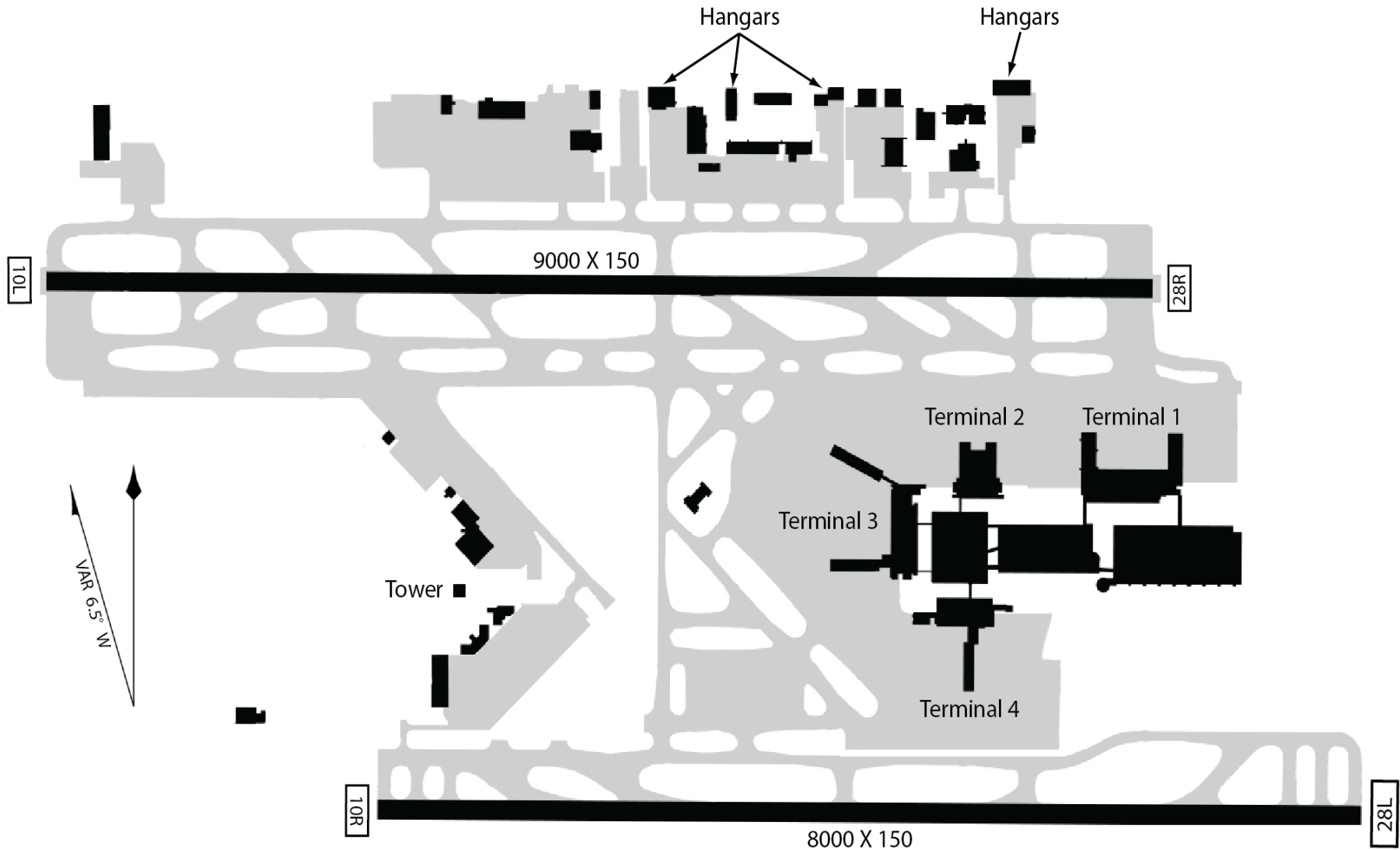


FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT



Airport capacity profile estimates were created using a standard set of performance characteristics and do not take into account non-runway constraints, unless otherwise noted. The capacity estimates developed for this report are not intended to replace the results of any detailed analysis that would precede an environmental, investment, or policy decision.

