
**RALEIGH ATCT/TRACON
STANDARD OPERATING PROCEDURES**



July 1, 2023

**VIRTUAL WASHINGTON ARTCC
VATUSA**

July 1, 2023

RDU ATCT/TRACON 7110.65C



VIRTUAL AIR TRAFFIC SIMULATION NETWORK
VATUSA DIVISION – WASHINGTON ARTCC

ORDER
RDU ATCT
7110.65C

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SUBJ: RDU 7110.65C

This order provides direction and guidance for the day-to-day operations of the Raleigh Durham Air Traffic Control Tower and TRACON and prescribes air traffic control procedures and phraseology. Controllers are required to be familiar with the provisions of these procedures.

This document is only to be used in a simulated environment. This document shall not be referenced or utilized in live operations in the National Airspace System (NAS). The Washington ARTCC, VATUSA, and VATSIM do not take any responsibility for uses of this order outside of the simulation environment.

John Bartlett
Air Traffic Manager
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RECORD OF CHANGES

Version	SUBJECT	AUTHORIZED BY	DATE ENTERED	DATE REMOVED
7110.65A	Initial	RR	1.3.2017	3.25.2017
7110.65B	- Added ATIS Frequency	RR	3.25.2017	7.1.2023
7110.65C	<ul style="list-style-type: none"> - Removed "VOX Channel." - Added Chapter 2 – Runway Configurations. - IFR initial altitude changed. - Added requirements for VFR departures requesting flight following. - Removed requirement for Class C clearance. - VFR initial altitude specified. - Changed departure gates. - Specify when approving pushbacks is required. - Specified areas of control for local control when split. - Updated departure headings for IFRs. - Added requirements for coordination between local control and TRACON - Updated go around altitude for non-standard headings. - New FIG 5-2-1 to better depict local control area of control when split. 	JB	7.1.2023	--

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CHAPTER 1. POSITIONS

The following callsigns and frequencies shall be used when working positions at RDU ATCT.

Identifier	Position	Frequency
RDU_DEL	Clearance Delivery	120.100
RDU_W_GND	Ground Control West	121.700
RDU_E_GND	Ground Control East	121.900
RDU_W_TWR	Local Control West	119.300
RDU_E_TWR	Local Control East	127.450
RDU_N_DEP	North Departure Radar	132.350
RDU_S_DEP	South Departure Radar	125.300
RDU_E_APP	East Arrival Radar	124.950
RDU_W_APP	West Arrival Radar	128.300
RDU_U_APP	East Final Radar	124.800
RDU_Y_APP	West Final Radar	135.150
KRDU_ATIS	ATIS	123.800

NOTE –

Bold text denotes combined frequency and callsign.

CHAPTER 2. RUNWAY CONFIGURATIONS

2-1. General

- a. Calm wind operation is west, otherwise refer to configurations below and select one most suitable for wind and traffic conditions.
- b. Controllers must be aware of runway 14/32 operations.
- c. Runway 14/32 shall only be available upon pilot request.

2-2. Change in Runway Configuration

- a. The CIC must determine the need for making any runway change. A routine runway change occurs when traffic and/or weather conditions are such that the change can be made with little or no degradation in service. In this instance, departures are allowed to depart from the runway originally assigned. Use the following procedures to complete a routine runway change:
 - 1) Provide RDU TRACON with the last departure's identification, its estimated time of departure, and the departure runway.
 - 2) Once the last aircraft departs, ensure that no other aircraft departs RDU without a release from RDU TRACON.
 - 3) Ensure that departures off the new runway have received the appropriate DP and departure control frequency, as needed.
 - 4) RDU TRACON shall inform the CIC when the sector reconfiguration has been completed.
 - 5) Ensure the ATIS has been updated and reflects the proper status.

2-3. West Ops

- a. Arrival and departure runways are 23R and 23L.
- b. Runway 14/32 available upon request.
 - 1) At time of request, runway selection of 14/32 will be made based on traffic and weather conditions.

2-4. East Ops

- a. Arrival and departure runways are 5R and 5L.
- b. Runway 14/32 available upon request.
 - 1) At time of request, runway selection of 14/32 will be made based on traffic and weather conditions.

