APPENDIX C

Airspace and Procedures

This Appendix provides a detailed overview of FLL's airspace, and approach and departure procedures.

- Appendix C Airspace and Procedures
- Attachment 1 Published Instrument Approach and Departure Procedures

APPENDIX C
Airspace and Procedures

1.1 Airspace

The FAA has six classifications of airspace under the National Airspace System (NAS). These classifications, which are designated Class A, B, C, D, E, and G and shown on **Figure C-1**, are critical to the safety of all flights and to the efficient operation of all air traffic control facilities and the NAS. The airspace in the southeast Florida region is highly congested and complex with many airports, both commercial service and general aviation. Martin County Airport is in a Class D airspace.

FIGURE C-1
AIRSPACE CLASSIFICATIONS

SOURCE: FAA Course ALC-42, *Airspace, Special Use Airspace and TFRs*, 2016.

The following paragraphs describe each airspace classification in the vicinity of SUA. **Figure C-2** depicts the airspace in the vicinity of the Airport.

Class A Airspace

Class A airspace is designated for positive control of aircraft and ranges from 18,000 feet above mean sea level (MSL) to 60,000 feet MSL. Within Class A airspace, only aircraft operating under instrument flight rules (IFR) that are on instrument flight plans are authorized. The aircraft must have specific equipment and Air Traffic Control (ATC) clearance before entering the airspace. This airspace is controlled by the FAA's Air Route Traffic Control Center (ARTCC).

Class B Airspace

Class B airspace is generally defined as the airspace from the ground surface up to 10,000 feet MSL. Class B airspace can sometimes be described as an "upside down wedding cake" designed to contain all published instrument procedures once an aircraft enters the airspace. ATC clearance is required for all aircraft to operate in Class B airspace. All aircraft that are so cleared also receive separation services from other aircraft within the airspace.

Aircraft operating under Visual Flight Rules (VFR) or IFR are permitted into Class B airspace; however, the aircraft must be equipped with a two-way radio capable of communicating with ATC on appropriate frequencies and an operable radar beacon transponder with automatic altitude reporting equipment. For IFR operations, the aircraft must have an operable VOR or TACAN receiver. The pilot must hold at least a private pilots certificate.

Further surrounding the Class B airport is a 30-nautical mile (nm) Mode C veil that is designated by a thin, solid magenta line that circles the Class B airspace and extends from the surface upward to 7,000 feet MSL. Unless otherwise authorized, an aircraft operating within the Mode C veil must be equipped with automatic pressure altitude reporting equipment having Mode C radar capability. This allows controllers to see all aircraft operating close to the Class B airspace and provide adequate aircraft separation minimums.

Class C Airspace

Class C airspace is the airspace from the surface up to 4,000 feet above the airport elevation charted in MSL surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Class C airspace is represented by solid magenta lines. Like Class B airspace, Class C airspace is individually tailored to meet the needs of the respective airport. As shown on **Figure C-2**, the layers are identified with magenta numbers representing the base and ceiling altitudes of the airspace. The airspace usually consists of a surface area with a 5-nm radius from the surface up to 4,000 feet above airport elevation, and a 10-nm radius that extends from 1,200 feet to 4,000 above the airport. Pilots must establish two-way radio communications with the ATC facility providing air traffic control services prior to entering the airspace. VFR aircraft are separated from IFR aircraft in Class C airspace.

Class D Airspace

The airspace immediately surrounding SUA is classified as a Class D airspace.

Class D airspace is generally that airspace from the surface to 2,500 feet AGL. The configuration of Class D airspace is individually tailored and shown as a dashed blue line with an altitude representing the extent of the airspace from the surface. When instrument procedures are published, the airspace will normally be designed to contain the procedures with either Class D or E airspace. Class D airspace only surrounds airports that have an operational control tower; pilots are required to establish and maintain two-way radio communication with the ATC facility.

Class E Airspace

Class E airspace is generally controlled airspace that is not Class A, B, C, or D. Class E airspace extends upward from either the surface or designated altitude to the overlying or adjacent controlled airspace. Also in this class are Victor airways (airspace beginning at either 700 feet or 1,200 feet AGL used to transition to/from the terminal or enroute environments) and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 feet MSL over the United States, including that airspace overlying the water within 12 nm off the coast of the 48 contiguous states and Alaska. It does not include airspace at or above 18,000 feet MSL. Class E airspace ensures that IFR aircraft remain in controlled airspace when approaching airports without Class D airspace or when flying on Victor airways that are below 18,000 feet MSL.

Most of the U.S. has a Class E airspace limit of 1,200 feet AGL. Where it decreases to 700 feet AGL is depicted on **Figure C-2** by a shaded, gradient magenta line. The floor of the vast majority of Class E airspace is 700 feet around the Southeast Florida area. The more defined side of the magenta line indicates areas where the floor of Class E airspace rises to 1,200 feet AGL. When Class E airspace extends down to the surface, it is depicted by a dashed magenta line. Class E airspace extending down to the surface usually abuts Class D airspace surrounding an airport.

Class G Airspace

Where the lower level of Class E airspace is not depicted, the airspace beneath is considered uncontrolled or Class G airspace. Class G airspace begins at ground level and, in very remote areas, it has an upper limit of up to but not including 14,500 feet MSL. The top of Class G airspace is usually where Class E airspace begins, usually either 700 foot AGL depicted by magenta shading or 1,200 foot AGL areas depicted by blue shading. Class G airspace begins at the surface throughout much of the area surrounding the Class B, C, D, and E airspaces throughout the Southeast Florida area. Uncontrolled airports located in Class G airspace are depicted in magenta since they do not have a control tower.

Special Use Airspace

Special use airspace consists of that airspace wherein activities must be confined because of their nature, or wherein limitations are imposed on aircraft operations that are not a part of those activities, or both.

1.2 Terminal Procedures Publications

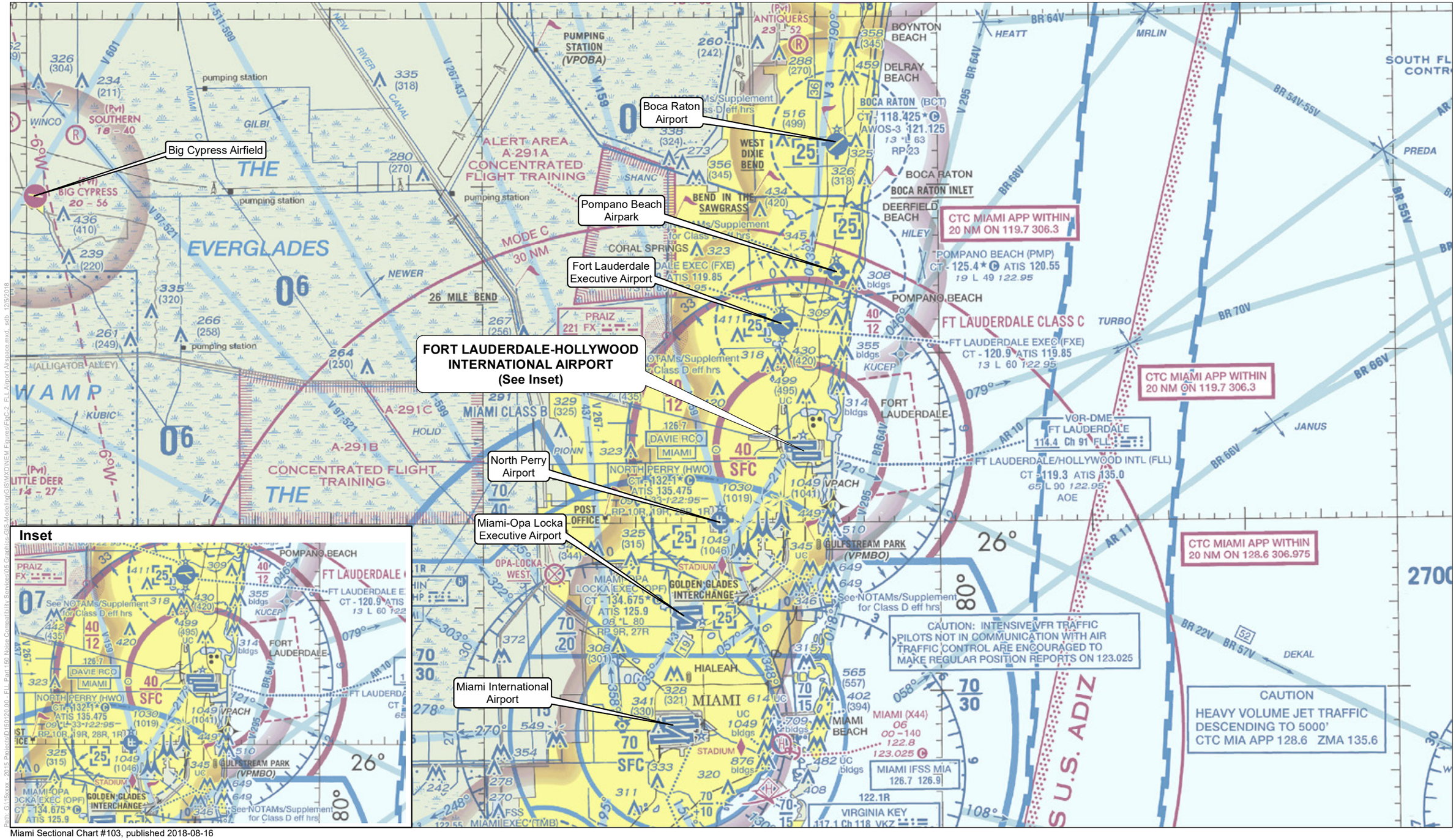
U.S. Terminal Procedures Publications (TPP) are published on a regular, periodic basis by the FAA. Collectively, the instrument approach procedures (IAPs), standard terminal arrival routes (STARs), and departure procedures (DPs) published within provide a system of procedures to move aircraft through the airspace into and out of an airport.

1.2.1 Instrument Approach Procedures

Instrument approach procedures are flight procedures developed and published by the FAA that pilots use to navigate their aircraft to the runway. The IAPs currently published for SUA are provided in **Attachment 1.**

1.2.2 Standard Terminal Arrival Routes and Departure Procedures

When flying a standard terminal arrival route or departure procedure, the pilot will follow waypoints or fixes that are either ground-based or RNAV-based depending on aircraft capability. In conventional procedures, fixes are defined by the location of a navigational aid (e.g., VOR) or determined by reference to these navigational aids such as DME intersections. The advantage of the RNAV STARs and DPs are that waypoints are defined by longitude and latitude, and allow aircraft to fly a more direct course from point to point instead of from navigational aid to navigational aid. STARs and DPs may serve more than one airport in an area, and an airport such as SUA may have multiple STARS and DPs. Each of the published procedures is noted in the following sections. Navigational aids and airspace fixes used by aircraft arriving and departing SUA are shown on **Figure C-3**. The STARs and DPs currently published for SUA are provided in **Attachment 1.**



Miami Sectional Chart #103, published 2018-08-16
SOURCE: Federal Aviation Administration, 2018; Adapted by ESA, 2018

Fort Lauderdale-Hollywood International Airport 14 CFR Part 150 Study . 150120

Figure C-2
Airport Airspace
Fort Lauderdale-Hollywood International Airport

ESA

Miami Sectional Chart #103, published 2018-08-16
SOURCE: Federal Aviation Administration, 2018; Adapted by ESA, 2018

Figure C-3
Navigational Aids
Fort Lauderdale-Hollywood International Airport

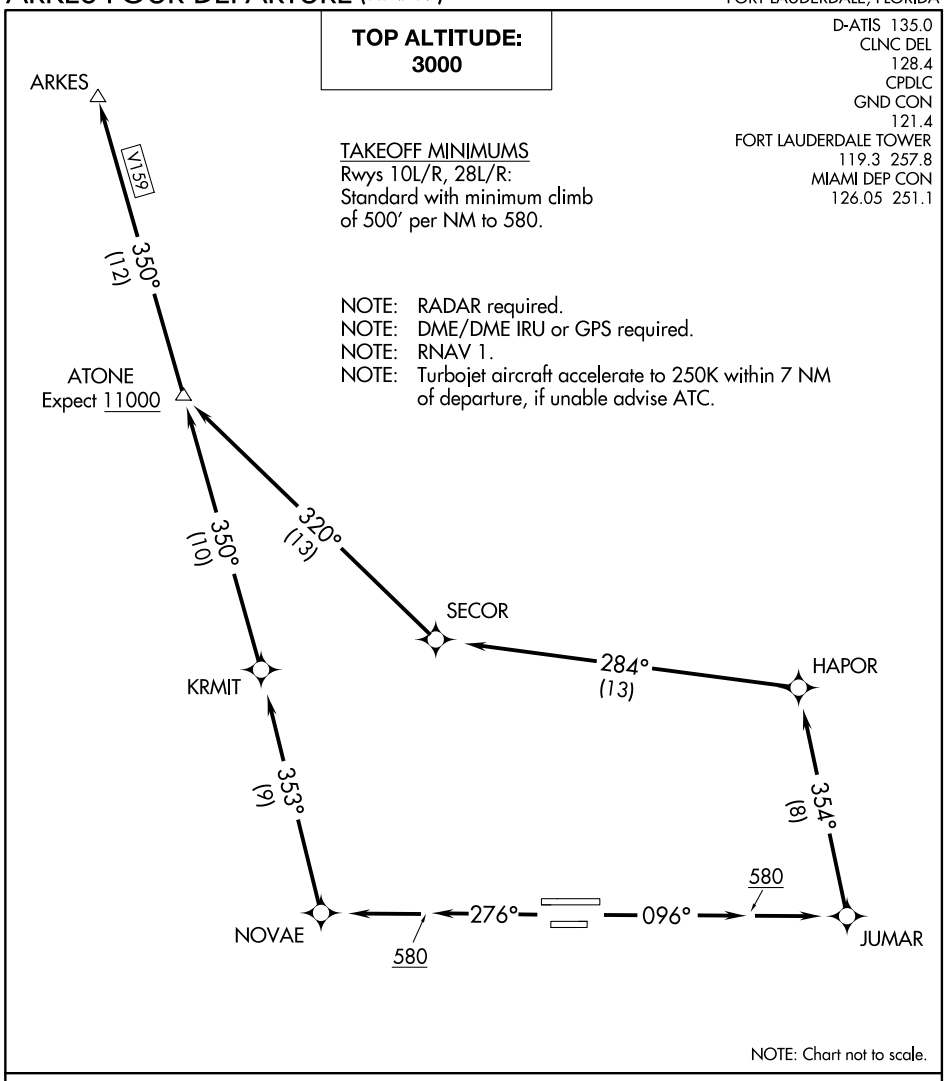
ESA

Appendix C Attachment 1

Published Instrument Approach and Departure Procedures

ARKES FOUR DEPARTURE (RNAV)

FORT LAUDERDALE/HOLLYWOOD INTL (FLL)
FORT LAUDERDALE, FLORIDA



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWYS 10L/R: Climb heading 096° to 580, then direct JUMAR, then turn left on track 354° to HAPOR, then on depicted route to ARKES, thence. . . .
TAKEOFF RWYS 28L/R: Climb heading 276° to 580, then direct NOVAE, then on depicted route to ARKES, thence. . . .