The list of Future Improvements and their expected effects on capacity does not imply FAA commitment to, or approval of, any item on the list.

DEFINITION

- The capacity profile shows the hourly throughput that an airport is able to sustain during periods of high demand, represented as the range between the model-estimated capacity and the ATC facility reported rate (called rate). Each weather condition has a unique capacity rate range.
- For each weather scenario, capacity estimates are based on information provided by ATC, including reported arrival and departure rates.
- The following charts compare actual hourly traffic with the estimated capacity curves for FLL. Some hourly traffic points fall outside the estimated capacity curves. There are many reasons why this may occur without affecting operational safety. For example, fewer wake-producing aircraft may have used the airport than were assumed in the analysis. Also, actual weather may have been better for part of the hour than that recorded for the hour, allowing more efficient ATC procedures than were modeled.

RECENT CAPACITY IMPROVEMENTS AT FLL

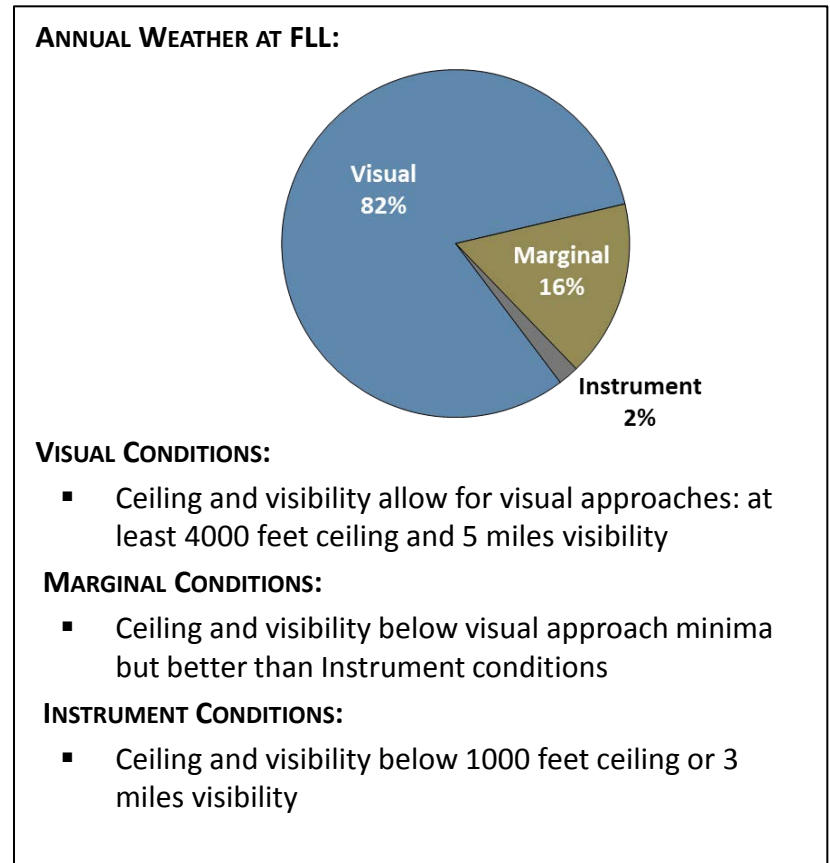
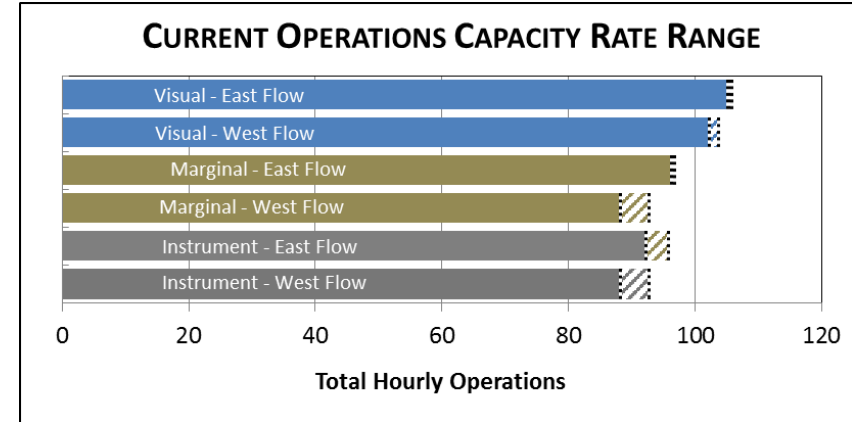
- *Time-Based Flow Management (TBFM)* helps to improve the flow of arrivals to the runways.
- *Runway Extension:* Runway 10R/28L was extended from 5276 to 8000 feet, which allows a wider range of aircraft to use this runway.