CHAPTER 3. CLEARANCE DELIVERY (CD)

3-1. DUTIES.

Clearance Delivery (CD) must:

- a. Formulate and issue IFR and VFR clearances to aircraft departing RDU. This does not include aircraft wishing to conduct pattern work.
- b. Review proposed flight plan information received and verify for accuracy and amend routings and altitudes, as necessary, in accordance with appropriate LOA's.

3-2. IFR DEPARTURE INSTRUCTIONS.

- a. Departure procedures:
 - 1) All IFR departures should be assigned a Standard Instrument Departure (SID) most consistent with their route of flight.
 - 2) Turbojets unable to fly any SID should be assigned fly runway heading, radar vectors to an initial fix and an appropriate altitude.
 - 3) All SID's should be entered into the aircraft's flight strip.
- b. Assign all IFR departures an initial altitude, and if appropriate an "expect final altitude" as follows:
 - 1) Jets - 6,000 feet or requested lower altitude.
 - 2) Turboprops – 3,000 feet.
 - 3) All other aircraft – 2,000 ft.
- c. Issue the appropriate departure frequency. (See below)
- d. Do not amend flight plan routes unless the pilot can accept and fly the new routing.

3-3. VFR DEPARTURE INSTRUCTIONS.

- a. All VFR departures shall include the following if requesting flight following:
 - 1) Destination airport.
 - 2) Aircraft type.
 - 3) Requested altitude.
 - (a) If remaining in the pattern, traffic patten altitude shall be input for cruise altitude.
- b. Assign all VFR departures an initial altitude, and if appropriate an "expect final altitude" as follows:
 - 4) Jets – At or below 6,000 feet or requested lower altitude.
 - 5) Turboprops – At or below 3,000 feet.
 - 6) All other aircraft – At or below 2,000 ft
- e. Departure Frequency
- f. VFR aircraft flying in the pattern should be assigned a squawk code.

3-4. DEPARTURE FREQUENCY ASSIGNMENT.

- a. Assign aircraft the appropriate departure frequency for their appropriate departure gate.

North Departure (132.35)	South Departure (125.3)
AIMHI [intersection]	FITON [intersection]
EPOCH [intersection]	STRMY [intersection]
OXFRD [intersection]	EVIGY [intersection]
LIB [VOR]	EAGER [intersection]
JAYRR [intersection]	
CATAR [intersection]	

CHAPTER 4. GROUND CONTROL (GC)

4-1. GENERAL.

- a. To reduce delays at the runway, sequence aircraft that have the same first fix or direction departure with other aircraft.
- b. The ramp and alleys are non-movement areas. GC cannot approve push backs or startups in this area. GC may only approve push backs or startups when the aircraft is pushing into the movement area.
- c. Taxiways must be kept clear for landing traffic to exit. All taxiway exits must be protected.
- d. Obtain approval from LC prior to assigning aircraft runway 14/32.
- e. GCE is the primary ground control frequency when combined.

4-2. TAXIWAY UTILIZATION.

- a. GCE is authorized to flow traffic westbound on taxiways C and J to hold short of taxiway F.
- b. GCW is authorized to flow traffic eastbound on taxiway D to hold short of taxiway J and taxiway E to hold short of taxiway A.
- c. The Transfer of Control Point (TCP) between GCE and GCW for aircraft utilizing taxiways C and D is taxiway G. Transfer communications of aircraft utilizing taxiway E as the aircraft enters taxiway E, and taxiway J as the aircraft passes J4.
- d. Taxiway C between Runways 32 and 23L, taxiway Z and taxiway connector C1 are controlled by LCW.
- e. Aircraft should be given the runway closest to their parking location, not their direction of flight,

4-3. RUNWAY CROSSINGS.

- a. Blanket runway crossings are NOT authorized at RDU.
- b. All aircraft crossing an active runway must be handed off to LC or have a crossing requested.