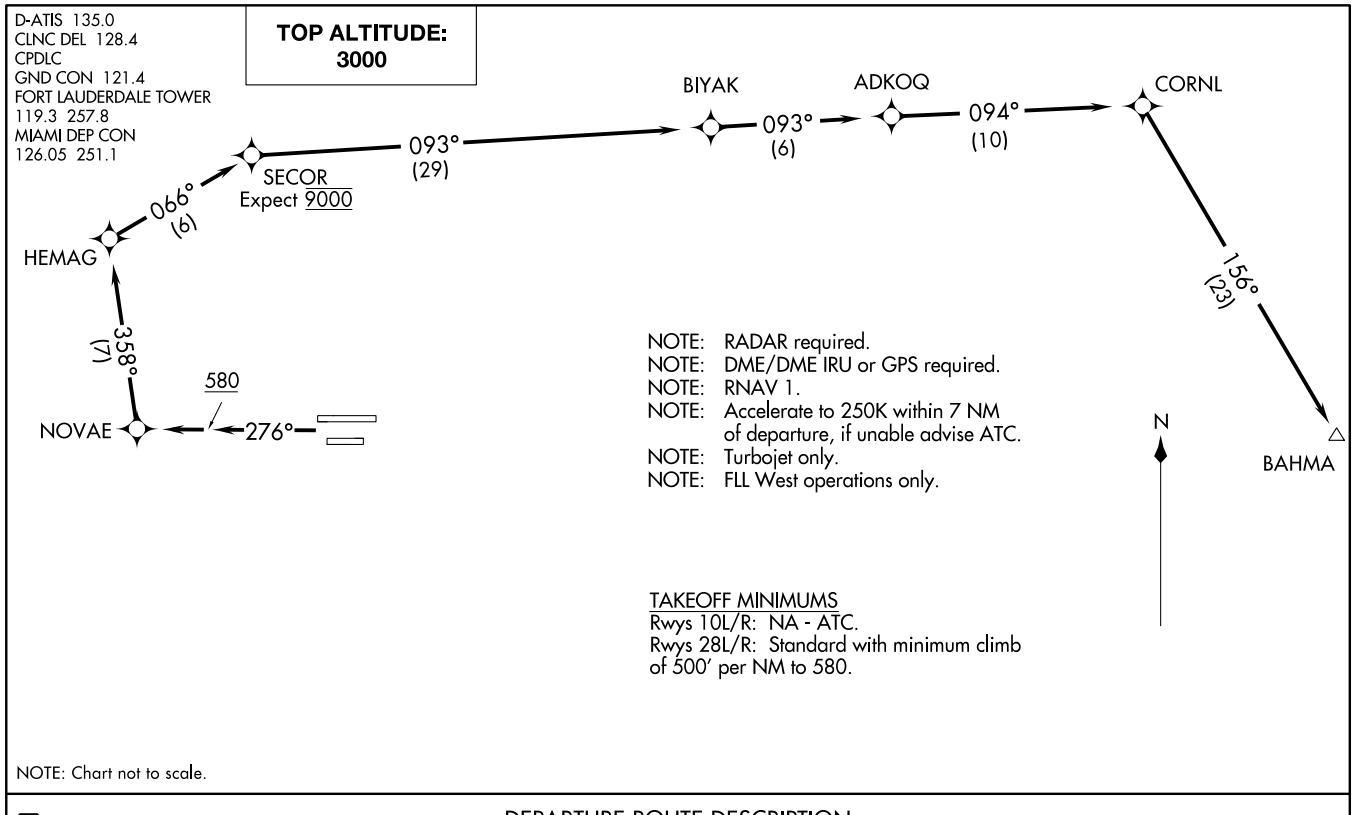
. . . .maintain 3000 or as assigned by ATC. Expect clearance to filed altitude 10 minutes after departure.

SE-3, 29 MAR 2018 to 26 APR 2018

(BAHMA5.BAHMA) 18088 AL-744 (FAA)

BAHMA FIVE DEPARTURE (RNAV)

FORT LAUDERDALE/HOLLYWOOD INTL (FLL)
FORT LAUDERDALE, FLORIDA



DEPARTURE ROUTE DESCRIPTION

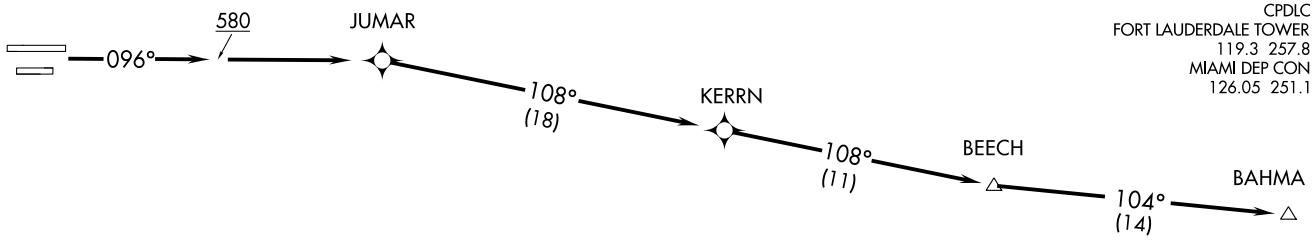
TAKEOFF RWYS 28L/R: Climb heading 276° to 580, then direct NOVAE, then on depicted route to BAHMA, thence. . . .

. . . .maintain 3000 or as assigned by ATC. Expect clearance to filed altitude 10 minutes after departure.

BAHMA FIVE DEPARTURE (RNAV)
(BAHMA5.BAHMA) 25JUN15
FORT LAUDERDALE, FLORIDA
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

TOP ALTITUDE: 3000

D-ATIS 135.0
CLNC DEL 128.4
GND CON 121.4
CPDLC
FORT LAUDERDALE TOWER 119.3 257.8
MIAMI DEP CON 126.05 251.1



TAKEOFF MINIMUMS
Rwys 10L/R: Standard with minimum climb of 500′ per NM to 580.
Rwys 28L/R: NA - ATC.

N

NOTE: RADAR required.
NOTE: DME/DME IRU or GPS required.
NOTE: RNAV 1.
NOTE: Turbojet only.
NOTE: FLL east operations only.
NOTE: Accelerate to 250K within 7 NM of departure, if unable advise ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

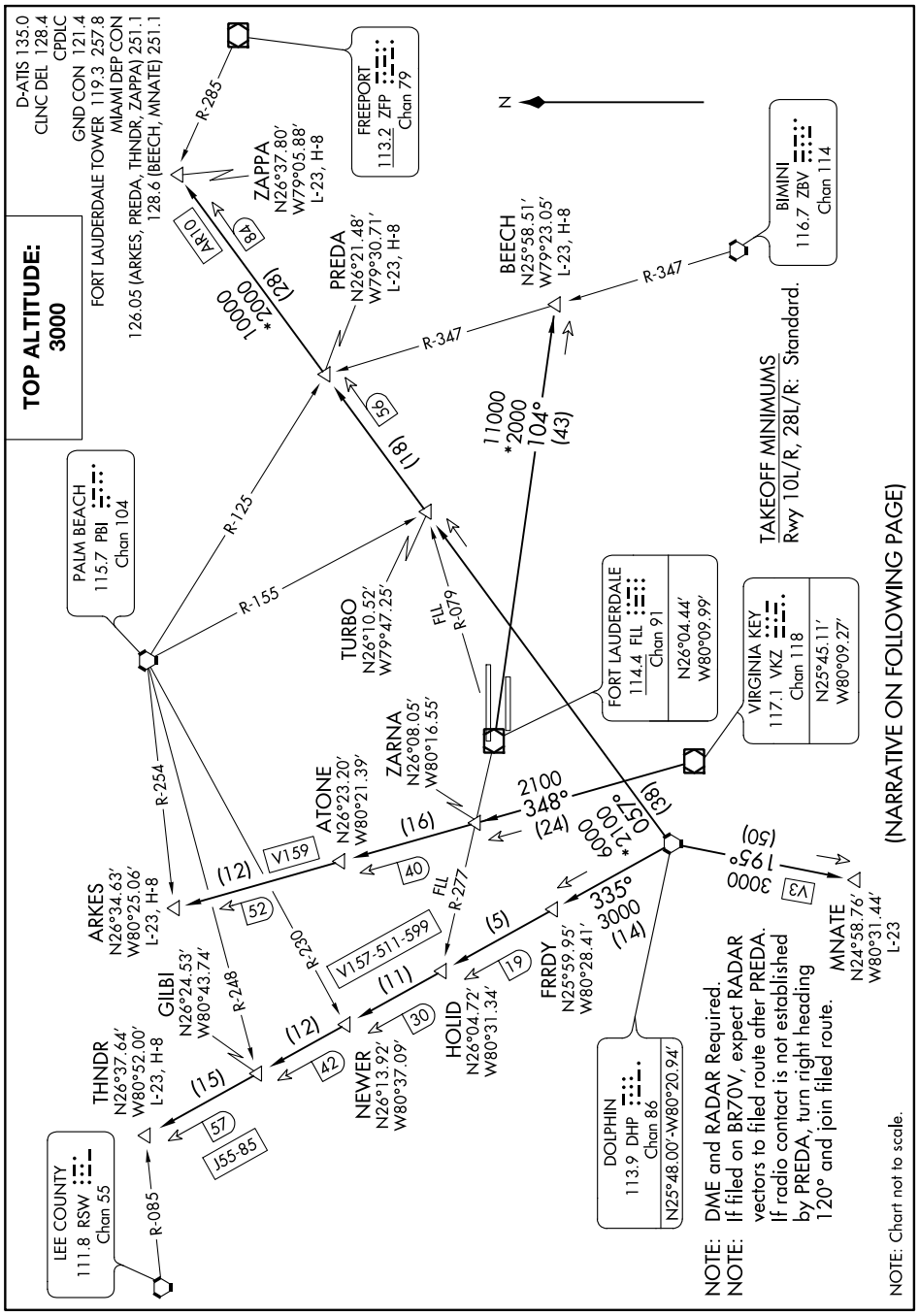
TAKEOFF RWYS 10L/R: Climb heading 096° to 580, then direct JUMAR, then on depicted route to BAHMA, thence. . . .

. . . .maintain 3000 or as assigned by ATC. Expect clearance to filed altitude 10 minutes after departure.

SE-3, 29 MAR 2018 to 26 APR 2018

FORT LAUDERDALE SIX DEPARTURE

FORT LAUDERDALE, FLORIDA



SE-3, 29 MAR 2018 to 26 APR 2018

FORT LAUDERDALE SIX DEPARTURE

FORT LAUDERDALE, FLORIDA

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWYS 10L/R: Climb on assigned heading. Thence. . . .
TAKEOFF RWY 28R: Climb on assigned heading. If assigned left turn, climb to 500 before turning left. Thence. . . .
TAKEOFF RWY 28L: Climb on assigned heading. If assigned left turn, climb to 700 before turning left. Thence. . . .

. . . .maintain 3000 or assigned lower altitude and expect radar vectors to appropriate transition. Expect further clearance to filed altitude ten (10) minutes after departure.

ARKES TRANSITION (FLL6.ARKES): From over VKZ VOR/DME on VKZ R-348 to ARKES INT.
BEECH TRANSITION (FLL6.BEECH): From over FLL VOR/DME on FLL R-104 to BEECH INT.
MNATE TRANSITION (FLL6.MNATE): From over DHP VORTAC on DHP R-195 to MNATE.
PREDA TRANSITION (FLL6.PREDA): From over DHP VORTAC on DHP R-057 to PREDA INT.
THNDR TRANSITION (FLL6.THNDR): From over DHP VORTAC on DHP R-335 to THNDR INT.
ZAPPA TRANSITION (FLL6.ZAPPA): From over DHP VORTAC on DHP R-057 to ZAPPA INT.

SE-3, 29 MAR 2018 to 26 APR 2018

(PREDA4.PREDA) 18088

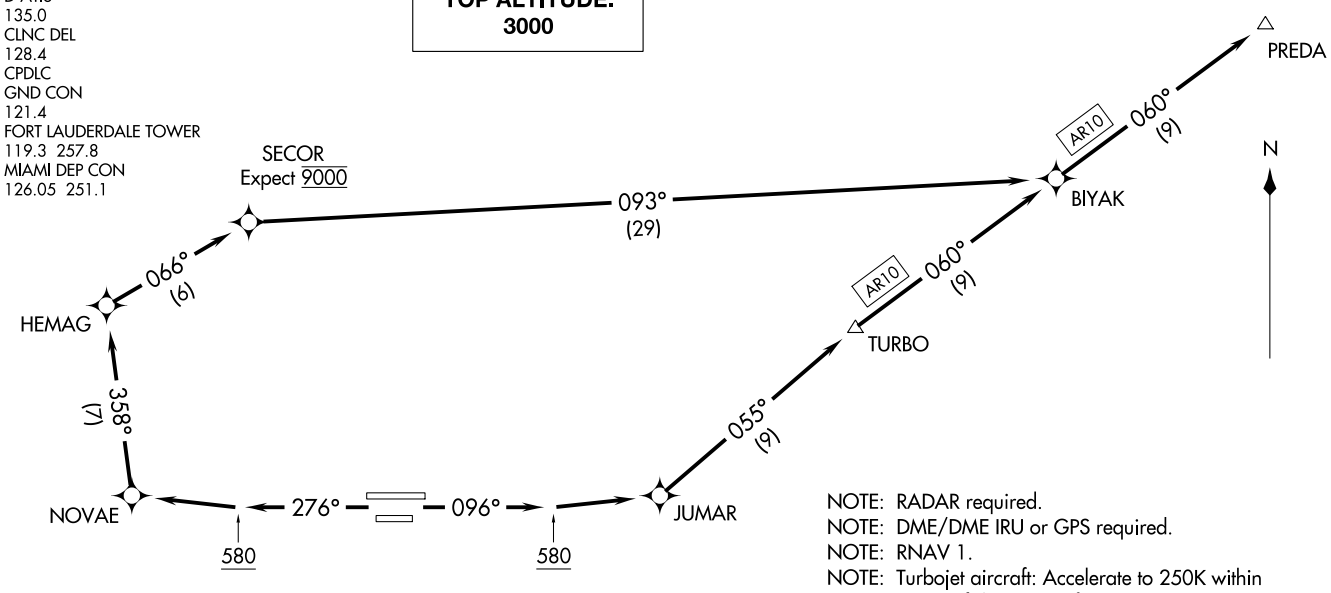
PREDA FOUR DEPARTURE (RNAV)

AL-744 (FAA)

FORT LAUDERDALE/HOLLYWOOD INTL (FTLL)
FORT LAUDERDALE, FLORIDA

TOP ALTITUDE: 3000

D-ATIS
135.0
CLNC DEL
128.4
CPDLC
GND CON
121.4
FORT LAUDERDALE TOWER
119.3 257.8
MIAMI DEP CON
126.05 251.1



NOTE: RADAR required.
NOTE: DME/DME IRU or GPS required.
NOTE: RNAV 1.
NOTE: Turbojet aircraft: Accelerate to 250K within 7 NM of departure, if unable advise ATC.

TAKEOFF MINIMUMS
Rwys 10L/R, 28L/R: Standard with minimum climb of 500′ per NM to 580.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWYS 10L/R: Climb heading 096° to 580, then direct JUMAR, then on depicted route to PREDA, thence. . . .
TAKEOFF RWYS 28L/R: Climb heading 276° to 580, then direct NOVAE, then on depicted route to PREDA, thence. . . .

. . . .maintain 3000 or as assigned by ATC. Expect clearance to filed altitude 10 minutes after departure.

PREDA FOUR DEPARTURE (RNAV)
(PREDA4.PREDA) 25JUN15
FORT LAUDERDALE/HOLLYWOOD INTL (FTLL)
FORT LAUDERDALE, FLORIDA

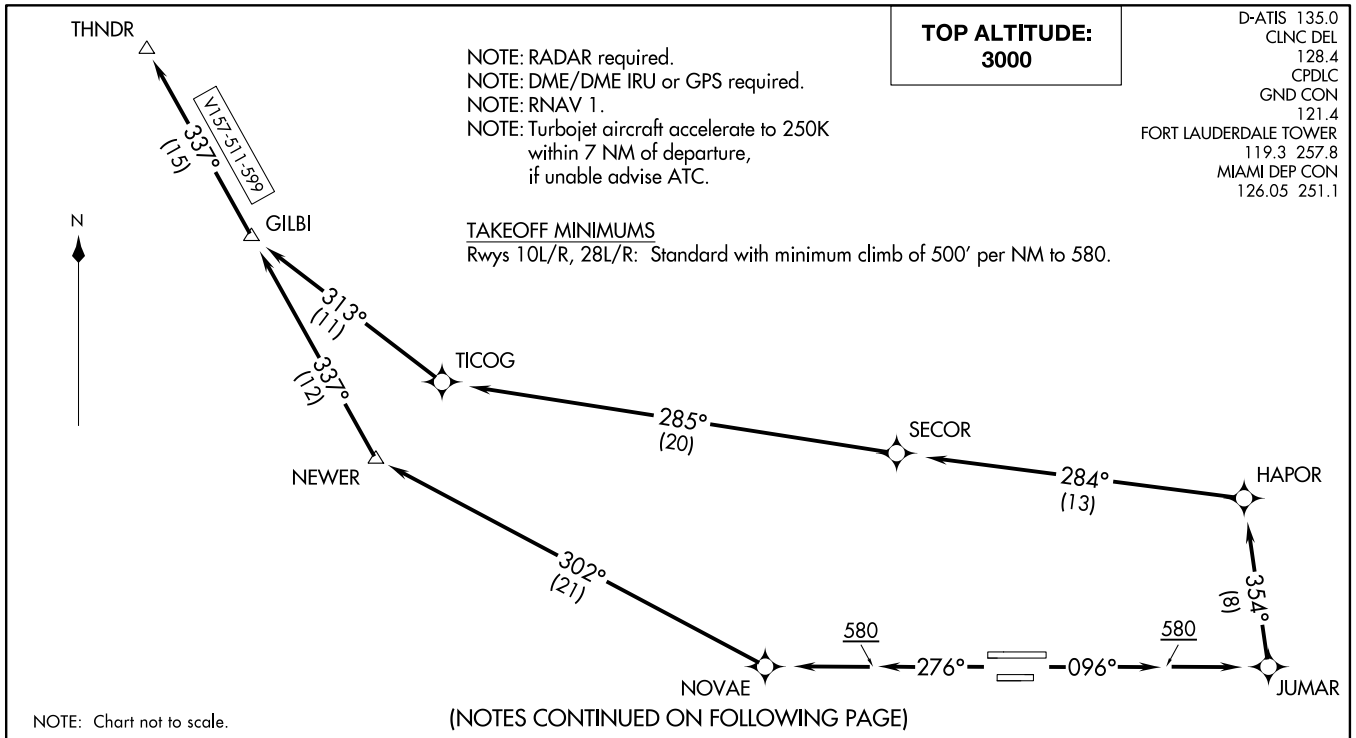
THNDR FOUR DEPARTURE (RNAV)

TOP ALTITUDE: 3000

D-ATIS 135.0
CLNC DEL 128.4
CPDLC
GND CON 121.4
FORT LAUDERDALE TOWER 119.3 257.8
MIAMI DEP CON 126.05 251.1

NOTE: RADAR required.
NOTE: DME/DME IRU or GPS required.
NOTE: RNAV 1.
NOTE: Turbojet aircraft accelerate to 250K within 7 NM of departure, if unable advise ATC.