FUTURE IMPROVEMENTS AT FLL

- *Improved Runway Delivery Accuracy:* The combined effects of several new capabilities, including ADS-B Out, CDTI, and TBM in the terminal area, will improve the ability of controllers to deliver aircraft to the runway with the desired separation from the preceding aircraft. This will reduce the average spacing between arrivals and boost arrival capacity.
- *Same Runway Departure Fanning* could be used at FLL for departures from Runways 10L/28R and 10R/28L. This improvement will allow reduced separation between successive departures due to Equivalent Lateral Spacing Operations (ELSO).
- *Wake Recategorization* assigns aircraft to new wake turbulence classifications based on their wake turbulence characteristics, such as wake generation, wake decay, and encounter effects. This results in closer longitudinal separation for certain aircraft types without sacrificing safety.

DATA SOURCES

- Actual hourly FLL operations, weather and configuration data were obtained from the FAA ASPM database, and represent operational hours from 7am to 11pm local time for all of Fiscal Years 2012 through 2014. Actual configuration usage is determined by multiple operational factors, including weather conditions.
- Facility reported rates were provided by ATC personnel at FLL.
- Model-estimated rates are derived from operational information provided by ATC.



VISUAL CONDITIONS:

- Ceiling and visibility allow for visual approaches: at least 4000 feet ceiling and 5 miles visibility

MARGINAL CONDITIONS:

- Ceiling and visibility below visual approach minima but better than Instrument conditions

INSTRUMENT CONDITIONS:

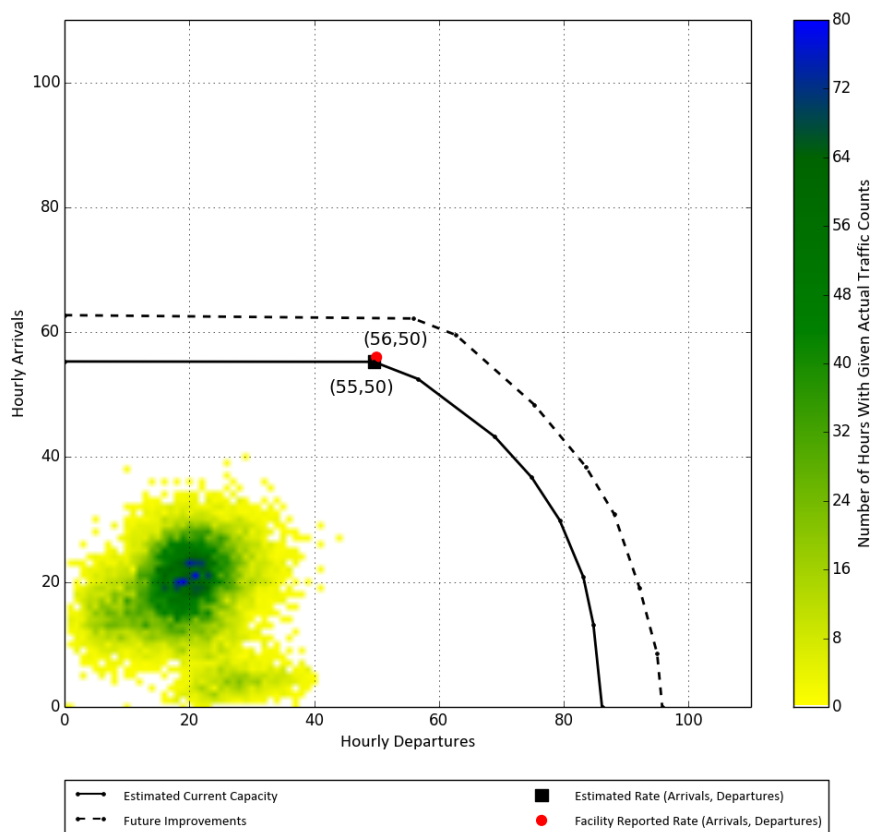
- Ceiling and visibility below 1000 feet ceiling or 3 miles visibility

