

## Fort Lauderdale-Hollywood International Airport



# Monthly Operations & RNAV Use Report



BROWARD COUNTY AVIATION DEPARTMENT MONTHLY RNAV REPORT November 2023

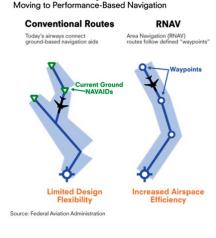
This *RNAV Report* provides a monthly overview of aircraft arriving and departing from Fort Lauderdale-Hollywood International Airport (FLL). The purpose of this report is to determine the number of aircraft that utilize Area Navigation (RNAV) procedures using the FLL Airport Noise and Operations Monitoring System (ANOMS).

#### OVERVIEW OF NEXTGEN 🐼

The Next Generation Air Transportation System (NextGen) is the FAA-led modernization of the United States National Airspace System (NAS). Goals include using new technologies and procedures to increase the safety, efficiency, and predictability of the NAS, as well as reducing the overall environmental impact of aviation. The FAA implemented the South-Central Florida Metroplex Project on August 12, 2021. This project is aimed at improving the safety and efficiency of airspace in South-Central Florida by optimizing arrival and departure procedures at 21 regional airports.

#### RNAV 🦽

RNAV is a method of navigation that consists of routes formed from a series of waypoints (geographical points on the ground) that may have required altitude or performance characteristics. Aircraft said to be navigating on RNAV procedures must fly over or near these waypoints (within a given tolerance), attaining the given altitude or performance settings set by the FAA and air traffic control (ATC). The potential advantages of RNAV routes include time and fuel savings, reduced dependency on radar vectoring, reduced ATC transmissions, and more efficient use of airspace.



**NEXT GEN Components: RNAV/RNP** 

#### Operations and Runway Use 🛫

This section provides a tabular and graphical summary of monthly operations and runway use at FLL. Monthly operations are broken down by airframe type, arrivals,

and departures, time of day (night defined as 10:30 pm to 6:00 am) and runway use is separated graphically by east and west flow.

#### RNAV PROCEDURES FOR FLL 🛫

This report provides a tabular and graphical summary of overall RNAV procedures for FLL. For aircraft arriving to or departing from FLL, there are 14 published RNAV procedures in total. These procedures each consist of waypoints and have multiple routes. This report will allow residents near the airport to understand, at a glance, the usage of RNAV procedures that most affect them.

Standard Instrument Departures (SIDs)

AGERS, BNICE, FEALX, GLADZ, FRSBE, HROCK, LIFRR, MAYNR, REGAE, SNAPR

Standard Arrival Routes (STARs)

• BHHIA, CUUDA, OLAHS, TEEKY

#### FLIGHT TRACK DENSITY PLOTS

Flight track density plots show the relative use of the airspace surrounding FLL. Color ranges are assigned based on the relative density of traffic (from low to high) for several categories:

- Jet Arrivals
- Jet Departures
- Jet Departures Close Up
- Non-Jet Operations

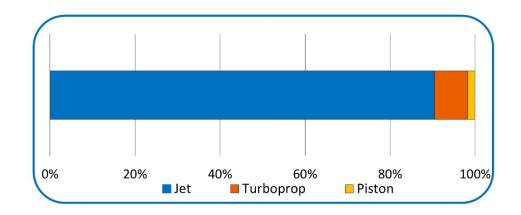
### RESOURCES 🗳

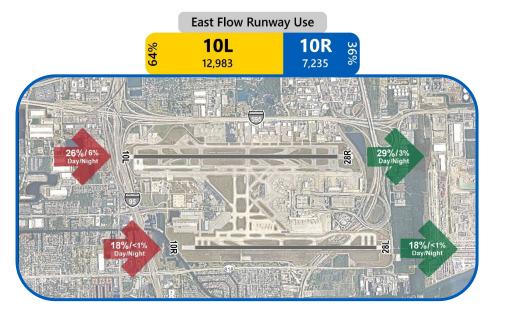
- <a href="https://www.faa.gov/air">https://www.faa.gov/air</a> traffic/community</a> engagement/florida/
- <u>http://metroplexenvironmental.com/fl\_metroplex/fl\_introduction.html</u>
- <u>http://www.metroplexenvironmental.com/fl\_metroplex/fl\_docs.html</u>
- <a href="https://www.faa.gov/nextgen/this-is-nextgen/">https://www.faa.gov/nextgen/this-is-nextgen/</a>