4-6. PUSHBACK PROCEDURES

- a. Movement Areas

- I
 - 1) Approve pushbacks onto taxiway A from Terminal 1.
 - 2) Specify tail direction, if nonstandard.
- b. Non-Movement Areas.
 - 1) The following should only be used during events. Normally, aircraft pushing into the alleys or other non-movement areas should be told “pushback at your discretion.”
 - 2) If ground metering is in effect, tell aircraft to advise ready to push. Ground may then provide pushback into the alleys.
 - 3) Provide traffic advisories into or out of non-movement areas.

NOTE –

Information related to aircraft movement in non-movement areas is advisory in nature and does not imply control responsibility.

CHAPTER 5. LOCAL CONTROL (LC)

5-1. AIRSPACE

- a. LC is delegated the airspace within the Raleigh-Durham Class C surface area at and below 2,000 feet and as shown in FIG 5-2-1.
- b. LCE/LCW split is in between the runway 5L/23R and 5R/23L extended centerlines as shown in FIG 5-2-1.

5-2. Local Control East

- a. Primary local control frequency when combined.
- b. Control all traffic within the airspace depicted in FIG 5-2-1. Control all aircraft traffic on runways 5R/23L, 14/32, and taxiways C southeast of runway 5R/23L, taxiway Z, and taxiway connector C1.
- c. Must advise LCW of runway 32 arrivals prior to 3 NM final.
- d. Runway 32 departures:
 - 1) Must obtain release from appropriate departure controller.
 - 2) Coordinate with LCW.
- e. Runway 14 departures:
 - 1) Must obtain release from appropriate departure controller.

5-3. Local Control West

- a. Control all traffic within the airspace depicted in FIG 5-2-1. Control all aircraft traffic on runway 5L/23R.
- b. Runway 14 arrivals:
 - 1) Must coordinate with LCE.

5-4. LINE UP AND WAIT (LUAW) PROCEDURES.

- a. LUAW procedures are authorized at RDU. Such operations are generally viewed as necessary to maintain airport efficiency. Use LUAW when it is expected the aircraft will depart after conflicting traffic is clear of the runway/ intersection. Utilize good operating practices and memory aids as needed when using LUAW procedures.
 - 1) Do not clear an aircraft to land, touch-and-go, option, or low approach on the same runway with an aircraft that has been cleared to line up and wait until the aircraft starts takeoff roll.

5-5. DEPARTURE HEADINGS.

- a. All IFR and VFR departures should be assigned a heading in their takeoff clearance unless they are being left on runway heading, or as depicted on the SID. Refer to the table below:

TBL 5-5-1
Departure Headings

West Flow (RWY 23L/R)		
Aircraft Type	Departure Sector	
	North	South
Jets	RH	210
Turbo Props	RH, 270	210, 180
Others	RH, 270, 290, 310	(210), (180), 160

East Flow (RWY 5L/R)		
Aircraft Type	Departure Sector	
	North	South
Jets	035	RH
Turbo Props	035, 360	RH, 070, 090
Others	035, 360, 320	RH, 070, 090, 110

- b. VFR departures should be treated the same as IFR departures, receiving a proper heading and handoff to departure control.
- c. The following shall be coordinated with the appropriate departure controller:
 - 1) Non-standard headings
 - 2) Non-standard altitudes

5-6. MISSED APPROACHES / GO AROUNDS.

- a. The tower shall verbally inform the appropriate departure controller of a missed approach/go-around. Unless otherwise coordinated, issue the following instructions to missed approach/go-around aircraft for the corresponding runways:
 - 1) A standard departure heading, 4,000 feet for a jet and 2,000 feet for others. Coordinate and handoff to the appropriate departure controller.
 - (a) If using non-standard departure heading, maintain 2,000 feet.

- 2) After a missed approach or go around, all departure releases are suspended until released by RDU TRACON.
- 3) Tower may re-sequence props providing the Tower ensures separation between the go around and all other pertinent traffic and does not affect the sequence of other IFR arrivals sequenced by the TRACON.