TAKEOFF MINIMUMS
Rwys 10L/R, 28L/R: Standard with minimum climb of 500′ per NM to 580.



NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWYS 10L/R: Climb heading 096° to 580, then direct JUMAR, then left turn on 354° track to HAPOR, then on depicted route to THNDR, thence . . . .
TAKEOFF RWYS 28L/R: Climb heading 276° to 580, then direct NOVAE, then on depicted route to THNDR, thence . . . .

. . . . maintain 3000 or as assigned by ATC. Expect clearance to filed altitude 10 minutes after departure.

SE-3, 29 MAR 2018 to 26 APR 2018

TAKEOFF OBSTACLE NOTES:

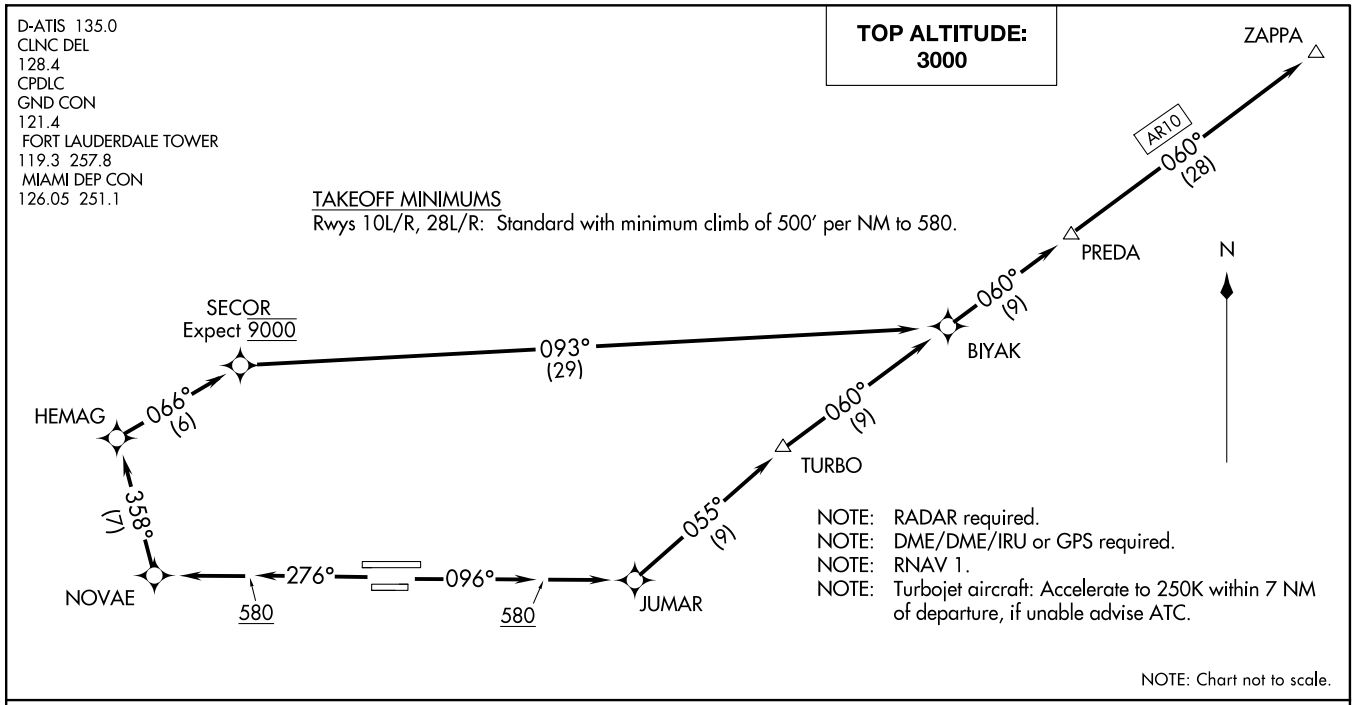
Rwy 10L: Approach light 296′ from DER, on centerline, 11′ AGL/15′ MSL. Building 469′ from DER, 378′ left of centerline, 13′ AGL/18′ MSL. Lights beginning 496′ from DER, from 28′ left to 27′ right of centerline, up to 16′ AGL/20′ MSL. Train on railroad beginning 510′ from DER, from 632′ left to on centerline, 23′ AGL/30′ MSL. Light poles beginning 666′ from DER, on centerline, up to 32′ AGL/36′ MSL. Poles and trees beginning 1290′ from DER, 548′ left and 633′ right of centerline, up to 49′ AGL/53′ MSL. Trees and pole beginning 1975′ from DER, 827′ left and 271′ right of centerline, up to 79′ AGL/83′ MSL. Bridge 2429′ from DER, 1123′ left of centerline, 65′ AGL/70′ MSL.

Rwy 10R: Trees beginning 199′ from DER, 259′ left of centerline, up to 21′ AGL/86′ MSL. Trees beginning 273′ from DER, 181′ right of centerline, up to 31′ AGL/96′ MSL. Trees beginning 495′ from DER, 144′ left of centerline, up to 44′ AGL/109′ MSL.

Rwy 28L: Tree 491′ from DER, 444′ left of centerline, 24′ AGL/34′ MSL. Trees beginning 773′ from DER, 399′ left of centerline, up to 80′ AGL/90′ MSL. Poles and trees beginning 865′ from DER, 534′ right of centerline, up to 81′ AGL/91′ MSL. Buildings, trees, and signs beginning 1317′ from DER, 455′ left of centerline, up to 100′ AGL/109′ MSL. Trees and pole beginning 1636′ from DER, 290′ right of centerline, up to 90′ AGL/100′ MSL. Towers beginning 3190′ from DER, 666′ right of centerline, up to 108′ AGL/114′ MSL.

Rwy 28R: Building and light pole beginning 260′ from DER, 253′ left of centerline and on centerline, up to 14′ AGL/18′ MSL. Vehicles on road beginning 323′ from DER, from 28′ left to 281′ right of centerline, 15′ AGL/21′ MSL. Approach lights beginning 441′ from DER, from 28′ left to 27′ right of centerline, up to 16′ AGL/25′ MSL. Vehicles on road beginning 455′ from DER, from 647′ left to 685′ right of centerline, up to 17′ AGL/33′ MSL. Approach lights beginning 652′ from DER, on centerline, up to 24′ AGL/33′ MSL. Train on railroad beginning 849′ from DER, from 683′ left to 379′ right of centerline, up to 23′ AGL/34′ MSL. Trees and sign beginning 1017′ from DER, 122′ left of centerline, up to 63′ AGL/72′ MSL. Trees beginning 2231′ from DER, 354′ left of centerline, up to 88′ AGL/97′ MSL. Trees beginning 2286′ from DER, 530′ right of centerline, up to 108′ AGL/112′ MSL.

SE-3, 29 MAR 2018 to 26 APR 2018



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWYS 10L/R: Climb heading 096° to 580, then direct JUMAR, then on depicted route to ZAPPA, thence. . . .
TAKEOFF RWYS 28L/R: Climb heading 276° to 580, then direct NOVAE, then on depicted route to ZAPPA, thence. . . .

. . . .maintain 3000 or as assigned by ATC. Expect clearance to filed altitude 10 minutes after departure.

SE-3, 29 MAR 2018 to 26 APR 2018

ZAPPA FOUR DEPARTURE (RNAV)
(ZAPPA4.ZAPPA) 25JUN15
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)
FORT LAUDERDALE, FLORIDA

RNAV (GPS) RWY 28L
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

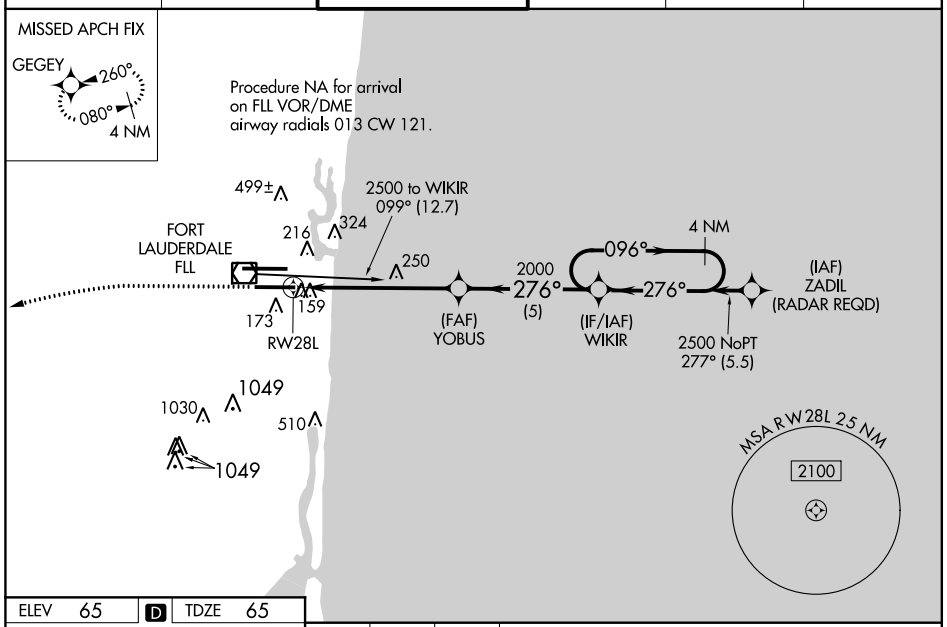
WAAS CH 58336 W28B	APP CRS 276°	Rwy ldg 8000 TDZE 65 Apt Elev 65

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 6°C (43°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations. For inop ALS increase LNAV/VNAV all Cats visibility to RVR 4500 and LNAV Cat D visibility to 1¼ SM. Inop table does not apply to LPV all Cats.

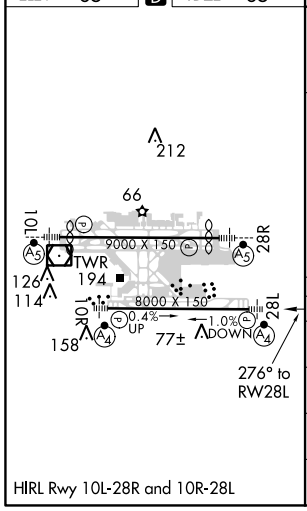
MALSF

MISSED APPROACH: Climb to 1000 then climbing left turn to 4000 direct GEGEY and hold, continue climb-in-hold to 4000.

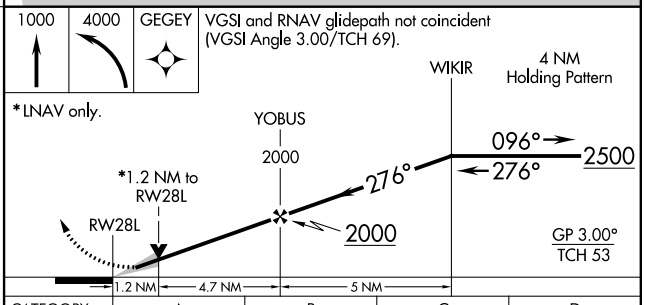
D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	



ELEV 65 | D | TDZE 65



HIRL Rwy 10L-28R and 10R-28L



CATEGORY	A	B	C	D
LPV DA	265/40 200 (200-¾)			
LNAV/VNAV DA	343/40 278 (300-¾)			
LNAV MDA	500/40 435 (500-¾)		500/50 435 (500-1)	
C CIRCLING	680-1 615 (700-1)		800-2 735 (700-2)	800-2¼ 735 (800-2¼)

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SE-3, 29 MAR 2018 to 26 APR 2018

LOC/DME I-LHI	APP CRS	Rwy ldg	8424
110.1	096°	TDZE	7
Chan 38		Apt Elev	65

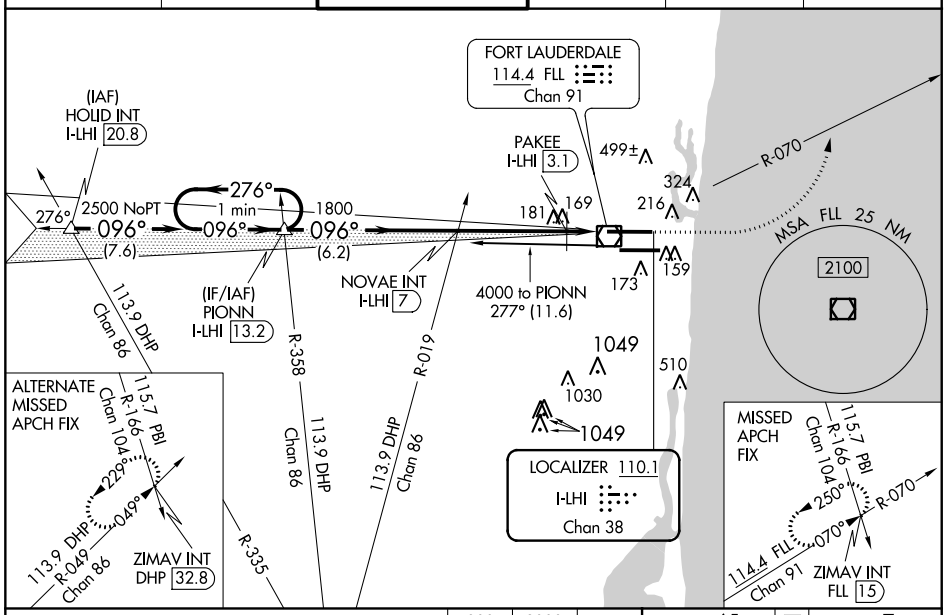
ILS or LOC RWY 10L
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

Inop table does not apply to S-ILS 10L all Cats. For inop MALSR, increase S-LOC 10L Cats A, B visibility to RVR 5000 and Cats C, D visibility to 1⅝ miles. PAKEE Fix Minimums: increase S-LOC 10L all Cats visibility to RVR 5500. Helicopter visibility reduction below RVR 4000 NA. Simultaneous approach authorized with Rwy 10R.

MALSR

MISSED APPROACH: Climb to 800 then climbing left turn to 2000 on FLL VOR/DME R-070 to ZIMAV INT/FLL 15 DME and hold.

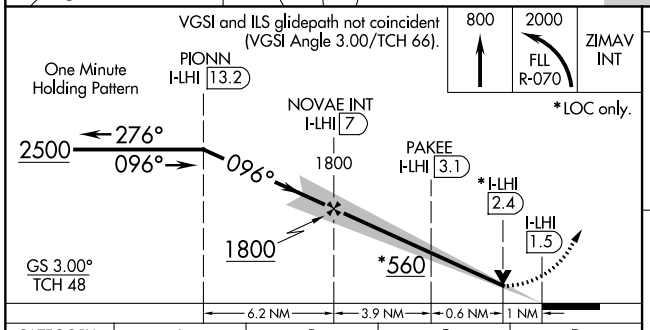
D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	



VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 66).

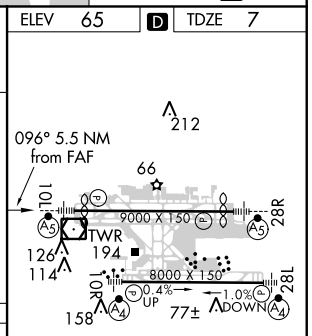
800	2000	ZIMAV INT
↑	FLL R-070	

*LOC only.