### Monthly Operations and Runway Use

Туре	Arrivals	Departures	Total
Jet	11,739	11,734	23,473
Turboprop	851	847	1,698
Piston	169	162	331
Total	12,759	12,743	25,502

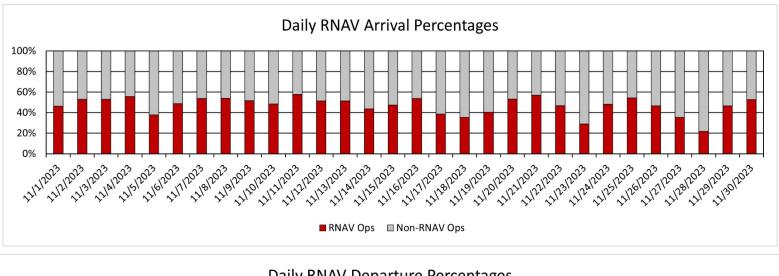


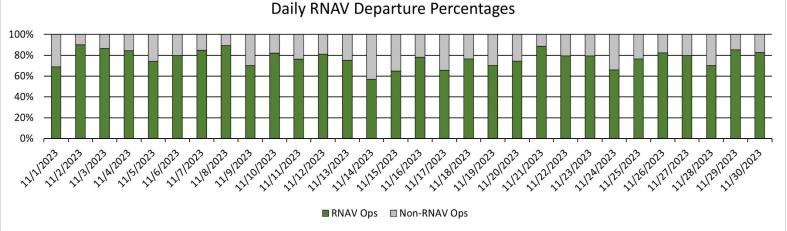






## Arrival and Departure Daily RNAV Percentages

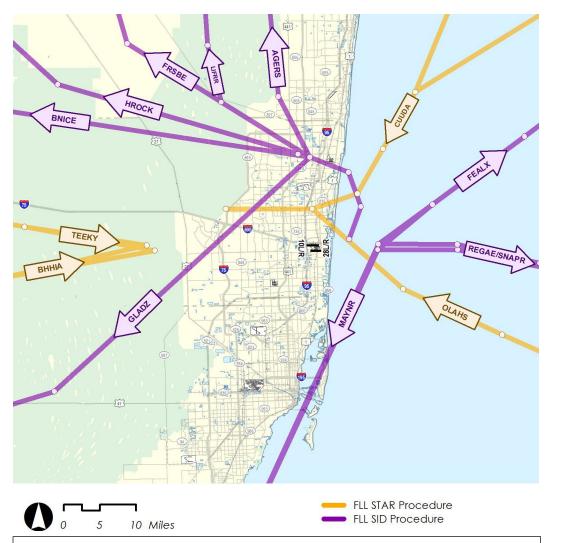






## FLL RNAV East Flow Operations 놀

Monthly RNAV Use Summary



Note: The Arrivals and Departures tables on the right represent the total number of flights during the month flying the full procedure for each procedure listed. Percentages represent any jet flying on an RNAV within Broward County. Flights that are vectored early are not included in this list.

STARS		
Procedure Name	<u># of Operati</u>	ons
BHHIA	12	
CUUDA	995	
OLAHS	341	FOOL
ТЕЕКҮ	2324	52%
6		3270