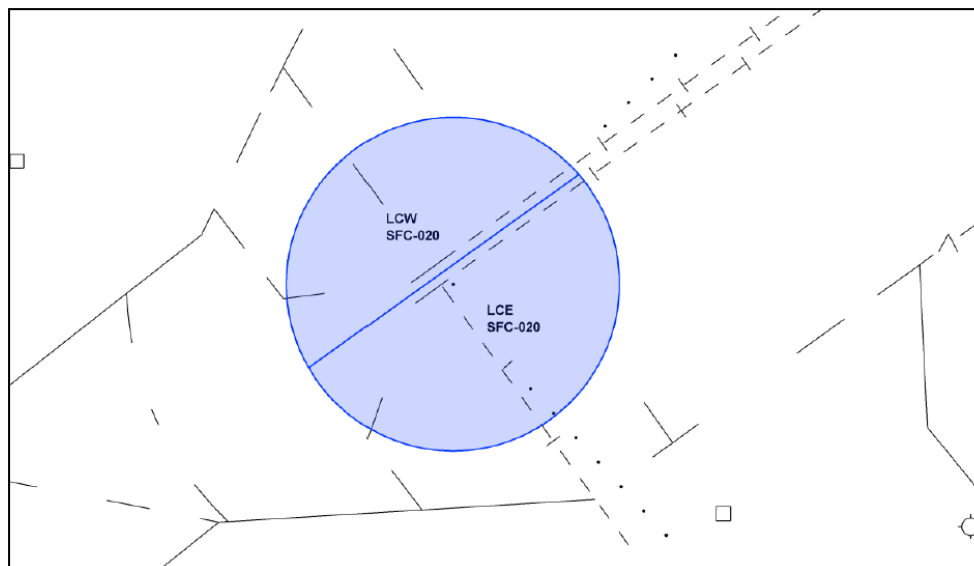
5-7. RUNWAY EXITING PROCEDURES.

- a. Once aircraft are clear of the runway, they shall taxi across all other active runways prior to being handed off to GC. If the aircraft does not need to cross an active runway, they shall be handed off to GC as soon as they are clear of the runway.

5-8. DEPARTURE RELEASES

- a. RDU has blanket IFR releases unless one of the following conditions is met;
 - 1) The aircraft is departing runway 14/32
 - 2) There was previously a go around/missed approach and departures haven't been released.
 - 3) TRACON cancels blanket releases and asks LC to call for release.

FIG 5-2-1
Local Control Airspace



NOTE –

The boundaries in FIG 2-5-1 coincide with the 5NM range ring from RDU.

Chapter 6. TRACON

6-1. DEPARTURES.

- a. Ensure turbo-jet aircraft issued RUNWAY HEADING off runway 23L/R do not turn until 2 DME or leaving 3,000 feet.
- b. Ensure turbo-jet aircraft issued RUNWAY HEADING off Runway 5, do not turn until leaving 3,000 feet.
- c. Ensure turbo-jet departures issued a 210-degree heading are not turned until 7 DME from the runway.
- d. Turbojet departures should be climbed to 12000 or lower filed altitude
- e. Prop or turboprop departures should be climbed to 11000 or lower filed altitude
 - a. Except for prop aircraft routed via the BLUEDEVIL SID, who get 12000 if filed higher

6-2. ARRIVALS (FEEDER)

- a. Ensure arriving turbojet aircraft do not descend below 6,000 feet prior to entering Final airspace. When using a base leg entry to FR airspace, descent below 6,000 feet may be permitted provided:
 - a. Approval is obtained from the appropriate controllers, and
 - b. Descent below 6,000 feet is not commenced prior to 20 flying miles from the airport.
- b. Unless otherwise coordinated with the final controller, assign 6,000 feet to turbojet aircraft handed off to the Final radar position, even if the Arrival function and the departure function are combined.