CATEGORY	A	B	C	D
S-ILS 10L	257/40	250 (200-¾)		
S-LOC 10L	560/40	553 (500-¾)	560/60	553 (500-1¼)
C CIRCLING	560-1 495 (500-1)	600-1 535 (600-1)	760-2¼ 695 (700-2¼)	760-2½ 695 (700-2½)
PAKEE FIX MINIMUMS (DME REQUIRED)				
S-LOC 10L	380/40	373 (400-¾)		
C CIRCLING	540-1 475 (500-1)	600-1 535 (600-1)	760-2¼ 695 (700-2¼)	760-2½ 695 (700-2½)

ELEV 65 D TDZE 7



HIRL Rwy 10L-28R and 10R-28L

FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

SE-3, 29 MAR 2018 to 26 APR 2018
SE-3, 29 MAR 2018 to 26 APR 2018

ILS or LOC RWY 28L
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

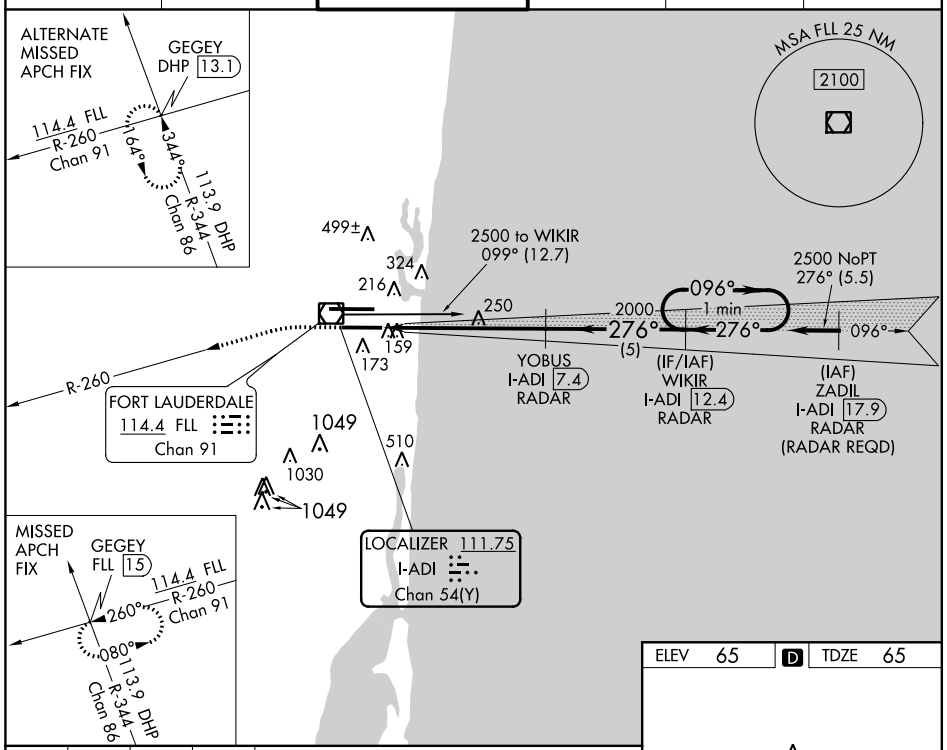
LOC/DME I-ADI	APP CRS	Rwy ldg	8000
111.75	276°	TDZE	65
Chan 54(Y)		Apt Elev	65

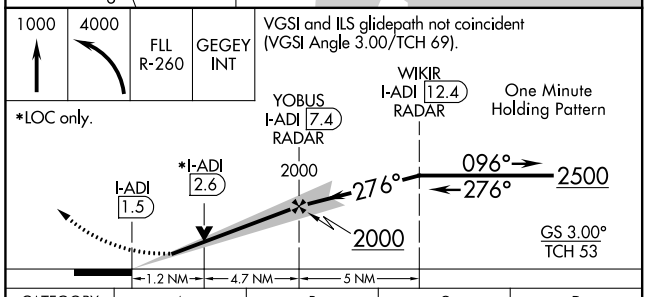
DME or RADAR Required. Simultaneous approach authorized. Inop table does not apply to S-ILS 28L. For inop ALS, increase S-LOC 28L Cat D visibility to 1¼ SM.

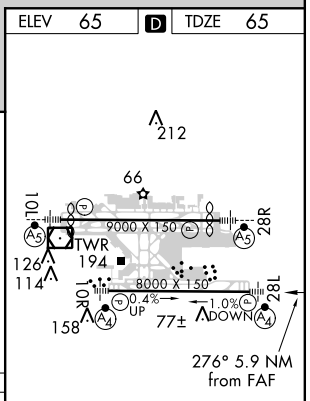
MALSF

MISSED APPROACH: Climb to 1000 then climbing left turn to 4000 on FLL VOR/DME R-260 to GEGEY INT/FLL 15 DME and hold, continue climb-in-hold to 4000.

D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	







HIRL Rwy 10L-28R and 10R-28L

CATEGORY	A	B	C	D
S-ILS 28L	265/40 200 (200-¾)			
S-LOC 28L	500/40 435 (500-¾)		500/50 435 (500-1)	
C CIRCLING	680-1 615 (700-1)		800-2 735 (800-2)	800-2¼ 735 (800-2¼)

FAF to MAP 5.9 NM

Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

SE-3, 29 MAR 2018 to 26 APR 2018

APP CRS	Rwy ldg	8424
096°	TDZE	7
	Apt Elev	9

RNAV (RNP) Y RWY 10L

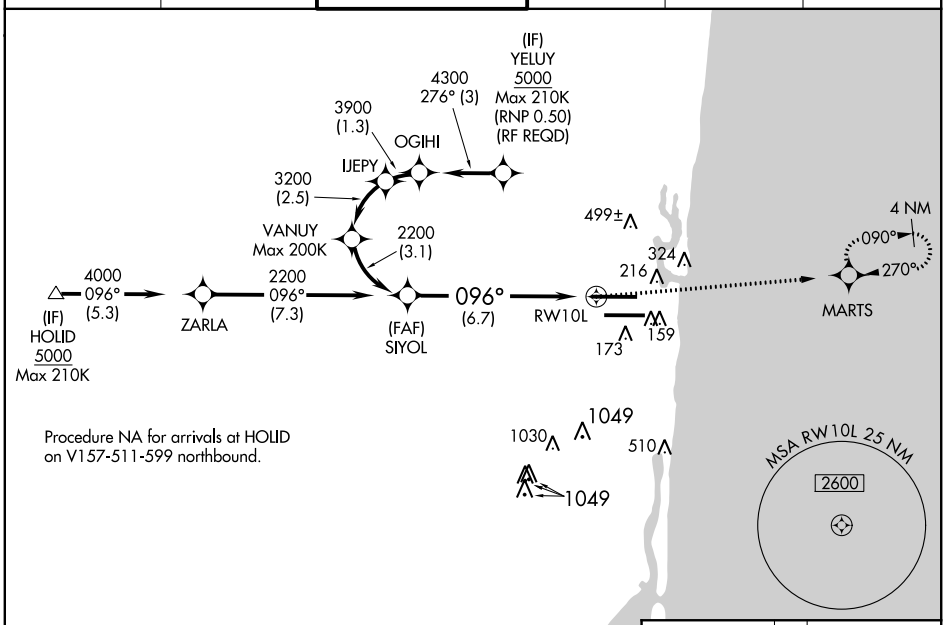
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

Inop table does not apply.
For uncompensated Baro-VNAV systems, procedure NA below 5°C (40°F) or above 54°C (130°F).
GPS Required.

MALSR

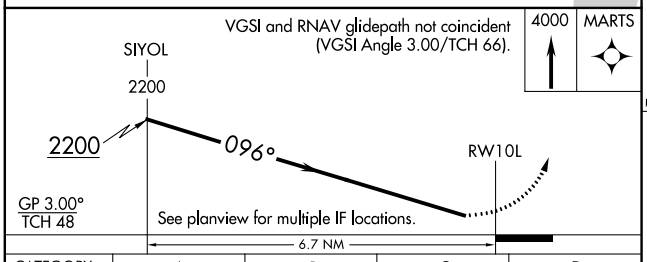
MISSED APPROACH: Climb to 4000 direct MARTS and hold, continue climb-in-hold to 4000.

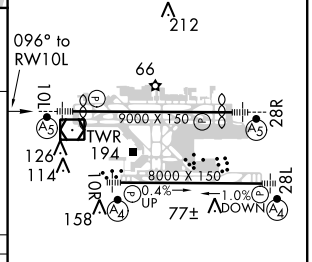
D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	



Procedure NA for arrivals at HOLID on V157-511-599 northbound.

ELEV 9	D	TDZE 7





CATEGORY	A	B	C	D
RNP 0.15 DA	307/50	300 (300-1)		
RNP 0.30 DA	445-1½	438 (500-1½)		

AUTHORIZATION REQUIRED

HIRL Rwy 10L-28R

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SE-3, 29 MAR 2018 to 26 APR 2018

WAAS CH **48902** **W10A**	APP CRS **096°**	Rwy ldg **8424** TDZE **7** Apt Elev **65**

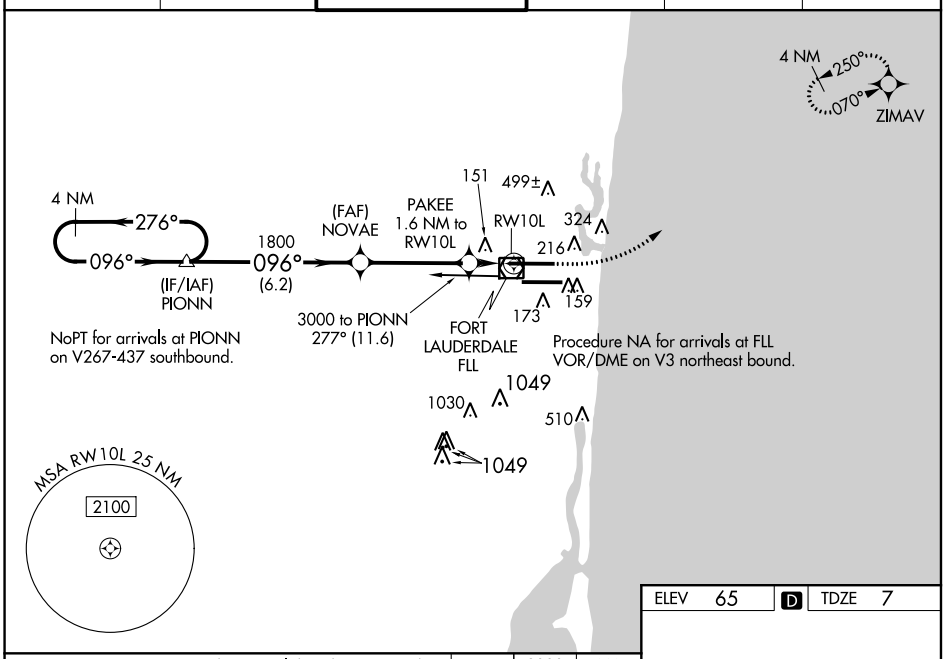
RNAV (GPS) Z RWY 10L
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

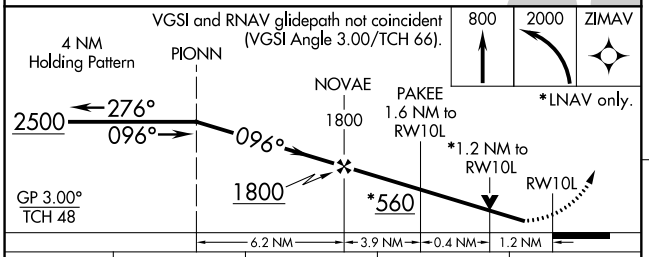
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 5°C (40°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inop MALSR, increase LNAV Cat A, B visibility to RVR 5500. Helicopter visibility reduction below 4000 RVR NA. Inop table does not apply to LPV all Cats. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations. Simultaneous approach authorized with Rwy 10R.

MALSR

MISSED APPROACH: Climb to 800 then climbing left turn to 2000 direct ZIMAV and hold.

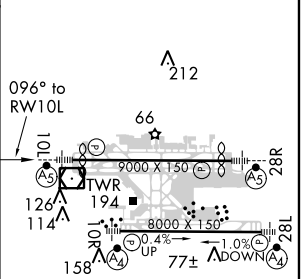
D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	





CATEGORY	A	B	C	D
LPV DA	257/40 250 (200-¾)			
LNAV/VNAV DA	477/57 470 (500-1¼)			
LNAV MDA	460/40 453 (400-¾)		460/45 453 (400-⅞)	
C CIRCLING	540-1 475 (500-1)	600-1 535 (600-1)	760-2 695 (700-2)	760-2¼ 695 (700-2¼)

ELEV 65 D TDZE 7



HIRL Rwy 10L-28R and 10R-28L

SE-3, 29 MAR 2018 to 26 APR 2018

ILS or LOC RWY 28R

FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

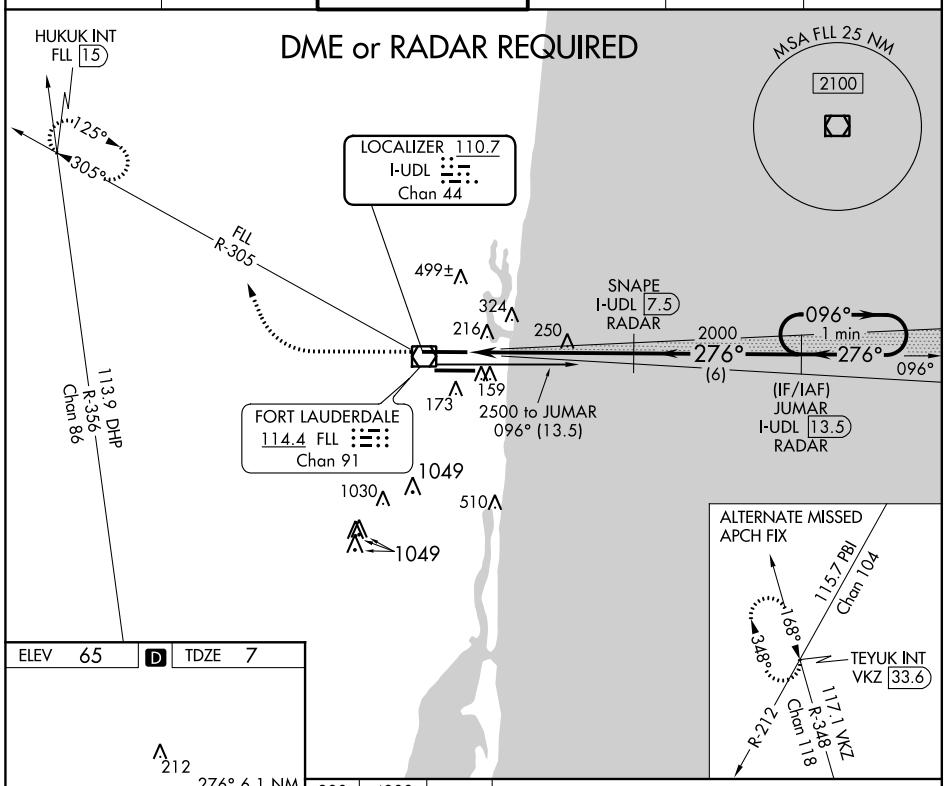
LOC/DME I-UDL	APP CRS	Rwy ldg	8394
110.7	276°	TDZE	7
Chan 44		Apt Elev	65

For inop MALSR, increase S-LOC 28R Cat C/D visibility to 1⅜ mile.
Simultaneous approach authorized with Rwy 28L.
Inop table does not apply to S-ILS 28R.

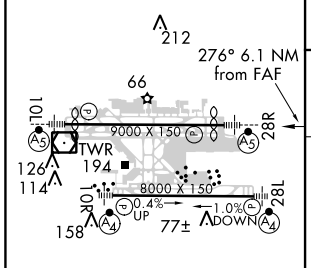
MALSR

MISSED APPROACH: Climb to 800 then climbing right turn to 4000 on FLL VOR/DME R-305 to HUKUK INT/FLL 15 DME and hold, continue climb-in-hold to 4000.