VISUAL – EAST FLOW

FLL SCENARIO: DEPENDENT APPROACHES, VISUAL SEPARATION

Type Operations	Arrival Runways	Departure Runways	Hourly Rate	
			ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	10L, 10R	10L, 10R	106	105
FUTURE IMPROVEMENTS	10L, 10R	10L, 10R	N/A	118

VISUAL WEATHER CONDITIONS



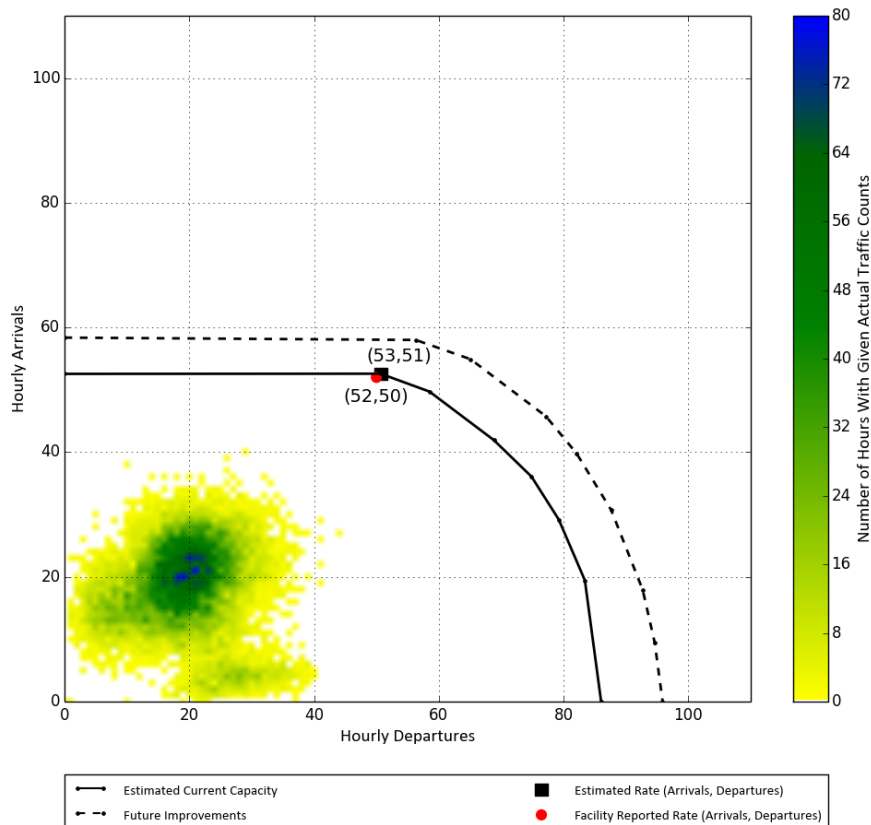
- **Future improvements:** Improved Runway Delivery Accuracy, Same Runway Departure Fanning, Wake Recategorization.
- The capacity rate range for East Flow operations in Visual conditions is 105-106 operations per hour.
- East flow is FLL's primary configuration in Visual conditions.
- Radar separation is used at the Outer Marker and no visual spacing is allowed behind Heavies or B757s.
- FLL does not run simultaneous approaches due to airspace constraints.
- *Note: Runway 10R/28L was closed from mid-April 2012 through mid-September 2014, so the percentages cited above include hours during which this configuration was not available. In addition, the ILS added to Runway 10L/28R allows it to be used in all weather conditions.*