6-3. ARRIVALS (FINAL)

- a. Unless visual separation is applied or coordination is affected, Final shall conduct parallel ILS approaches as follows:
 - a. RWY 23L - Ensure aircraft intercept the localizer at 3,200 feet inside 10 DME and 4,000 feet outside 10 DME.
 - b. RWY 5R - Ensure aircraft intercept the localizer at 3,100 feet inside 10 DME and 4,000 feet outside 10 DME.
 - c. RWY 23R - Ensure aircraft intercept the localizer at 2,200 feet inside 10 DME and 3,000 feet outside 10 DME.
 - d. RWY 5L - Ensure aircraft intercept the localizer at 2,100 feet inside 10 DME and 3,000 feet outside 10 DME.
- b. Ensure arriving turbo-jet aircraft do not descend below 3,000 feet prior to 10 DME for noise abatement.
- c. Aircraft shall not be vectored for visual approaches when the ceiling is less than 2100 feet.
- d. Authorize simultaneous operations to runways 23L/5R or 23R/5L and 32 as follows:
 - a. Visual approaches may be conducted simultaneously with visual or instrument approaches to another runway provided standard separation is maintained until the aircraft conducting the visual approach have been issued, and the pilot has acknowledged receipt of the visual approach clearance.

- b.** Simultaneous instrument approaches may be conducted provided standard separation is maintained through the duration of the approaches or until visual separation is provided by the aircraft or the tower.
- e.** Ensure vertical separation between opposite base leg traffic until another form of separation is established.

Chapter 7. Prearranged Coordination

7-1. JET RDU ARRIVALS

Arrival Fix	Route	RNAV STAR RWY 5/23	RWY5 Conventional	RWY23 Conventional
ALDAN	SBV or ALDAN STAR	Descend Via	12,000	10,000 250 kts
ARGAL	ARGAL or KAROO STAR	Descend Via	12,000	10,000
BUZZY	BUZZY or MALNR STAR	Descend Via	11,000 250 kts	11,000 or 12,000
BRADE	BRADE or BLOGS STAR	Descend Via	11,000	11,000 250 kts

7-2. PROP RDU ARRIVALS

Arrival Fix	Approved Types	Route	RWY5	RWY23
ALDAN	Turbo Prop Only	SBV STAR	8,000	8,000
ARGAL	Turbo Prop Only	ARGAL STAR	8,000	8,000
BUZZY	Props	BUZZY STAR	Transitioned to FAY approach for descent	
BRADE	Props	BRADE STAR	Transitioned to GSB approach for descent	
ALDAN ATA	Piston	Direct RDU	At or below 7,000	
LVL DTA	Piston	Direct RDU	At or below 7,000	
ARGAL ATA	Piston	Direct RDU	At or below 7,000	4,000
TYI DTA	Piston	Direct RDU	At or below 7,000	
FAY DTA	Piston	Direct RDU	Transitioned to FAY approach for descent	

7-3. RDU SATTELITE ARRIVALS

- a. Aircraft landing at RDU satellites must be cleared via either
 - a. An arrival fix, then direct destination at or above 8000
 - b. Direct to destination at or below 7000