D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	

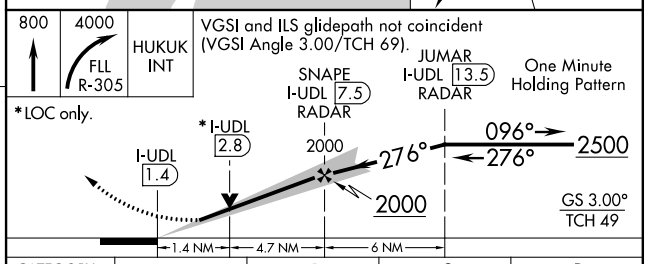


ELEV	65	D	TDZE	7



HIRL Rwy 10L-28R and 10R-28L

FAF to MAP 6.1 NM					
Knots	60	90	120	150	180
Min:Sec	6:06	4:04	3:03	2:26	2:02



CATEGORY	A	B	C	D
S-ILS 28R	257/40 250 (200-¾)			
S-LOC 28R	520/24 513 (500-½)		520/55 513 (500-1¼)	
C CIRCLING	540-1 475 (500-1)	600-1 535 (600-1)	760-2¼ 695 (700-2¼)	760-2½ 695 (700-2½)

SE-3, 29 MAR 2018 to 26 APR 2018
SE-3, 29 MAR 2018 to 26 APR 2018

ILS or LOC RWY 10R
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

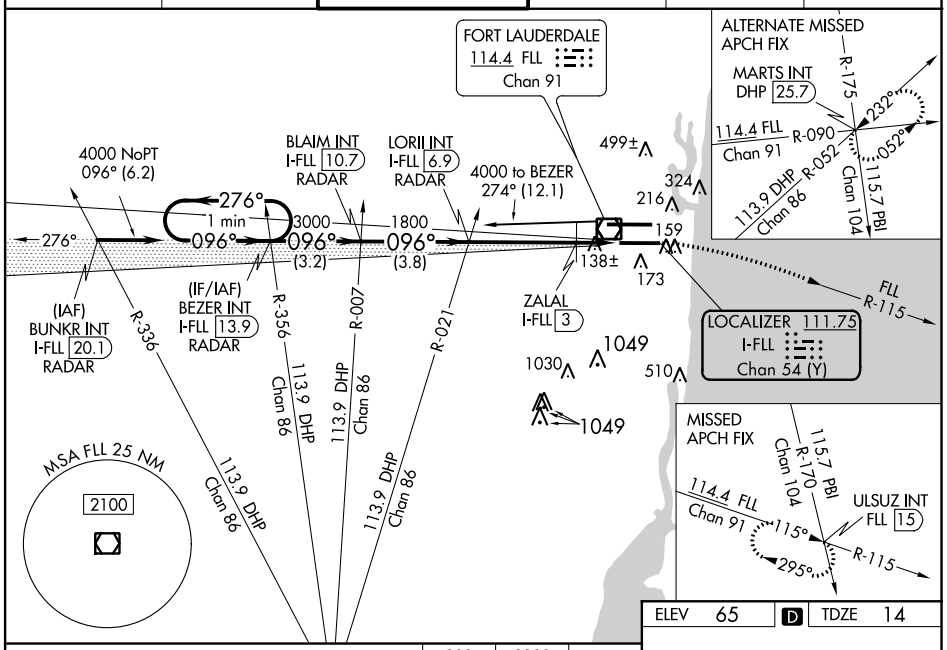
LOC/DME I-FLL	APP CRS	Rwy ldg	8000
111.75	096°	TDZE	14
Chan 54 (Y)		Apt Elev	65

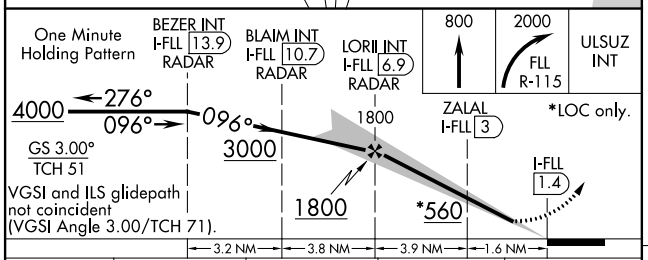
Simultaneous approach authorized. Helicopter visibility reduction below RVR 4000 NA. Inop table does not apply to S-ILS 10R all Cats.
For inop ALS, increase S-LOC 10R Cat D visibility to 1⅝ SM.
For inop ALS when using ZALAL FIX minimums, increase S-LOC 10R Cat D visibility to 1⅜ SM.

MALSF

MISSED APPROACH: Climb to 800 then climbing right turn to 2000 on FLL VOR/DME R-115 to ULSUZ INT/FLL 15 DME and hold.

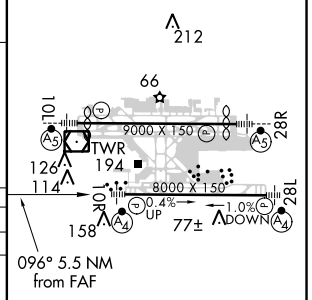
D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	





CATEGORY	A	B	C	D
S-ILS 10R	264/40	250 (200-¾)		
S-LOC 10R	560/40	546 (500-¾)	560-1⅜	546 (500-1⅜)
C CIRCLING	680-1	615 (700-1)	800-2 735 (800-2)	800-2¼ 735 (800-2¼)
ZALAL FIX MINIMUMS (DME REQUIRED)				
S-LOC 10R	400/40	386 (400-¾)	400/55	386 (400-1¼)
C CIRCLING	680-1	615 (700-1)	800-2 735 (800-2)	800-2¼ 735 (800-2¼)

ELEV 65 | D | TDZE 14



HIRL Rwy 10L-28R and 10R-28L

FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

SE-3, 29 MAR 2018 to 26 APR 2018
SE-3, 29 MAR 2018 to 26 APR 2018

WAAS CH **63236** **W10B**	APP CRS **096°**	Rwy ldg **8000** TDZE **14** Apt Elev **65**

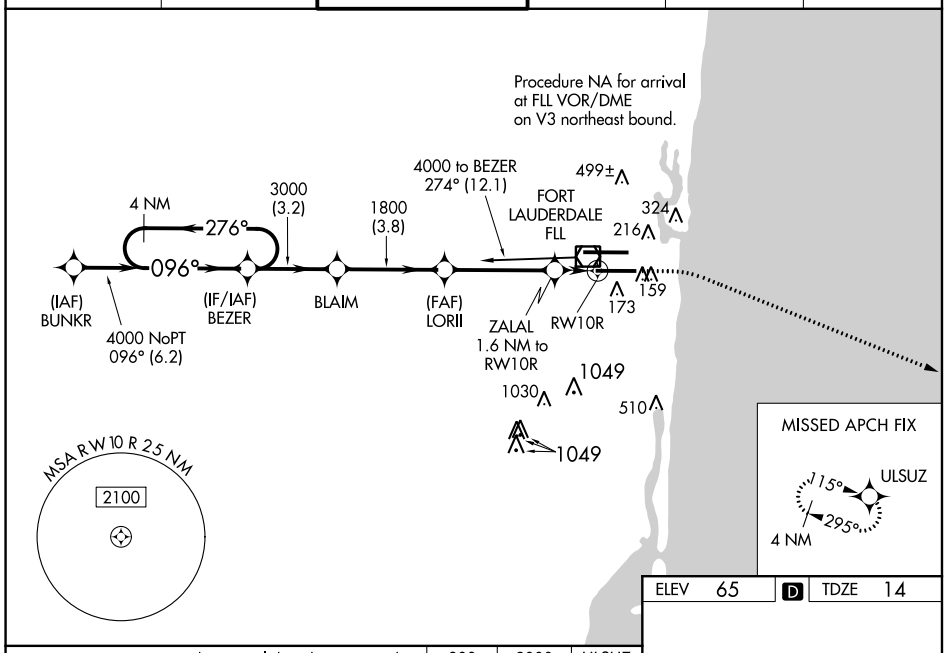
RNAV (GPS) RWY 10R
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 6°C (43°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Simultaneous approach authorized. Use of FD or AP providing RNAV track guidance required during simultaneous operations. Helicopter visibility reduction below RVR 4000 NA. For inop ALS, increase LNAV/VNAV Cat D and LNAV Cats C and D visibility to 1⅜ SM. Inop Table does not apply to LPV all Cats.

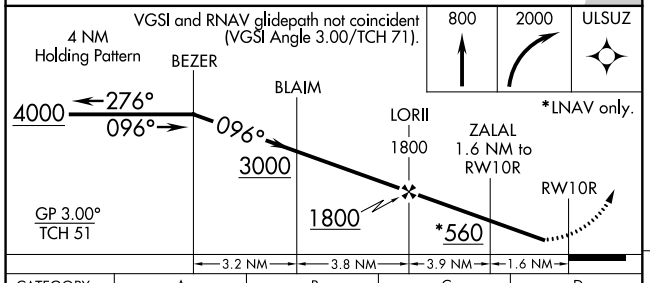
MALSF

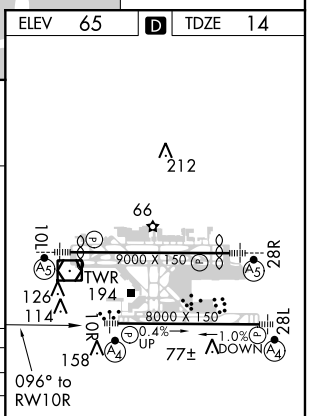
MISSED APPROACH: Climb to 800 then climbing right turn to 2000 direct ULSUZ and hold.

D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	



ELEV 65 | D | TDZE 14





CATEGORY	A	B	C	D
LPV DA	264/40 250 (200-¾)			
LNAV/VNAV DA	419/60 405 (400-1¼)			
LNAV MDA	460/40 446 (400-¾)		460/55 446 (400-1¼)	
C CIRCLING	680-1 615 (700-1)		800-2 735 (800-2)	800-2¼ 735 (800-2¼)

HIRL Rwy 10L-28R and 10R-28L

SE-3, 29 MAR 2018 to 26 APR 2018

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APP CRS	Rwy ldg	8394
276°	TDZE	7
	Apt Elev	9

RNAV (RNP) Z RWY 28R

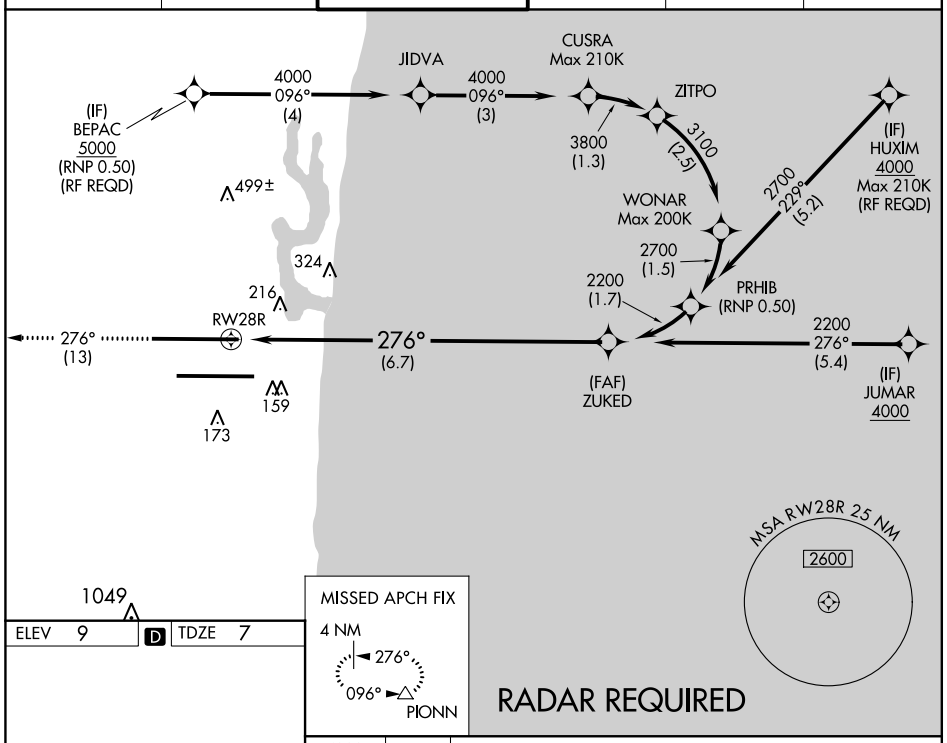
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

For uncompensated Baro-VNAV systems, procedure NA below 5°C (40°F) or above 54°C (130°F).
GPS Required.
Inop table does not apply.

MALSR

MISSED APPROACH: Climb to 4000 on track 276° to PIONN and hold, continue climb-in-hold to 4000.

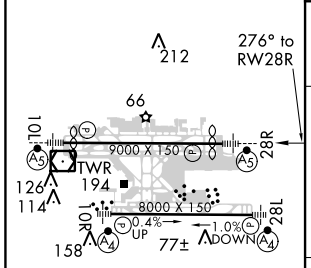
D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	



ELEV 9 D TDZE 7

MISSED APCH FIX
4 NM
276°
096°
PIONN

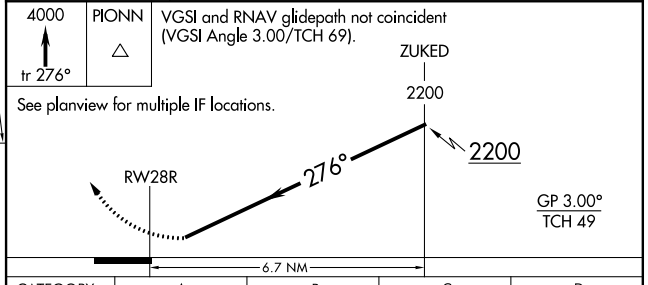
RADAR REQUIRED



4000	PIONN
tr 276°	△

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 69).

See planview for multiple IF locations.



CATEGORY	A	B	C	D
RNP 0.15 DA	405-1⅜ 398 (400-1⅜)			
RNP 0.30 DA	627-1⅝ 620 (700-1⅜)			

HIRL Rwy 10L-28R

AUTHORIZATION REQUIRED

SE-3, 29 MAR 2018 to 26 APR 2018

SE-3, 29 MAR 2018 to 26 APR 2018

RNAV (GPS) Y RWY 28R
FORT LAUDERDALE/HOLLYWOOD INTL (FLL)

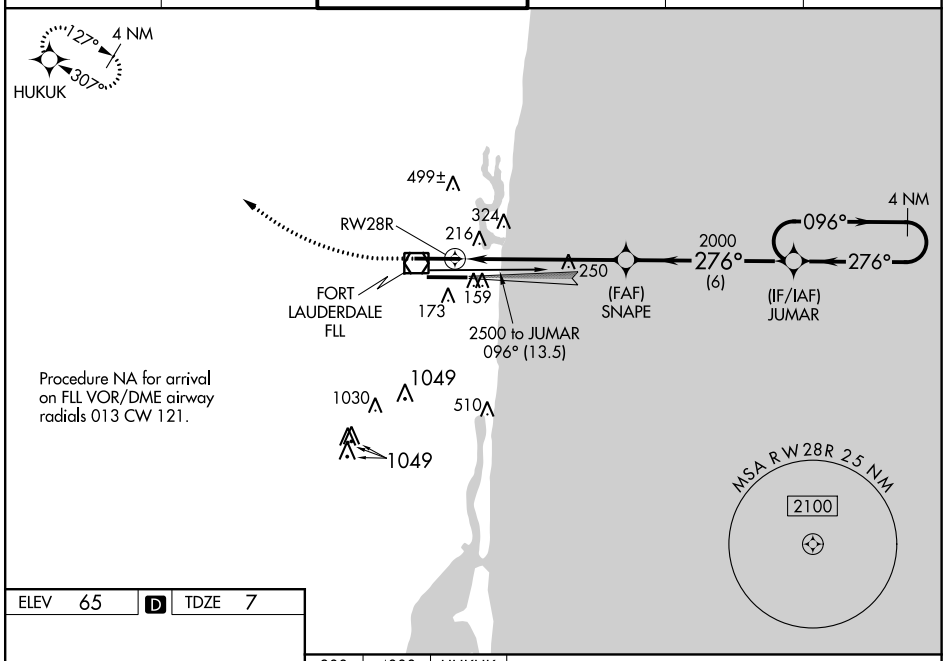
WAAS CH 61002 W28A	APP CRS 276°	Rwy ldg 8394 TDZE 7 Apt Elev 65

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 5°C (40°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Inop table does not apply to LPV all Cats. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations. Simultaneous approach authorized with Rwy 28L.

MALSR

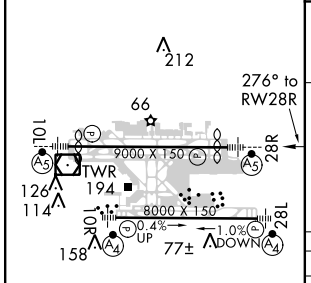
MISSED APPROACH: Climb to 800 then climbing right turn to 4000 direct HUKUK and hold, continue climb-in-hold to 4000.

