Rail	169	169
Metromover	14	14
<b>Subtotal</b>	<b>6,045</b>	<b>7,029</b>
<b>Midday Period Route Miles</b>		
Local Bus	4,586	5,117
Metrorail	117	116
Express Bus	737	385
Tri-Rail	112	112
Metromover	14	14
<b>Subtotal</b>	<b>5,565</b>	<b>5,743</b>
<b>Total</b>	<b>11,610</b>	<b>12,771</b>

## Person Trips

While person trips will increase by two percent overall in the region with the 2030 forecast as compared to the 2025 forecast, the decrease in population and employment results in a decrease of 16 percent in the number of person trips in the North Corridor, as shown in Table E-4. Regionwide for 2030 as compared to 2025, home-based work trips increased by nine percent for compared to one percent in the non home-based trip purpose and no growth in the home-based other trip purpose. The home-based other trips in the North Corridor for 2030 as compared to 2025 decreased by 23 percent compared to 18 percent in the non home-based and seven percent in the home-based other category.

Table E-4  
2025 and 2030 Person Trips Comparison

Person Trip by Trip Purpose	2025	2030	Change
<b>Miami-Dade and Broward County</b>			
<b>Total Daily</b>	<b>17,820,553</b>	<b>18,178,234</b>	<b>2%</b>
<b>Home-Based Work</b>	<b>4,182,789</b>	<b>4,606,966</b>	<b>9%</b>
<b>Home-Based Other</b>	<b>7,365,490</b>	<b>7,341,891</b>	<b>0%</b>
<b>Non Home-Based</b>	<b>4,617,379</b>	<b>4,682,844</b>	<b>1%</b>
<b>North Corridor</b>			
<b>Total Daily</b>	<b>511,445</b>	<b>431,448</b>	<b>-16%</b>
<b>Home-Based Work</b>	<b>117,672</b>	<b>109,268</b>	<b>-7%</b>
<b>Home-Based Other</b>	<b>243,097</b>	<b>186,888</b>	<b>-23%</b>
<b>Non Home-Based</b>	<b>106,034</b>	<b>86,319</b>	<b>-18%</b>

## Parking Space Requirement Methodology

Changes in forecast transit trips at individual stations are also due to the methodology used to evaluate the estimated number of parking spaces required. The estimated parking space requirement for each station included in the FEIS was based on an unconstrained parking capacity at each of the stations. Traditionally, region-wide travel forecasting models have been inadequate in predicting parking demand at the individual station level.

To partially address this, the estimated number of parking spaces was re-evaluated using parking constraints in the model application by introducing a “shadow price”. In that scheme, park-and-ride demand is distributed iteratively such that the amount of demand exceeding the capacity of a given lot is either manually allocated to alternative stations with available capacity or travelers “switch” to other access mode options or possibly become private auto trips. The “shadow price” can be interpreted as the additional impedance to defer potential trips. This value can also be used to determine: (1) optimal cost at parking lot; (2) sensitivity of existing capacities; (3) feasibility of providing additional capacity.

The “capacity” or maximum number of spaces that can be provided at each station was determined based on the design values and included in the travel demand model. The trips at each station and the estimated number of parking spaces shown in Table 1 are based on the capacity of the parking areas at each station. The results of the travel demand forecast, therefore, show that the total number of spaces (per the project design) provided along the corridor exceeds the projected demand by 56 spaces.