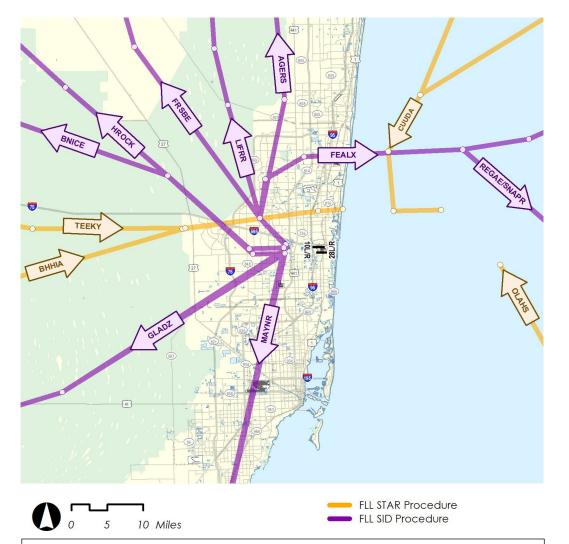
## SIDS | Departures

Procedure Name	# of Operations	
AGERS	84	
BNICE	548	
FEALX	1747	
FRSBE	495	
GLADZ	137	
HROCK	567	
LIFRR	241	
MAYNR	25	
REGAE	13 700	<b>0</b>
SNAPR	1212	70
$\leq$		



### FLL RNAV West Flow Operations 🛫

Monthly RNAV Use Summary



Note: The Arrivals and Departures tables on the right represent the total number of flights during the month flying the full procedure for each procedure listed. Percentages represent any jet flying on an RNAV within Broward County. Flights that are vectored early are not included in this list.

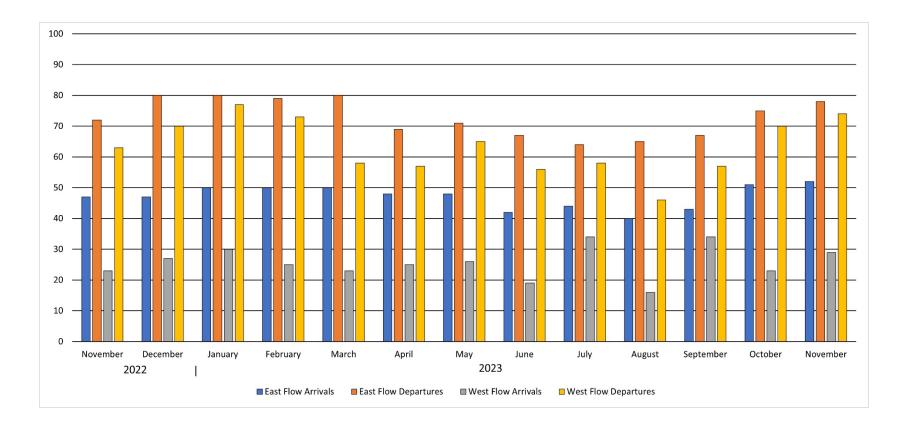
STARS	A	rrivals	
Procedure Name		# of Operat	ions
BHHIA		5	
CUUDA		104	
OLAHS		52	
ТЕЕКҮ		349	29%
			2970

## SIDS | Departures

Due ee duue Mense	# af On a	untinun.
Procedure Name	<u># of Ope</u>	erations
AGERS	17	
BNICE	149	
FEALX	352	
FRSBE	157	
GLADZ	0	
HROCK	131	
LIFRR	3	
MAYNR	142	
		7/0/
		1470