D-ATIS	MIAMI APP CON	FORT LAUDERDALE TOWER	GND CON	CLNC DEL	CPDLC
135.0	133.775 285.6	119.3 257.8	121.4	128.4	

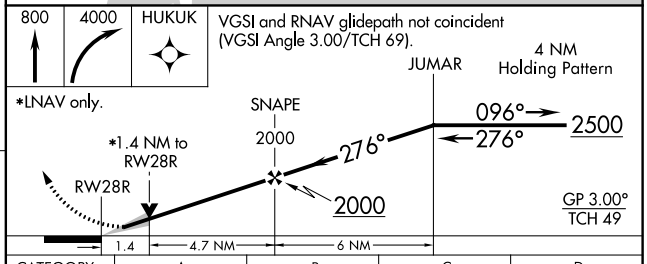


Procedure NA for arrival on FLL VOR/DME airway radials 013 CW 121.

ELEV 65 | D | TDZE 7



HIRL Rwy 10L-28R and 10R-28L



CATEGORY	A	B	C	D
LPV DA	257/40 250 (200-¾)			
LNAV/VNAV DA	594-1½ 587 (600-1½)			
LNAV MDA	520/24 513 (500-½)		520/55 513 (500-1¼)	
C CIRCLING	540-1 475 (500-1)	600-1 535 (600-1)	760-2 695 (700-2)	760-2¼ 695 (700-2¼)

SE-3, 29 MAR 2018 to 26 APR 2018

(DVALL.CURSO5) 18032

CURSO FIVE ARRIVAL (RNAV) Transition Routes

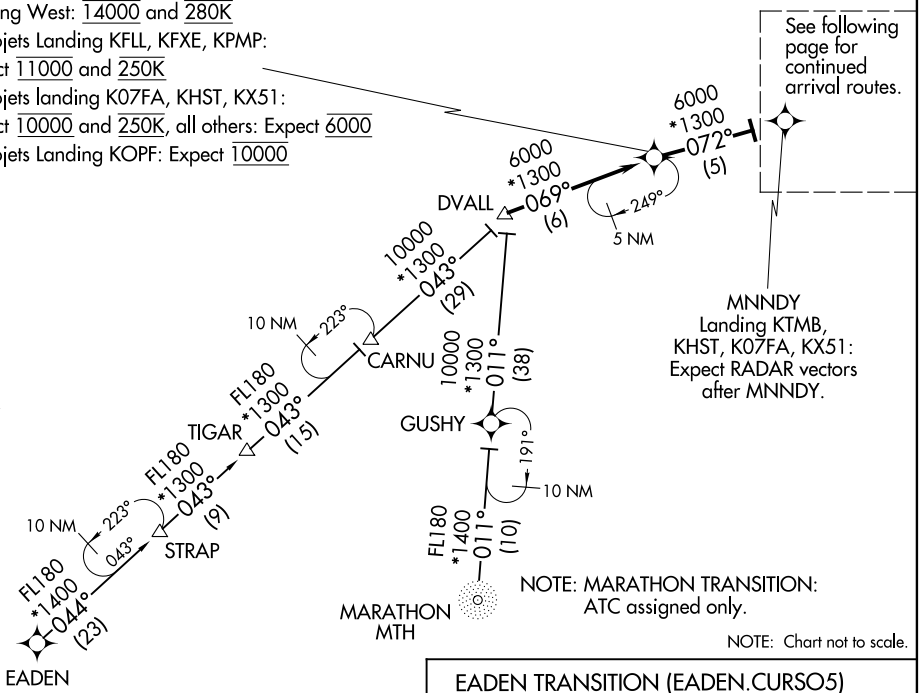
AL-257 (FAA)

MIAMI, FLORIDA

MIAMI APP CON
124.85 322.3
MIAMI INTL D-ATIS
119.15
NORTH PERRY ATIS
135.475
MIAMI-OPA LOCKA EXECUTIVE ATIS
125.9
MIAMI EXECUTIVE ATIS
124.0
HOMESTEAD ARB ATIS
132.275 269.9
FORT LAUDERDALE EXECUTIVE ATIS
119.85
FORT LAUDERDALE/HOLLYWOOD INTL D-ATIS
135.0
POMPANO BEACH AIRPARK ATIS
120.55

CURSO
Turbojets landing KMIA: Expect
Landing East: 10000 and 250K
Landing West: 14000 and 280K
Turbojets Landing KFLL, KFXE, KPMP:
Expect 11000 and 250K
Turbojets landing K07FA, KHST, KX51:
Expect 10000 and 250K, all others: Expect 6000
Turbojets Landing KOPF: Expect 10000

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.



(CONTINUED ON FOLLOWING PAGES)

EADEN TRANSITION (EADEN.CURSO5)
MARATHON TRANSITION (MTH.CURSO5)

ARRIVAL ROUTE DESCRIPTION

. . . . From DVALL on track 069° to CURSO, then on track 072° to MNNDY.

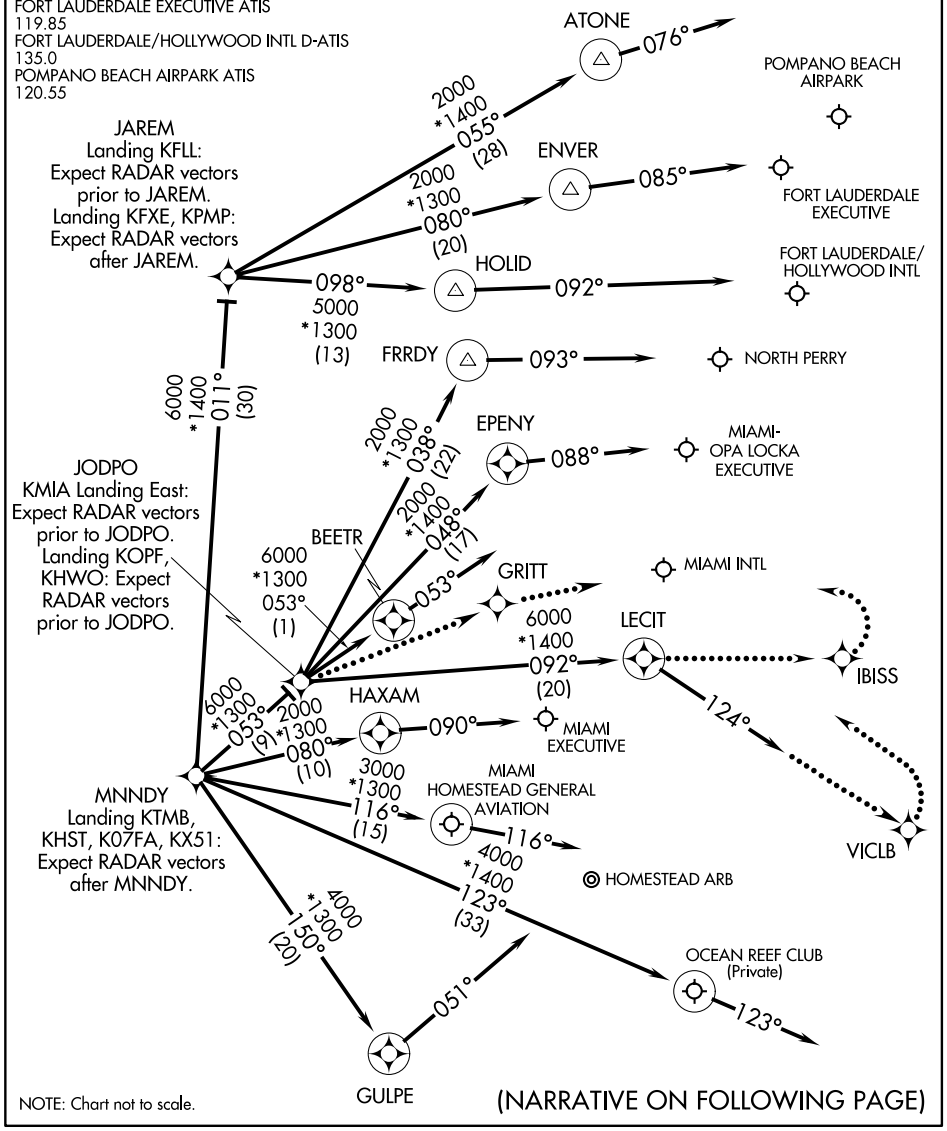
CURSO FIVE ARRIVAL (RNAV) Transition Routes
(DVALL.CURSO5) 07DEC17
MIAMI, FLORIDA

CURSO FIVE ARRIVAL (RNAV) Arrival Routes

MIAMI, FLORIDA

MIAMI APP CON
124.85 322.3
MIAMI INTL D-ATIS
119.15
NORTH PERRY ATIS
135.475
MIAMI-OPA LOCKA EXECUTIVE ATIS
125.9
MIAMI EXECUTIVE ATIS
124.0
HOMESTEAD ARB ATIS
132.275 269.9
FORT LAUDERDALE EXECUTIVE ATIS
119.85
FORT LAUDERDALE/HOLLYWOOD INTL D-ATIS
135.0
POMPANO BEACH AIRPARK ATIS
120.55

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.



NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

SE-3, 29 MAR 2018 to 26 APR 2018

ARRIVAL ROUTE DESCRIPTION

KMIA: From DVALL on track 069° to CURSO, then on track 072° to MNNDY.

KMIA Landing East Rwys 08R/L, 09, 12: From MNNDY on track 053° to JODPO, then on track 053° to BEETR, then on heading 053°.
Expect RADAR vectors to final approach course.

KMIA Landing West Rwys 26R/L, 27, 30: From MNNDY on track 053° to JODPO, then on track 092° to LECIT, then on heading 124°.
Expect RADAR vectors to final approach course.

Landing K07FA: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 123° to K07FA, then on heading 123°.
Expect RADAR vectors to final approach course.

Landing KFLL: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 011° to JAREM, then on track 098° to HOLID, then on heading 092°.
Expect RADAR vectors to final approach course.

Landing KFXE: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 011° to JAREM, then on track 080° to ENVER, then on heading 085°.
Expect RADAR vectors to final approach course.

Landing KHST: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 150° to GULPE, then on heading 051°.
Expect RADAR vectors to final approach course.

Landing KHWO: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 053° to JODPO, then on track 038° to FRRDY, then on heading 093°.
Expect RADAR vectors to final approach course.

Landing KOPF: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 053° to JODPO, then on track 048° to EPENY, then on heading 088°.
Expect RADAR vectors to final approach course.

Landing KPMP: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 011° to JAREM, then on track 055° to ATONE, then on heading 076°.
Expect RADAR vectors to final approach course.

Landing KTMB: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 080° to HAXAM, then on heading 090°.
Expect RADAR vectors to final approach course.

Landing KX51: From DVALL on track 069° to CURSO, then on track 072° to MNNDY, then on track 116° to KX51, then on heading 116°.
Expect RADAR vectors to final approach course.

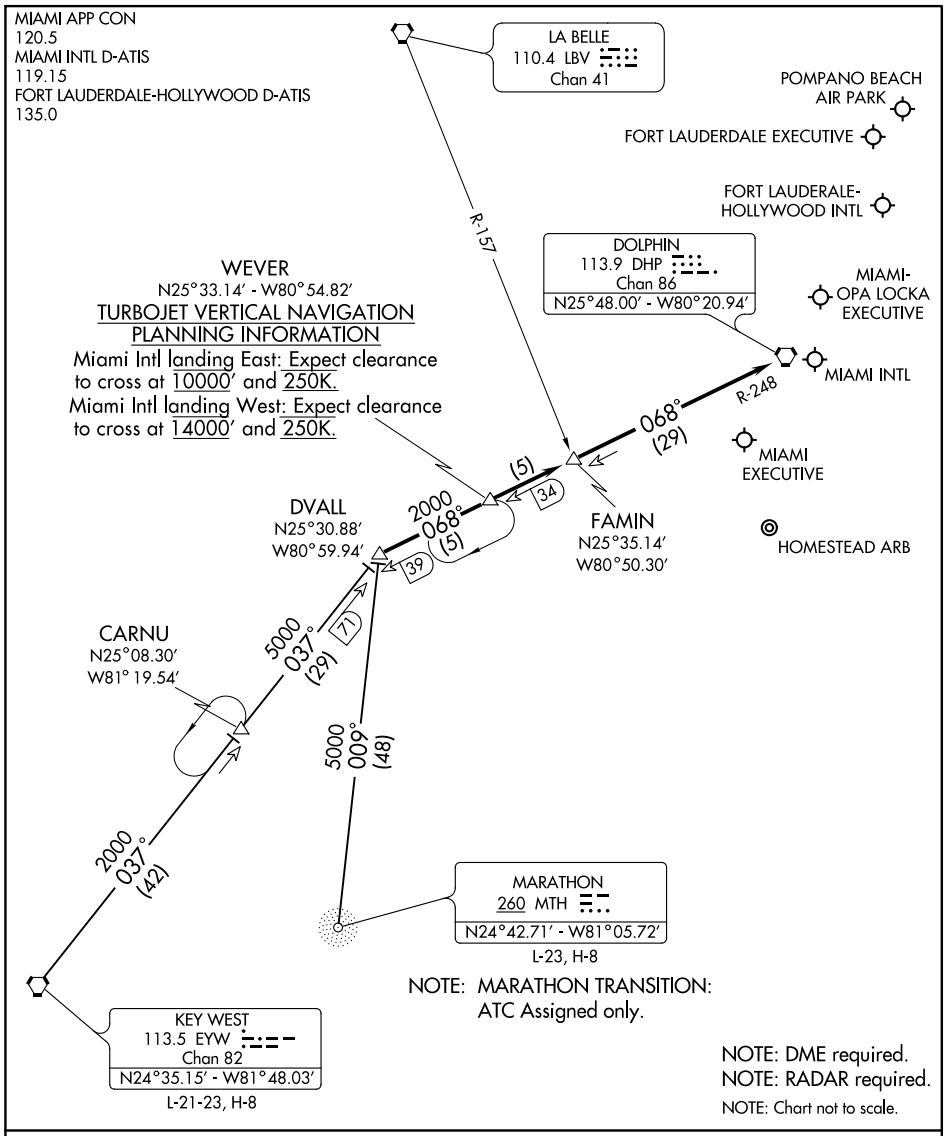
LOST COMMUNICATIONS

KMIA Landing East: Track to JODPO, then proceed direct to GRITT, intercept Rwy 09 final approach course, conduct approach.
KMIA Landing West: Track to LECIT, then proceed direct VICLB, turn left to intercept Rwy 30 final approach course, conduct approach.
Group 6 aircraft, track to LECIT, then proceed direct IBISS, turn left to intercept Rwy 27 final approach course, conduct approach.

SE-3, 29 MAR 2018 to 26 APR 2018
SE-3, 29 MAR 2018 to 26 APR 2018

DVALL THREE ARRIVAL (DVALL.DVALL3)

MIAMI, FLORIDA



KEY WEST TRANSITION (EYW.DVALL3): From over EYW VORTAC on EYW R-037 to DVALL INT. Thence. . . .

MARATHON TRANSITION (MTH.DVALL3): From over MTH NDB on bearing 009° to DVALL INT. Thence. . . .

. . . .From over DVALL INT via DHP R-248 to DHP VORTAC. Expect RADAR vectors to final approach course after FAMIN INT.