VISUAL – WEST FLOW

FLL: SCENARIO: DEPENDENT APPROACHES, VISUAL SEPARATION

FLL Scenario	Arrival Runways	Departure Runways	Hourly Rate	
			ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	28L, 28R	28L, 28R	102	104
FUTURE IMPROVEMENTS	28L, 28R	28L, 28R	N/A	114

VISUAL WEATHER CONDITIONS



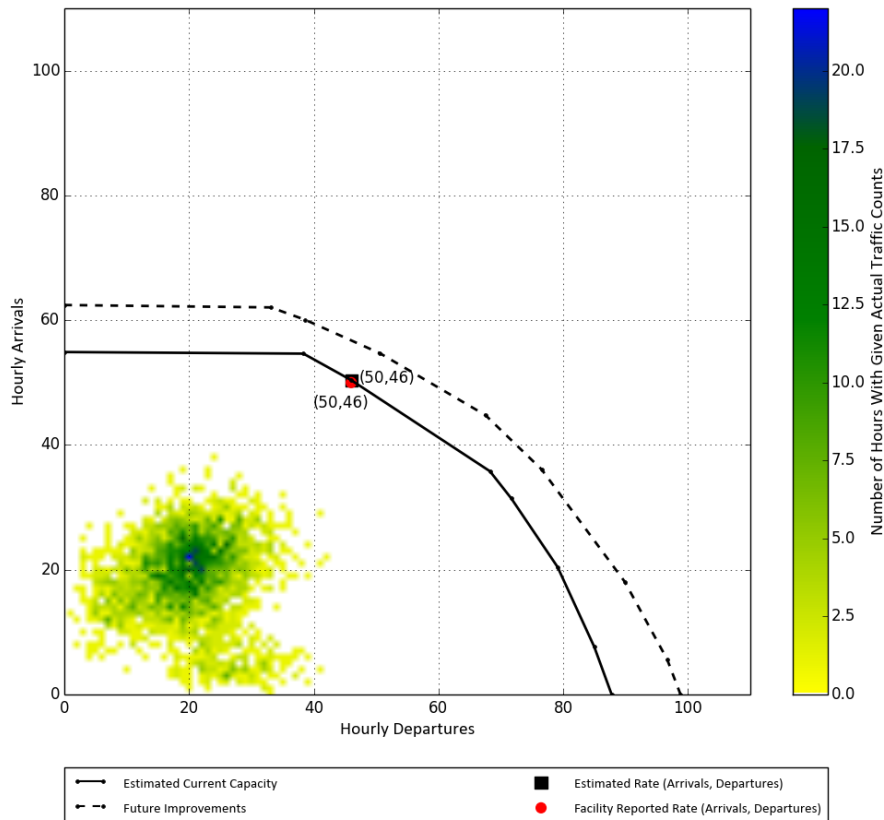
- **Future improvements:** Improved Runway Delivery Accuracy, Same Runway Departure Fanning, Wake Recategorization
- The capacity rate range for West Flow operations in Visual conditions is 102-104 operations per hour.
- West flow is FLL's secondary configuration in Visual conditions.
- Additional in-trail spacing between arrivals to Runway 28R is employed in order to account for limited high-speed exits in that direction.
- Radar separation is used at the Outer Marker and no visual spacing is allowed behind Heavies or B757s.
- FLL does not run simultaneous approaches due to airspace constraints.
- *Note: Runway 10R/28L was closed from mid-April 2012 through mid-September 2014, so the percentages cited above include hours during which this configuration was not available. In addition, the ILS added to Runway 10L/28R allows it to be used in all weather conditions.*