#### Monthly East and West Flow RNAV Percentages





100%

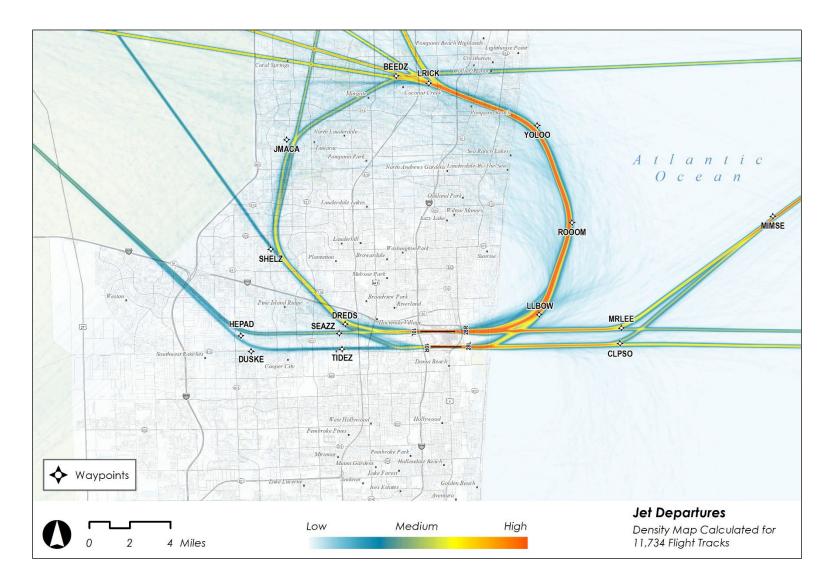
# Monthly RNAV Use by Operator

	Number of	Operations	Percent RNAV Operat	ions		Number of	Operations	Percent RNAV Oper	ations
Air Carrier	Total	RNAV	50%	100%	GA / Charter	Total	RNAV	50%	
r Canada	286	173			Aerolineas Ejecutivas	20	11		•
anada Rouge	266	145		•	Corporate Flight Management	64	34		•
insat	94	51			Delta Private Jets	24	11		
irlines	248	198			Executive Flight Services	24	15		
Air	523	339			Flexjets	124	70		
Airlines	1108	689			Mountain Aviation	32	24		
irlines	122	69			NetJets	197	112		
	44	29	· · · · · ·	-	Sun Country Airlines	34	26		
s Aereas Brasileiras	128	69			XOJet Inc.	28	18	· · · · · ·	-•
Air Holdings Ltd.	152	82		-	Cargo				
nes	42	23			FedEx	233	162		•
lines	1934	1363			UPS Airlines	46	32		B
es	134	80		-	Arrivals 🗕		Departure	5	
Airways	4333	2544							
west Airlines	3089	2107							
rlines	5889	3642							
Airlines	1393	943		•					
	132	78							