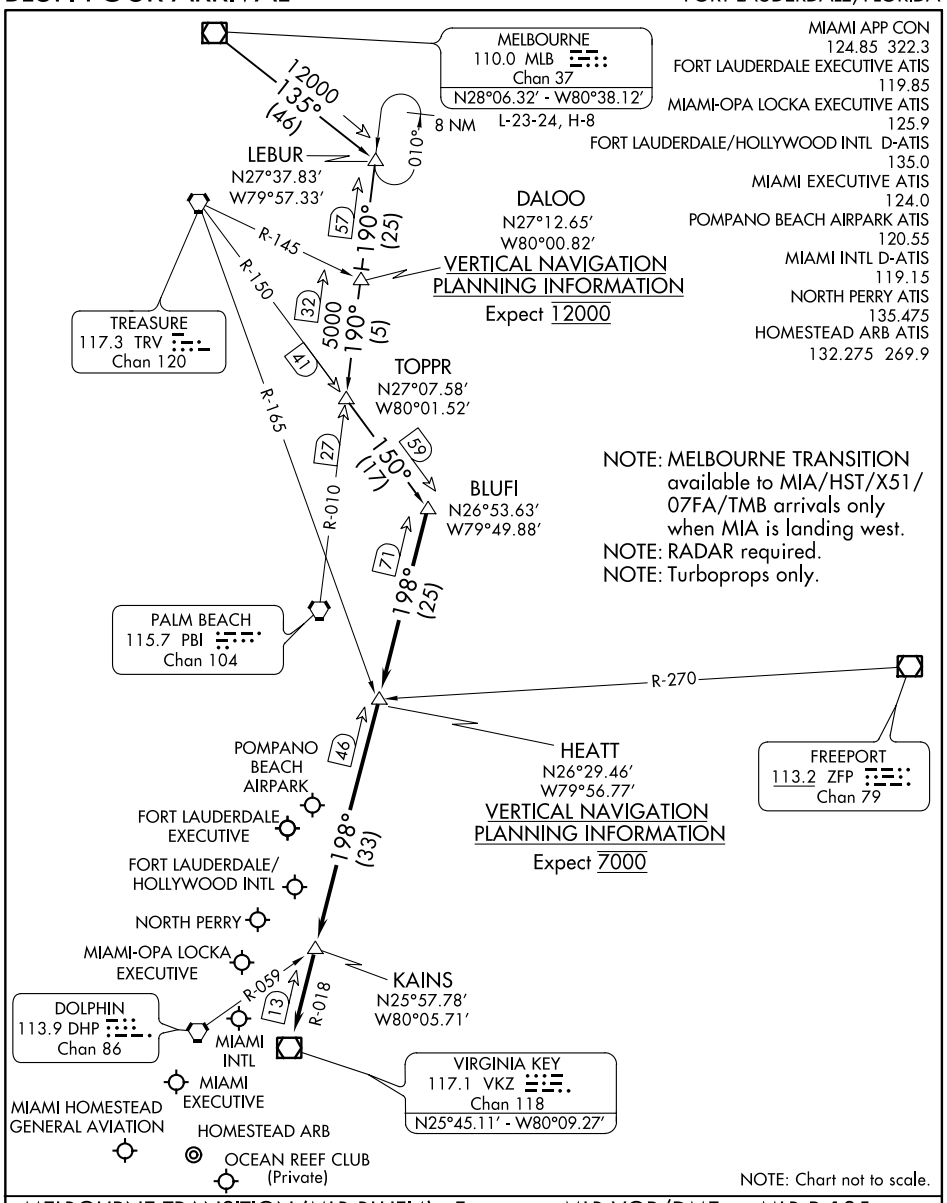
DVALL THREE ARRIVAL (DVALL.DVALL3)

MIAMI, FLORIDA

SE-3, 29 MAR 2018 to 26 APR 2018

BLUFI FOUR ARRIVAL

FORT LAUDERDALE, FLORIDA



MELBOURNE TRANSITION (MLB.BLUFI4): From over MLB VOR/DME on MLB R-135 to LEBUR INT/MLB 46 DME, then on PBI R-010 to TOPPR INT/PBI 30 DME, then on TRV R-150 to BLUFI INT. Thence . . .

. . . from over BLUFI INT/VKZ 71 DME on VKZ R-018 to HEATT INT/VKZ 46 DME, then on VKZ R-018 to KAINS INT, then on VKZ R-018 to VKZ VOR/DME. Expect RADAR vectors to final approach course after KAINS INT.

BLUFI FOUR ARRIVAL

FORT LAUDERDALE, FLORIDA

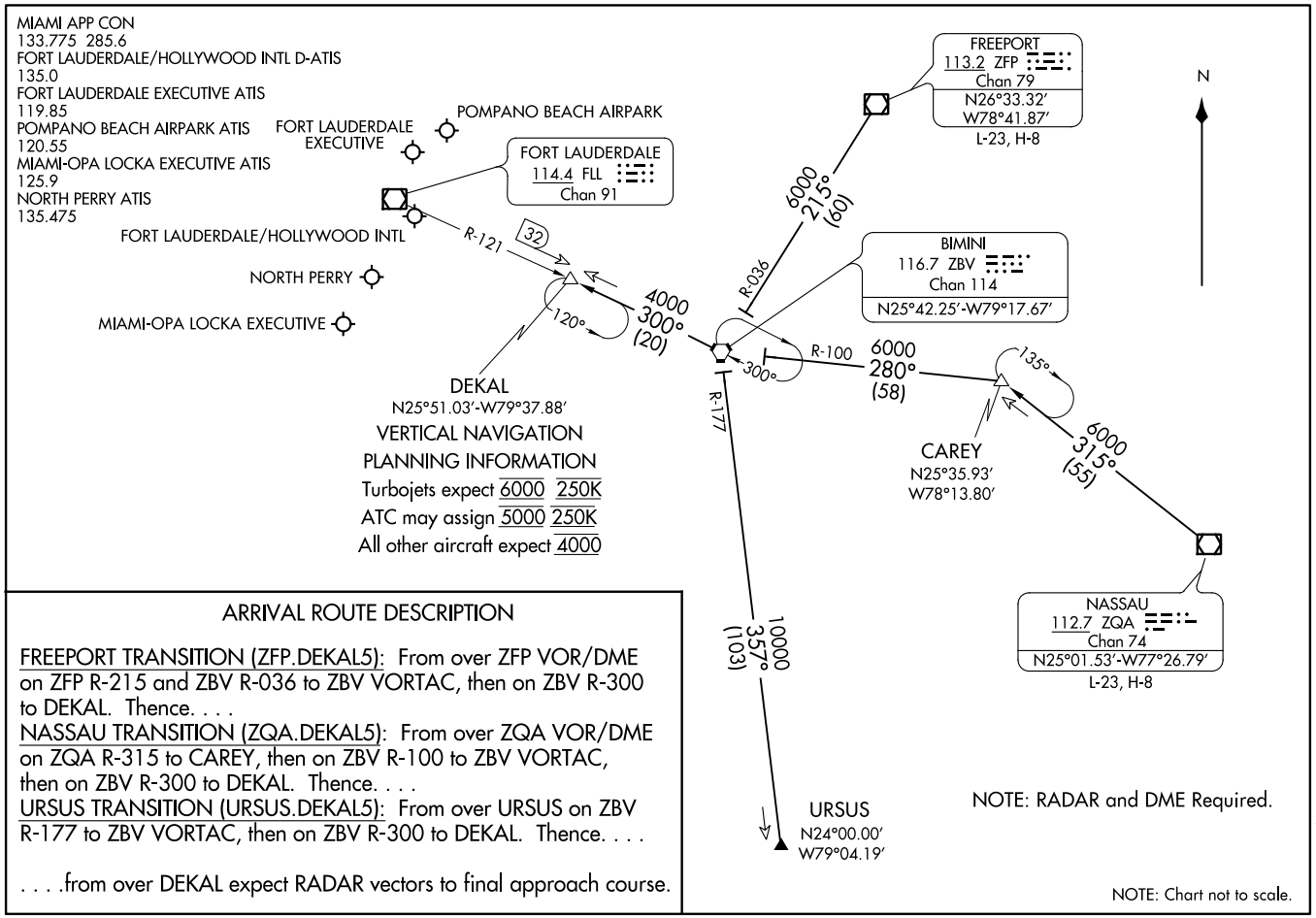
SE-3, 29 MAR 2018 to 26 APR 2018

DEKAL FIVE ARRIVAL

(DEKAL.DEKAL5) 22JUN17

FORT LAUDERDALE, FLORIDA

MIAMI APP CON
133.775 285.6
FORT LAUDERDALE/HOLLYWOOD INTL D-ATIS
135.0
FORT LAUDERDALE EXECUTIVE ATIS
119.85
POMPANO BEACH AIRPARK ATIS
120.55
MIAMI-OPA LOCKA EXECUTIVE ATIS
125.9
NORTH PERRY ATIS
135.475



VERTICAL NAVIGATION
PLANNING INFORMATION

Turbojets expect 6000 250K
ATC may assign 5000 250K
All other aircraft expect 4000

ARRIVAL ROUTE DESCRIPTION

FREEPORT TRANSITION (ZFP.DEKAL5): From over ZFP VOR/DME on ZFP R-215 and ZBV R-036 to ZBV VORTAC, then on ZBV R-300 to DEKAL. Thence. . . .

NASSAU TRANSITION (ZQA.DEKAL5): From over ZQA VOR/DME on ZQA R-315 to CAREY, then on ZBV R-100 to ZBV VORTAC, then on ZBV R-300 to DEKAL. Thence. . . .

URSUS TRANSITION (URSUS.DEKAL5): From over URSUS on ZBV R-177 to ZBV VORTAC, then on ZBV R-300 to DEKAL. Thence. . . .

. . . .from over DEKAL expect RADAR vectors to final approach course.

NOTE: RADAR and DME Required.

NOTE: Chart not to scale.

DEKAL FIVE ARRIVAL

(DEKAL.DEKAL5) 17173

AL-744 (FAA)

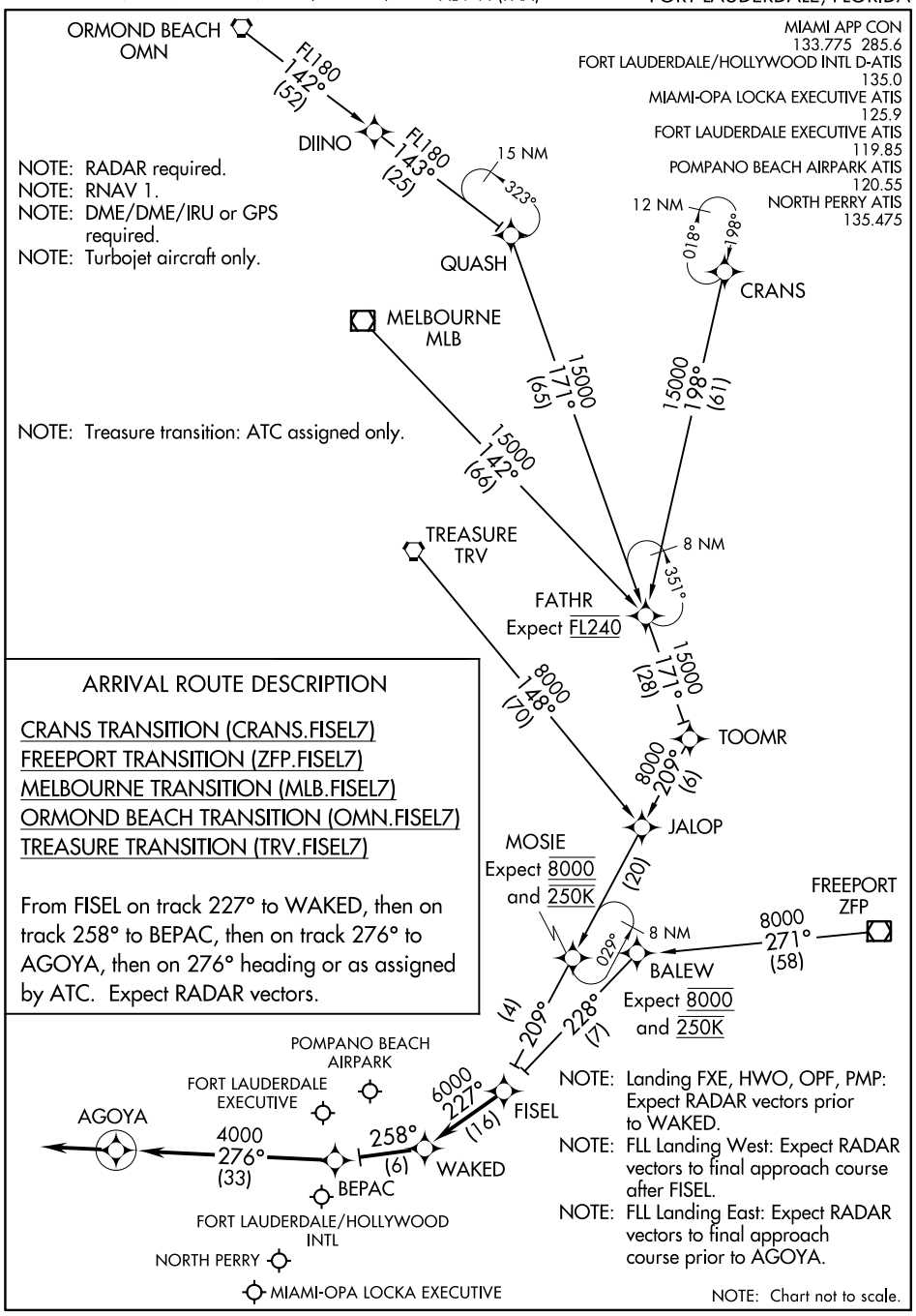
FORT LAUDERDALE, FLORIDA

(FISEL.FISEL7) 17173

FISEL SEVEN ARRIVAL (RNAV)

AL-744 (FAA)

FORT LAUDERDALE, FLORIDA



SE-3, 29 MAR 2018 to 26 APR 2018

SE-3, 29 MAR 2018 to 26 APR 2018

FISEL SEVEN ARRIVAL (RNAV)

FORT LAUDERDALE, FLORIDA

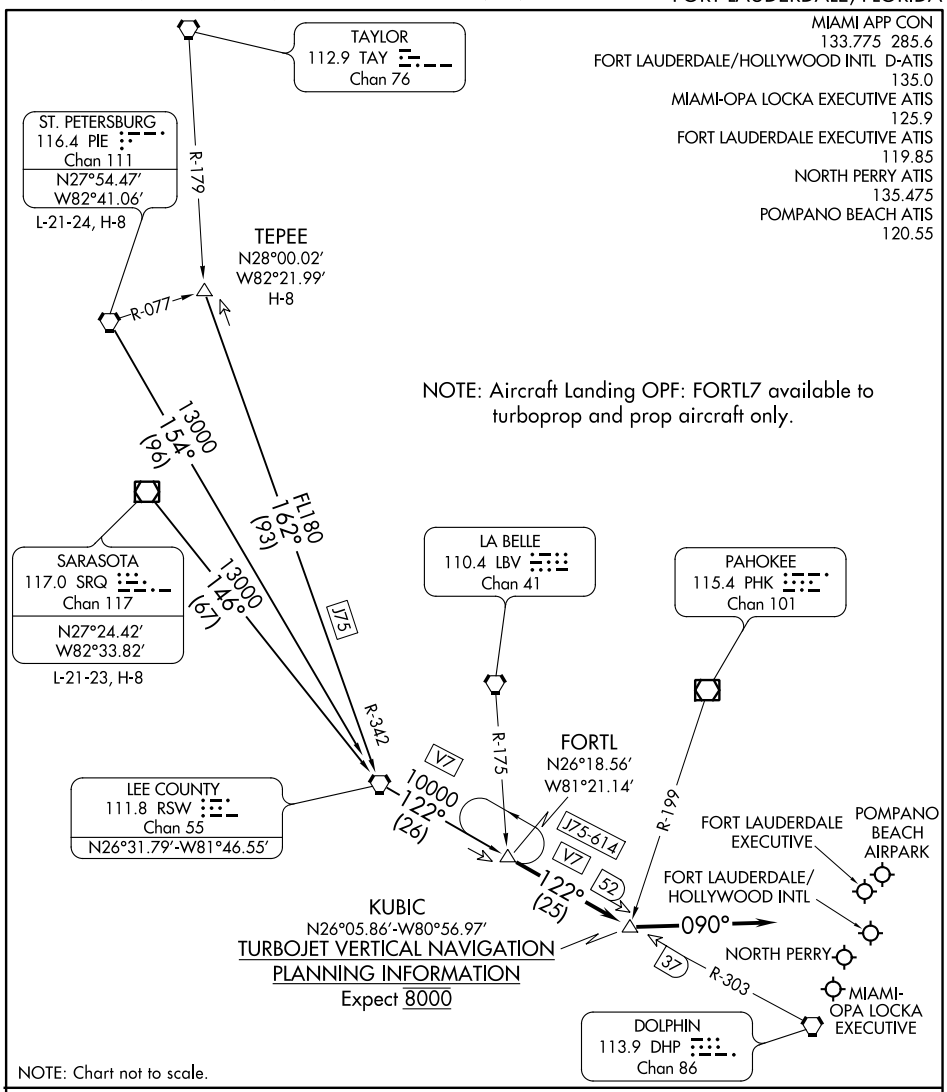
(FISEL.FISEL7) 22JUN17

(FORTL.FORTL7) 17173

FORTL SEVEN ARRIVAL

AL-744 (FAA)

FORT LAUDERDALE, FLORIDA



ARRIVAL ROUTE DESCRIPTION

ST. PETERSBURG TRANSITION (PIE.FORTL7): From over PIE VORTAC on PIE R-154 to RSW VORTAC, then on RSW R-122 to FORTL INT. Thence. . . .
SARASOTA TRANSITION (SRQ.FORTL7): From over SRQ VOR/DME on SRQ R-146 to RSW VORTAC, then on RSW R-122 to FORTL INT. Thence. . . .
TEPEE TRANSITION (TEPEE.FORTL7): From over TEPEE INT on J75 and RSW R-342 to RSW VORTAC, then on RSW R-122 to FORTL INT. Thence. . . .