MARGINAL – EAST FLOW

FLL SCENARIO: DEPENDENT INSTRUMENT APPROACHES, RADAR SEPARATION

FLL Scenario	Arrival Runways	Departure Runways	Hourly Rate	
			ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	10L, 10R	10L, 10R	96	96
FUTURE IMPROVEMENTS	10L, 10R	10L, 10R	N/A	106

MARGINAL WEATHER CONDITIONS



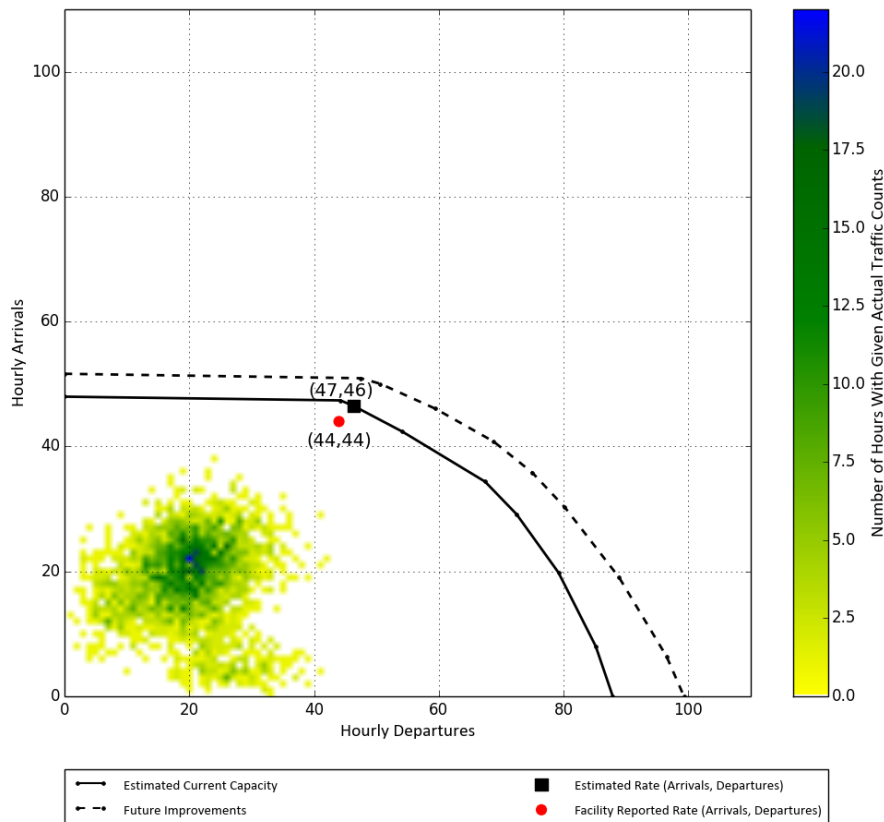
- **Future improvements:** Improved Runway Delivery Accuracy, Same Runway Departure Fanning, Wake Recategorization
- The capacity rate range for East flow operations in Marginal conditions is 92-96 operations per hour.
- FLL operates in this configuration approximately 16% of the time in Marginal weather conditions (totaling 3% annually). This is expected to be FLL’s primary configuration in Marginal conditions going forward, now that runway construction is complete.
- No visual spacing is allowed behind Heavies or B757s.
- FLL does not run simultaneous approaches due to airspace constraints.
- *Note: Runway 10R/28L was closed from mid-April 2012 through mid-September 2014, so the percentages cited above include hours during which this configuration was not available. In addition, the ILS added to Runway 10L/28R allows it to be used in all weather conditions.*