# Relative Airspace Density $\circlearrowleft$

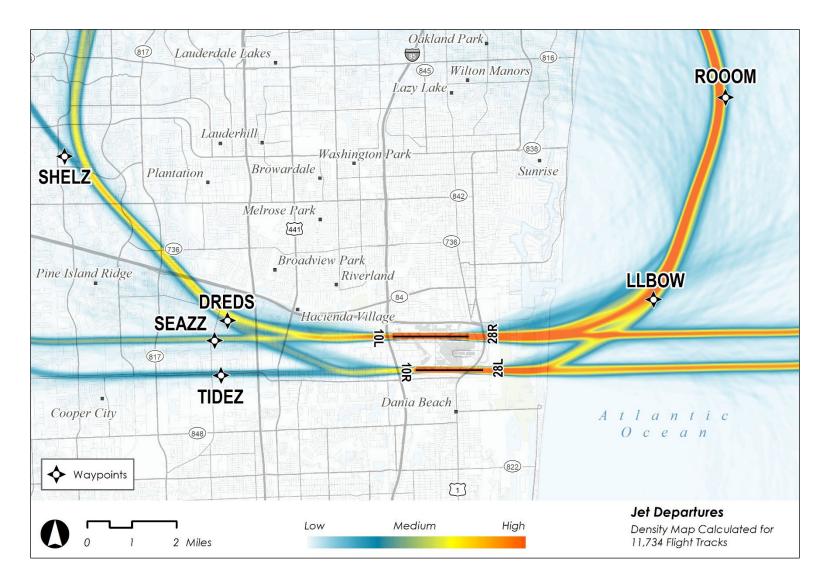
For All Jet Departures November 2023





### Relative Airspace Density

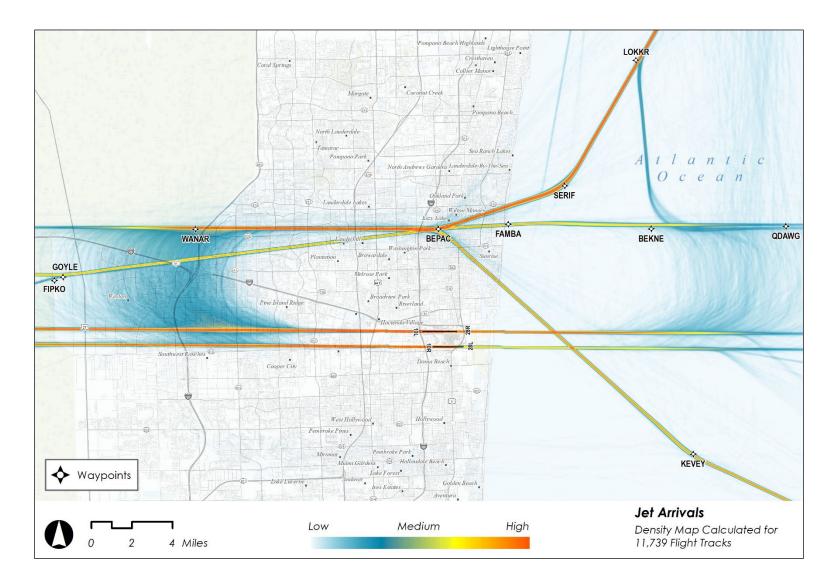
For All Jet Departures November 2023





## Relative Airspace Density $\circlearrowleft$

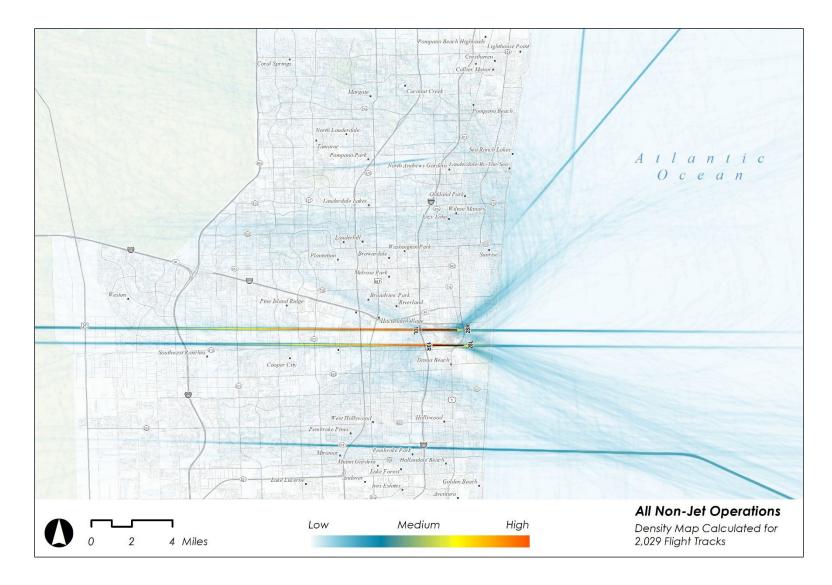
For All Jet Arrivals November 2023





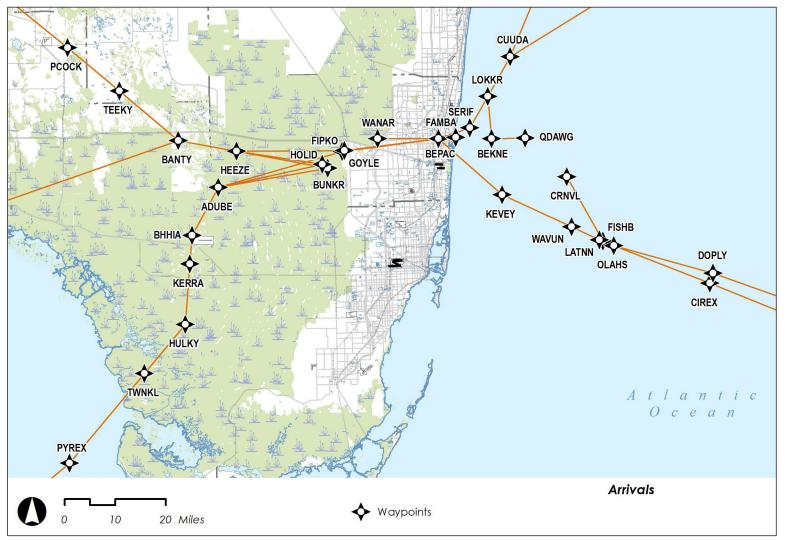
### Relative Airspace Density

For All Non-Jet Arrival and Departures November 2023





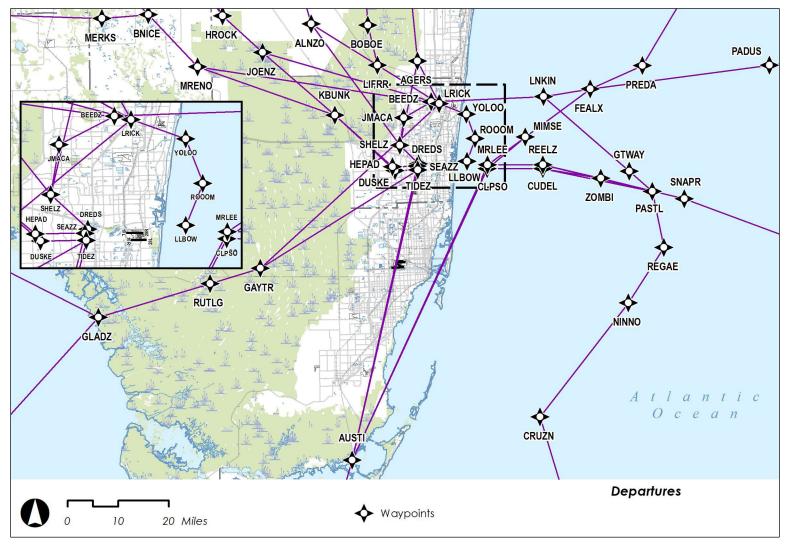
### South-Central Florida Metroplex FLL Arrivals (STARS)



Source: http://www.metroplexenvironmental.com/fl\_metroplex/fl\_docs.html

# Appendix

#### South-Central Florida Metroplex FLL Departures (SID)



Source: http://www.metroplexenvironmental.com/fl\_metroplex/fl\_docs.html