7-4. DEPARTURES

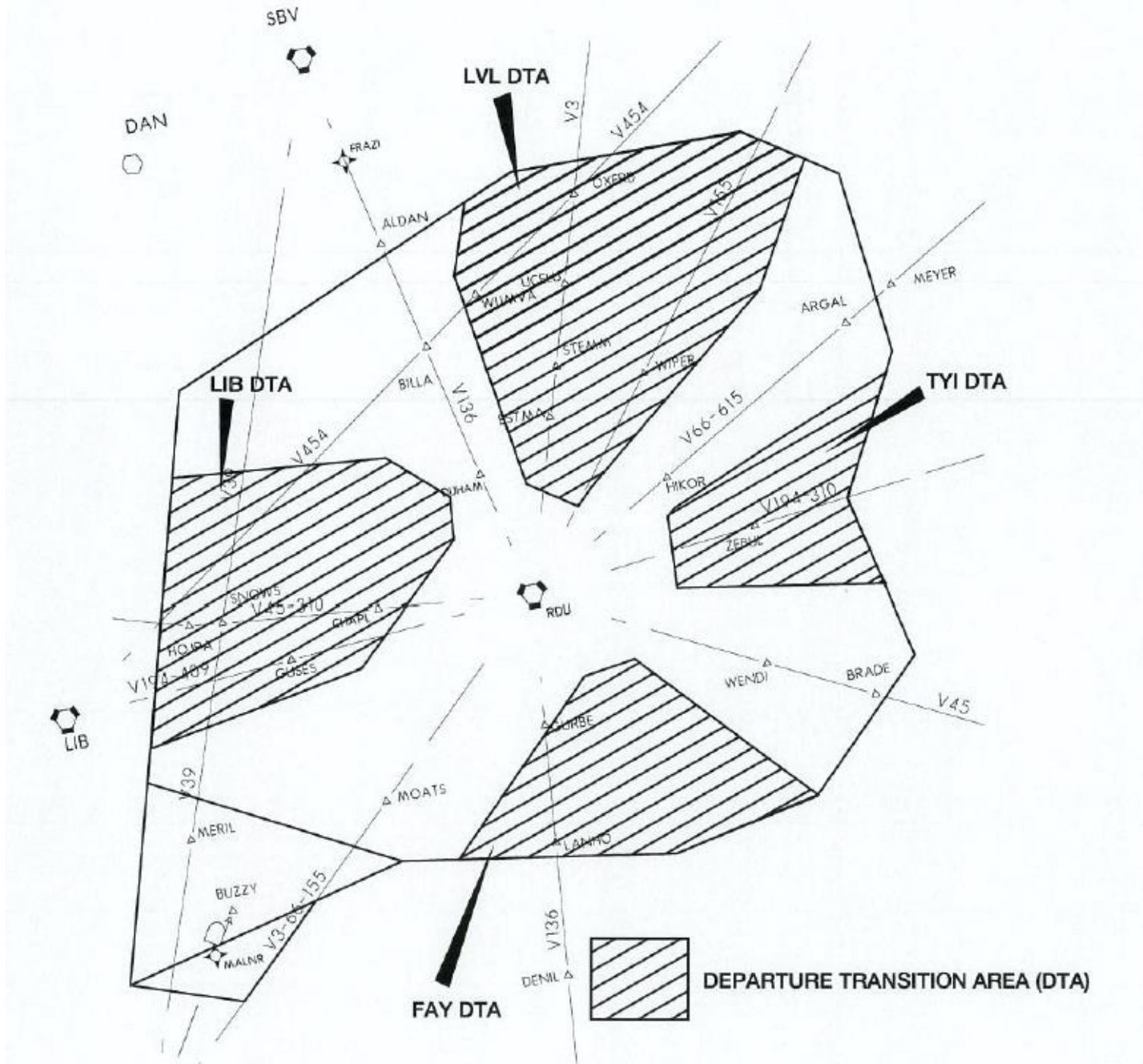
- a. Aircraft departing RDU must be routed via a DTA depicted in appendix 1.
- b. The LWOOD SID may only be used for the following destinations unless coordinated
 - a. AGC, CLE, CMH, DTW, ERI, IND, LBE, MDW, MSP, PIT
- c. Aircraft departing RDU and RDU satellites landing at PGV may be cleared direct at or below 9000

d. A		d	
SID	Direct to fix	SID	Direct to fix
BEXGO SID	Any fix or waypoint	OXFRD SID	PEAVY or OXFRD
HOOKZ SID	FITON	ROZBO SID	EAGER
HURIC SID	STRMY or HURIC	SHPRD SID	CATAR
LWOOD SID	FOCAL		