MARGINAL – WEST FLOW

FLL SCENARIO: DEPENDENT INSTRUMENT APPROACHES, RADAR SEPARATION

FLL Scenario	Arrival Runways	Departure Runways	Hourly Rate	
			ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	28L, 28R	28L, 28R	88	93
FUTURE IMPROVEMENTS	28L, 28R	28L, 28R	N/A	101

MARGINAL WEATHER CONDITIONS



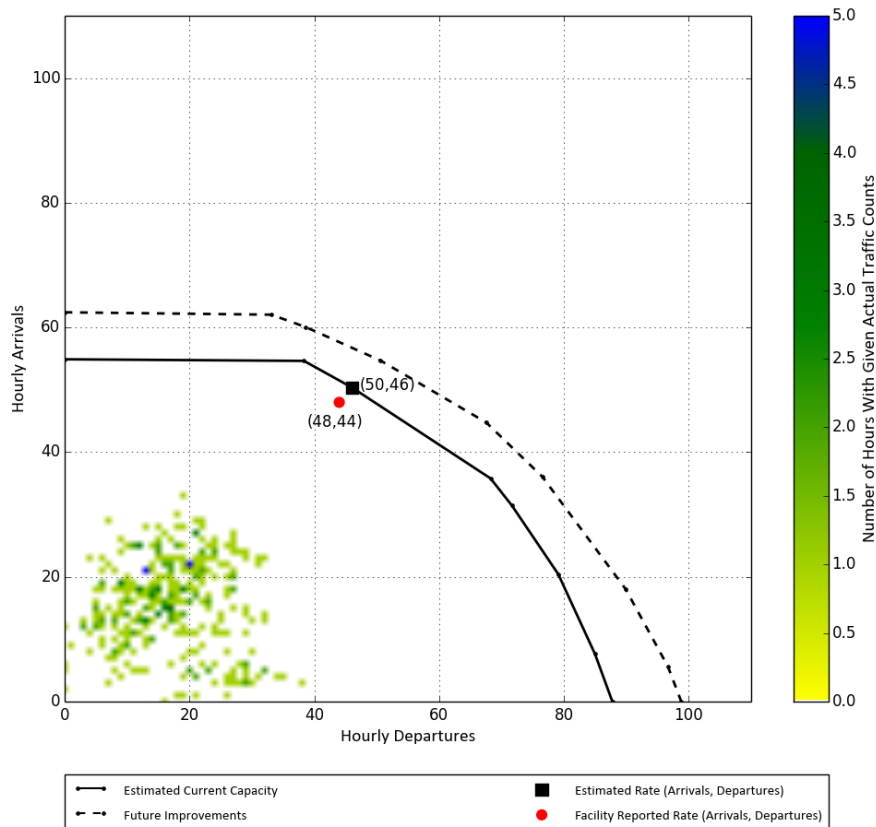
- **Future improvements:** Improved Runway Delivery Accuracy, Same Runway Departure Fanning, Wake Recategorization
- The capacity rate range for West flow operations in Marginal conditions is 88-93 operations per hour.
- Although FLL has not historically operated in this configuration, the airport will use this configuration going forward, now that the runway extension is complete.
- Additional in-trail spacing between arrivals to Runway 28R is employed in order to account for limited high-speed exits in that direction.
- No visual spacing is allowed behind Heavies or B757s.
- FLL does not run simultaneous approaches due to airspace constraints.