#### South-Central Florida Metroplex Waypoints by Procedure

#### STARS | Arrivals

BHHIA THREE: 10L: [PYREX+ TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-HOLID BHHIA THREE: 10R: [PYREX+ TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-BUNKR	OLAHS THREE: 10L/R: [DOPLY+ CIREX+]-OLAHS-LATNN-WAVUN-KEVEY-BEPAC-WANAR OLAHS THREE: 28L/R: [DOPLY+ CIREX+]-OLAHS-FISHB-CRNVL
BHHIA THREE: 28L/R: [PYREX+ TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-FIPKO-BEPAC-FAMBA	
	TEEKY THREE: 10L: [PCOCK+ MARCI+]-TEEKY-BANTY-HEEZE-HOLID
CUUDA TWO: 10L/R: [MACKL+ PLAID+]-CUUDA-LOKKR-SERIF-BEPAC-WANAR	TEEKY THREE: 10R: [PCOCK+ MARCI+]-TEEKY-BANTY-HEEZE-BUNKR
CUUDA TWO: 28L/R: [MACKL+ PLAID+]-CUUDA-LOKKR-BEKNE-QDAWG	TEEKY THREE: 28L/R: [PCOCK+ MARCI+]-TEEKY-BANTY-HEEZE-GOYLE-BEPAC-FAMBA