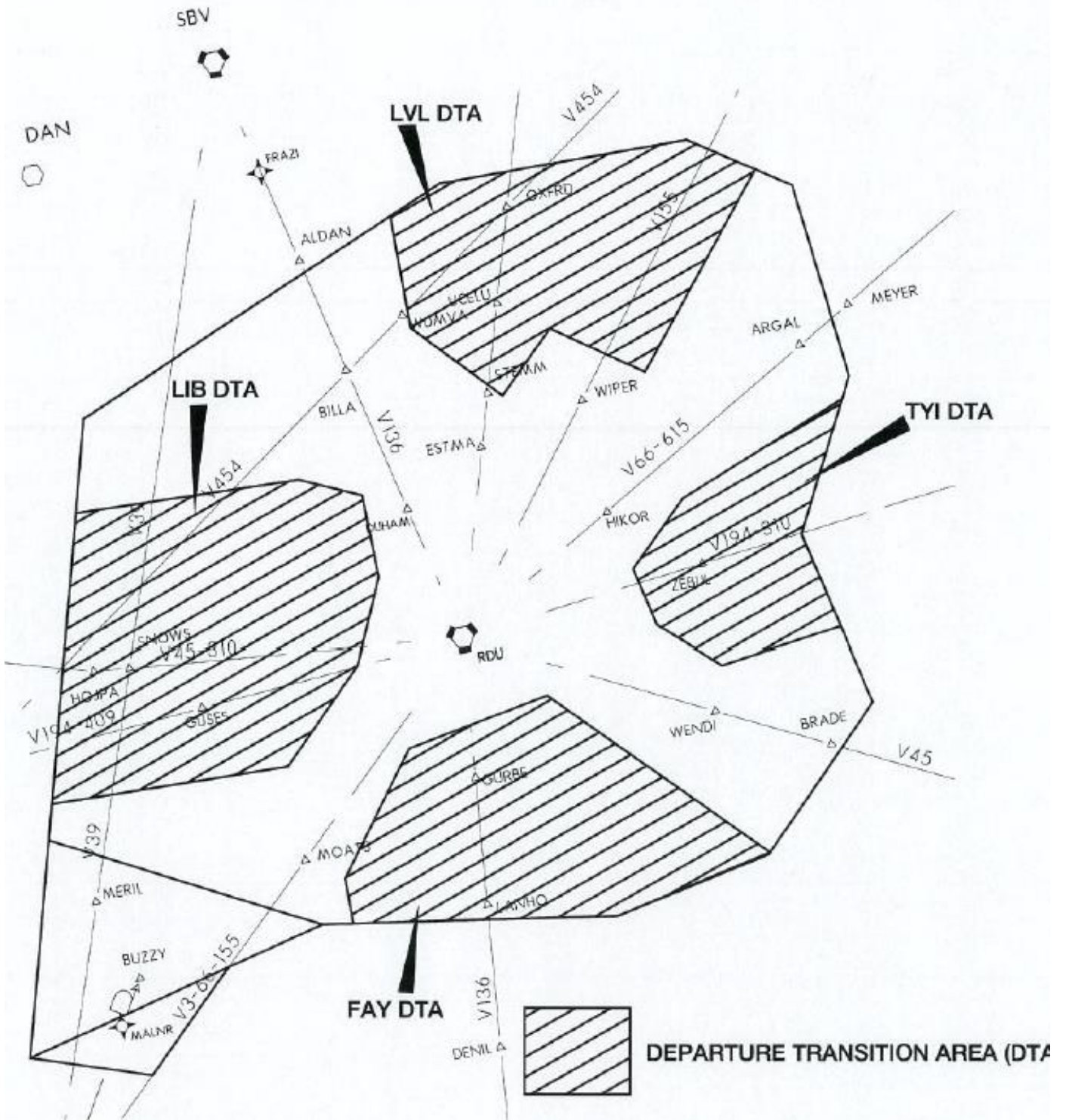
- e. Departures to RWI and W03 must be assigned 5000 and may be cleared direct destination
- f. RWI and W03 departures requesting 12000 or lower will be cleared direct RDU VORTAC as filed climbing to 10000 or lower requested altitude

APPENDIX 1. DEPARTURE TRANSITION AREAS (DTA)