. . . .From over FORTL INT on RSW R-122 to KUBIC INT, then heading 090°.
Expect RADAR vectors to final approach course.

FORTL SEVEN ARRIVAL

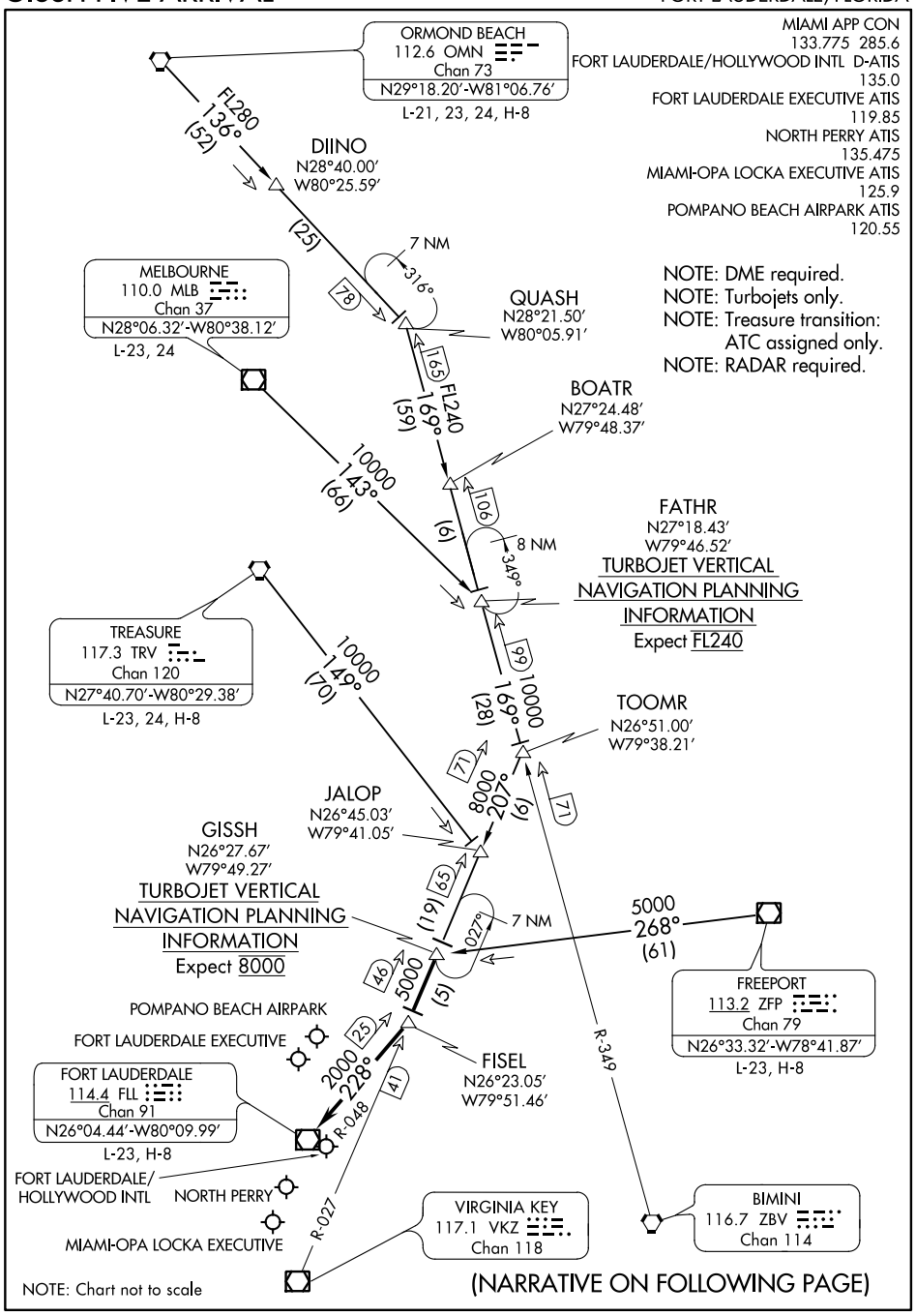
FORT LAUDERDALE, FLORIDA

(FORTL.FORTL7) 22JUN17

SE-3, 29 MAR 2018 to 26 APR 2018

GISSH FIVE ARRIVAL

FORT LAUDERDALE, FLORIDA



(NARRATIVE ON FOLLOWING PAGE)

SE-3, 29 MAR 2018 to 26 APR 2018

ARRIVAL ROUTE DESCRIPTION

FREEPORT TRANSITION (ZFP.GISSH5): From over ZFP VOR/DME on ZFP R-268 to GISSH INT/ZFP 61 DME. Thence . . . .

MELBOURNE TRANSITION (MLB.GISSH5): From over MLB VOR/DME on MLB R-143 to FATHR INT/MLB 66 DME, then on ZBV R-349 to TOOMR INT/ZBV 71 DME, then on VKZ R-027 to GISSH INT/VKZ 46 DME. Thence . . . .

ORMOND BEACH TRANSITION (OMN.GISSH5): From over OMN VORTAC on OMN R-136 to QUASH INT/OMN 78 DME, then on ZBV R-349 to TOOMR INT/ZBV 71 DME, then on VKZ R-027 to GISSH INT/VKZ 46 DME. Thence . . . .

TREASURE TRANSITION (TRV.GISSH5): From over TRV VORTAC on TRV R-149 to JALOP INT/TRV 70 DME, then on VKZ R-027 to GISSH INT/VKZ 46 DME. Thence . . . .

. . . . from over GISSH INT/VKZ 46 DME on VKZ R-027 to FISEL INT/FLL 25 DME, then on FLL VOR/DME R-048 to FLL VOR/DME, expect RADAR vectors to final approach course.

SE-3, 29 MAR 2018 to 26 APR 2018

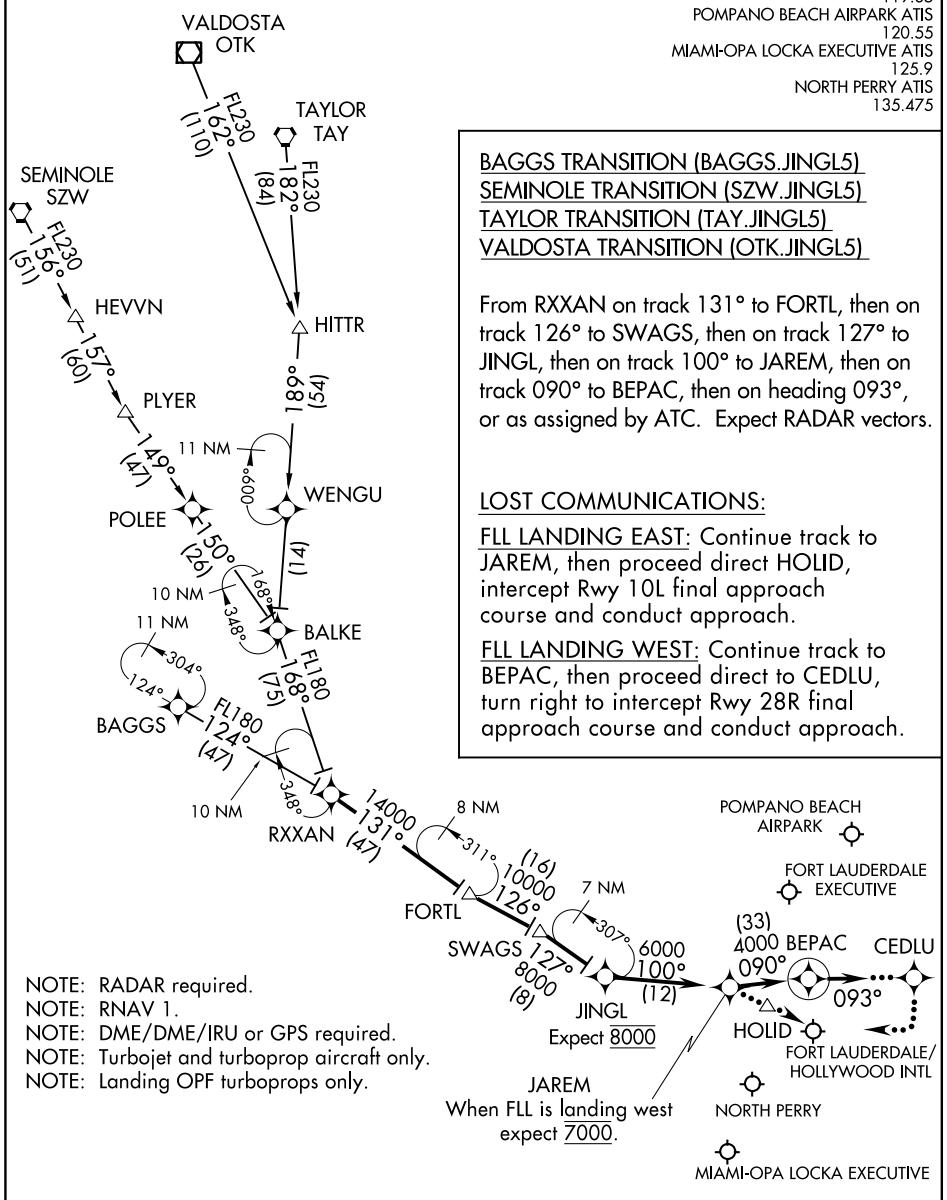
(JINGL.JINGL5) 17173

JINGL FIVE ARRIVAL (RNAV)

AL-744 (FAA)

FORT LAUDERDALE, FLORIDA

MIAMI APP CON
133.775 285.6
FORT LAUDERDALE/HOLLYWOOD INTL D-ATIS
135.0
FORT LAUDERDALE EXECUTIVE ATIS
119.85
POMPANO BEACH AIRPARK ATIS
120.55
MIAMI-OPA LOCKA EXECUTIVE ATIS
125.9
NORTH PERRY ATIS
135.475



BAGGS TRANSITION (BAGGS.JINGL5)
SEMINOLE TRANSITION (SZW.JINGL5)
TAYLOR TRANSITION (TAY.JINGL5)
VALDOSTA TRANSITION (OTK.JINGL5)

From RXXAN on track 131° to FORTL, then on track 126° to SWAGS, then on track 127° to JINGL, then on track 100° to JAREM, then on track 090° to BEPAC, then on heading 093°, or as assigned by ATC. Expect RADAR vectors.

LOST COMMUNICATIONS:

FLL LANDING EAST: Continue track to JAREM, then proceed direct HOLID, intercept Rwy 10L final approach course and conduct approach.

FLL LANDING WEST: Continue track to BEPAC, then proceed direct to CEDLU, turn right to intercept Rwy 28R final approach course and conduct approach.

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet and turboprop aircraft only.
NOTE: Landing OPF turboprops only.

NOTE: Chart not to scale.

JINGL FIVE ARRIVAL (RNAV)

FORT LAUDERDALE, FLORIDA

(JINGL.JINGL5) 22JUN17

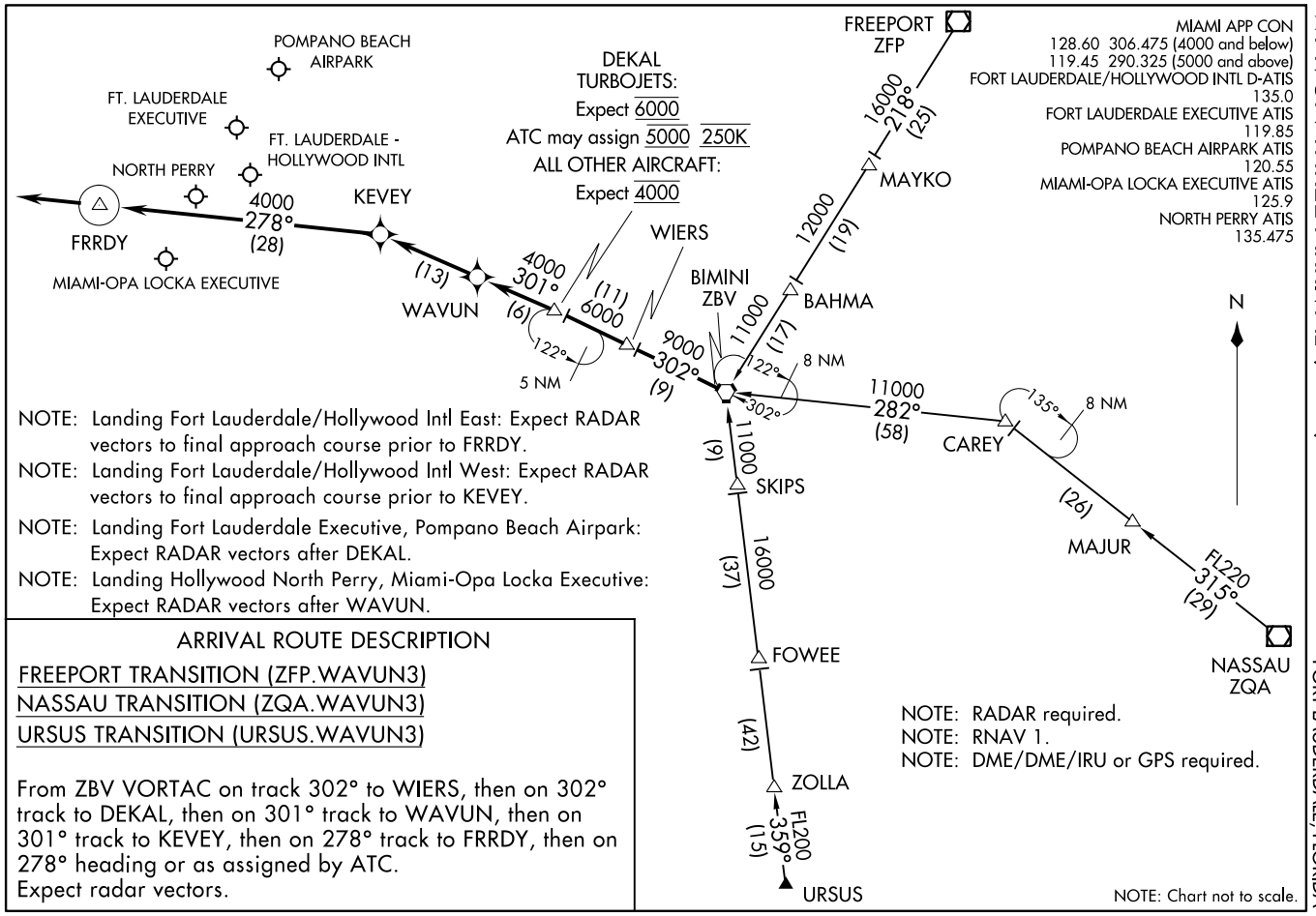
SE-3, 29 MAR 2018 to 26 APR 2018

(WAVUN.WAVUN3) 17173

WAVUN THREE ARRIVAL (RNAV)

AL-744 (FAA)

FORT LAUDERDALE, FLORIDA



NOTE: Landing Fort Lauderdale/Hollywood Intl East: Expect RADAR vectors to final approach course prior to FRRDY.

NOTE: Landing Fort Lauderdale/Hollywood Intl West: Expect RADAR vectors to final approach course prior to KEVEY.

NOTE: Landing Fort Lauderdale Executive, Pompano Beach Airpark: Expect RADAR vectors after DEKAL.

NOTE: Landing Hollywood North Perry, Miami-Opa Locka Executive: Expect RADAR vectors after WAVUN.

ARRIVAL ROUTE DESCRIPTION

FREEPORT TRANSITION (ZFP.WAVUN3)

NASSAU TRANSITION (ZQA.WAVUN3)

URSUS TRANSITION (URSUS.WAVUN3)

From ZBV VORTAC on track 302° to WIERS, then on 302° track to DEKAL, then on 301° track to WAVUN, then on 301° track to KEVEY, then on 278° track to FRRDY, then on 278° heading or as assigned by ATC.
Expect radar vectors.

WAVUN THREE ARRIVAL (RNAV)
(WAVUN.WAVUN3) 22JUN17
FORT LAUDERDALE, FLORIDA