#### SIDS | Departures

AGERS ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-AGERS-[HURGI+]-PERTS-AARPS-MMART-ENWOD SEAZY-[DUCEN+] AGERS ONE: 28L/R: DREDS-SHELZ-AGERS-[HURGI+]-PERTS-AARPS-MMART-ENWOD-SEAZY-[DUCEN+]	HROCK TWO: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-JOENZ-HROCK-[KPASA+ SMELZ+] HROCK TWO: 28L: TIDEZ-DUSKE-KBUNK-JOENZ-HROCK-[KPASA+ SMELZ+] HROCK TWO: 28R: SEAZZ-HEPAD-KBUNK-JOENZ-HROCK-[KPASA+ SMELZ+]
BNICE ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-MRENO-BNICE-[COREA+ DOLIE+ MERKS+] BNICE ONE: 28L: TIDEZ-DUSKE-KBUNK-MRENO-BNICE-[COREA+ DOLIE+ MERKS+] BNICE ONE: 28R: SEAZZ-HEPAD-KBUNK-MRENO-BNICE-[COREA+ DOLIE+ MERKS+]	LIFRR ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-LIFRR-BOBOE-DURRY-CLEFF-[WIXED+ BAIRN+] LIFRR ONE: 28L/R: DREDS-SHELZ-LIFRR-BOBOE-DURRY-CLEFF-[WIXED+ BAIRN+]
FEALX TWO: 10L: MRLEE-MIMSE- FEALX-[PADUS+ PREDA+ WOLFO+] FEALX TWO: 10R: CLPSO-MIMSE-FEALX-[PADUS+ PREDA+ WOLFO+] FEALX TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-FEALX-[PADUS+ PREDA+ WOLFO+]	MAYNR ONE: 10L: MRLEE-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+] MAYNR ONE: 10R: CLPSO-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+] MAYNR ONE: 28L: TIDEZ-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+] MAYNR ONE: 28R: SEAZZ-AUSTI-MAYNR-MCLAW-[FUNDI+ JABOX+]
GLADZ TWO: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-GAYTR-RUTLG-GLADZ-[WIGNA+ MARCI+] GLADZ TWO: 28L: TIDEZ-GAYTR-RUTLG-GLADZ-[WIGNA+ MARCI+] GLADZ TWO: 28R: SEAZZ-GAYTR-RUTLG-GLADZ-[WIGNA+ MARCI+]	REGAE TWO: 10L: MRLEE-REELZ-ZOMBI-PASTL-REGAE-NINNO-CRUZN-GLAMS-LRODD-[URSUS+] REGAE TWO: 10R: CLPSO-CUDEL-ZOMBI-PASTL-REGAE-NINNO-CRUZN-GLAMS-LRODD-[URSUS+] REGAE TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-PASTL-REGAE-NINNO-CRUZN- GLAMS-LRODD-[URSUS+]
FRSBE TWO: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-ALNZO-FRSBE-[WAPOM+ STYMY+] FRSBE TWO: 28L/R: DREDS-SHELZ-ALNZO-FRSBE-[WAPOM+ STYMY+]	SNAPR TWO: 10L: MRLEE-REELZ-ZOMBI-SNAPR-KRAFT-HEYDR-[RAJAY+ SUMAC+] SNAPR TWO: 10R: CLPSO-CUDEL-ZOMBI-SNAPR-KRAFT-HEYDR-[RAJAY+ SUMAC+] SNAPR TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-SNAPR-KRAFT-HEYDR- [RAJAY+ SUMAC+]

To view the active published FAA full procedure plates, please follow the link here:

https://www.faa.gov/air\_traffic/flight\_info/aeronav/procedures/application/?event=procedure.results&tab=charts&nasrId=FLL#searchResultsTop

# Appendix

#### **Noise Information**

#### Ways to File an Aircraft Noise Comment

To file a formal aircraft noise comment, choose one of the following options:

Online: Complete the <u>Noise Comment Form</u> then select the Submit button.

By Phone: Call the Noise Comment Hotline at 954-359-2366

Download the new Noise Comment Web App and use this platform to file a complaint.

#### Using the New Noise Comment Web App to file a noise complaint.

From a mobile phone, click this link <u>Noise Comment Web App</u> and download to an iPhone or Android phone.

The link is only accessible from a mobile phone. It is not available in the iOS or Google Play App stores. It is only available from the webpage.

#### Noise Comment Web App Instructions:

Save the app to your home screen using the link above.

From an iPhone: Tap the box with the vertical arrow and select add to the home screen.

From an Android phone: Tap the 3 Menu dots and select add to the homepage.

Go to your home screen and open the new noise comment web app.

Enter your comment information following Steps 1-5 and click Submit.

Note: After using the noise comment web app the first time, user information is saved and does not need to be re-entered. You can submit additional comments by tapping "Submit Comment."

If you have questions or comments about the app, please contact the Aviation Department at 954-359-6181

Prepared by Harris Miller Miller & Hanson Inc. on behalf of Broward County Aviation Department.