INSTRUMENT – EAST FLOW

FLL SCENARIO: DEPENDENT INSTRUMENT APPROACHES, RADAR SEPARATION

FLL Scenario	Arrival Runways	Departure Runways	Hourly Rate	
			ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	10L, 10R	10L, 10R	92	96
FUTURE IMPROVEMENTS	10L, 10R	10L, 10R	N/A	106

INSTRUMENT WEATHER CONDITIONS



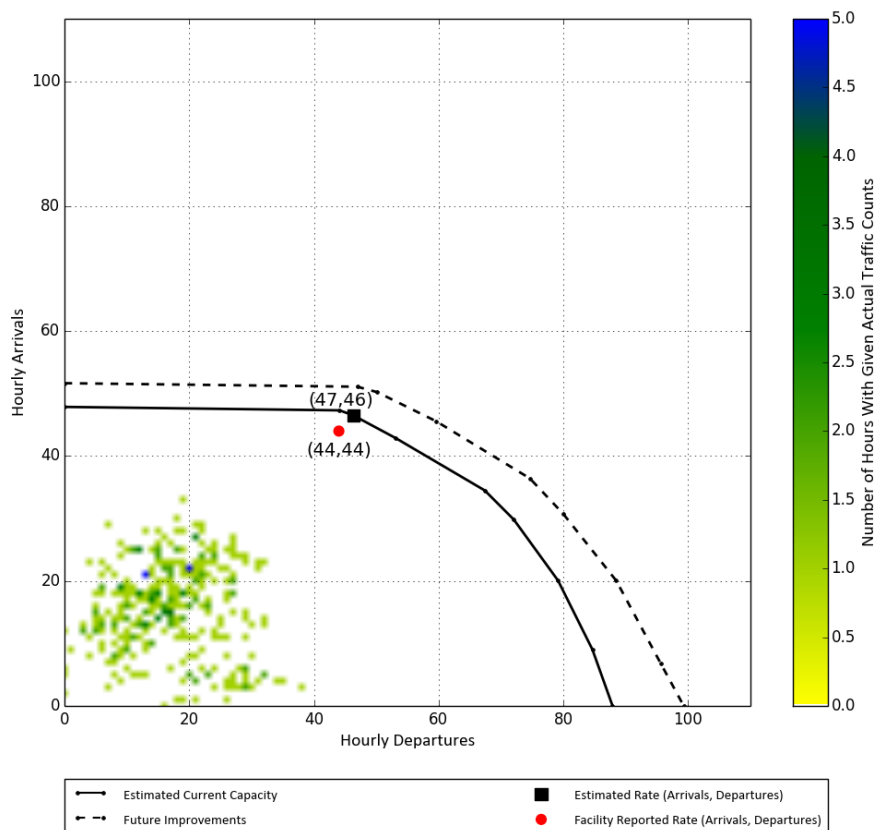
- **Future improvements:** Improved Runway Delivery Accuracy, Same Runway Departure Fanning, Wake Recategorization.
- The capacity rate range for East flow operations in Instrument conditions is 92-96 operations per hour.
- Although FLL has not historically operated in this configuration, the airport will operate in this configuration going forward, now that the runway extension is complete.
- FLL does not run simultaneous approaches due to airspace constraints.

INSTRUMENT – WEST FLOW

FLL SCENARIO: DEPENDENT INSTRUMENT APPROACHES, RADAR SEPARATION

FLL Scenario	Arrival Runways	Departure Runways	Hourly Rate	
			ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	28L, 28R	28L, 28R	88	93
FUTURE IMPROVEMENTS	28L, 28R	28L, 28R	N/A	101

INSTRUMENT WEATHER CONDITIONS



- **Future Conditions:** Improved Runway Delivery Accuracy, Same Runway Departure Fanning, Wake Recategorization.
- The capacity rate range for West flow operations in Instrument conditions is 88-93 operations per hour.
- Although FLL has not historically operated in this configuration, the airport will operate in this configuration going forward, now that the runway extension is complete.
- Additional in-trail spacing between arrivals to Runway 28R is employed in order to account for limited high-speed exits in that direction.
- FLL does not run simultaneous approaches due to airspace constraints.