Runway 5 Operation



Runway 23 Operation

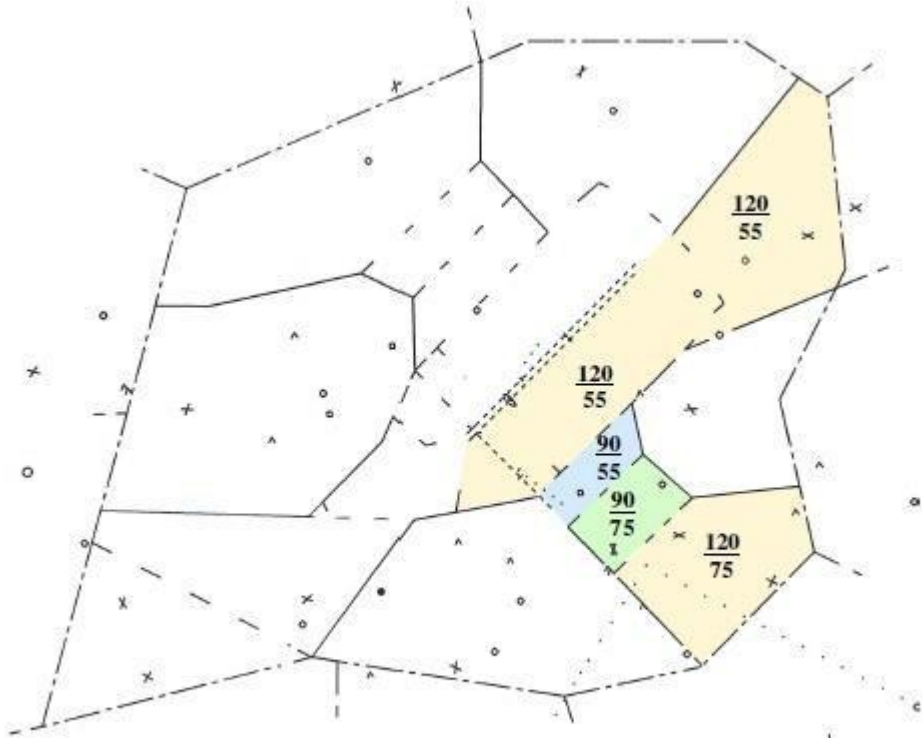


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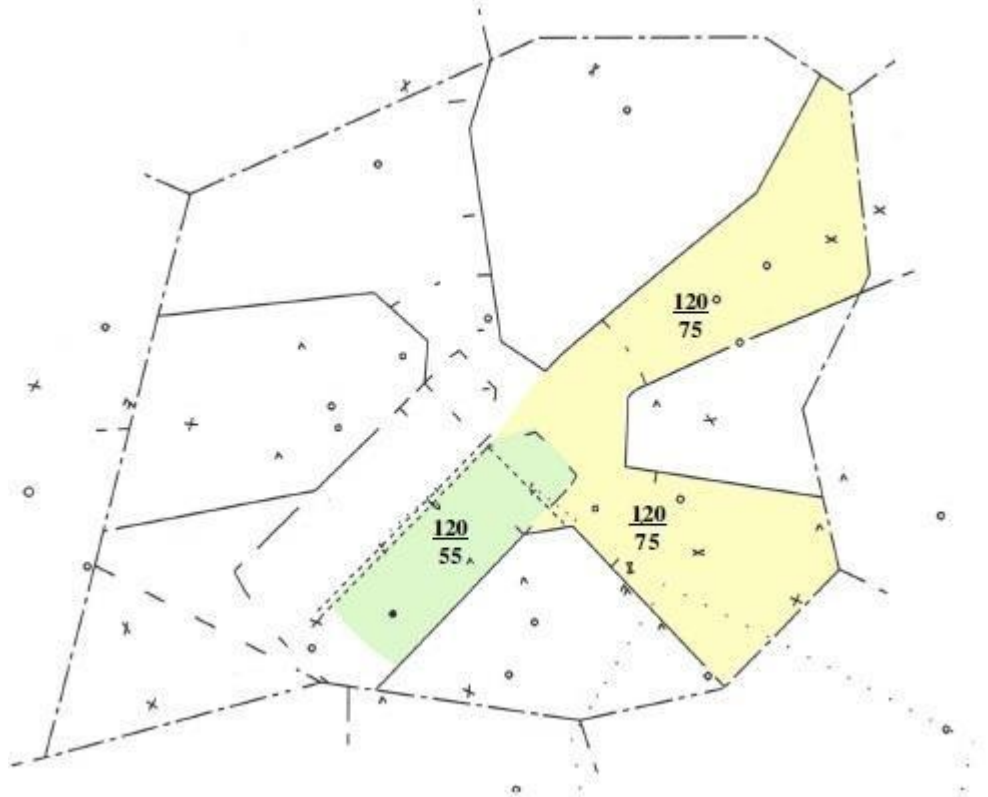
APPENDIX 2. RDU TRACON AIRSPACE

East Arrival Radar

Runway 23 Operations



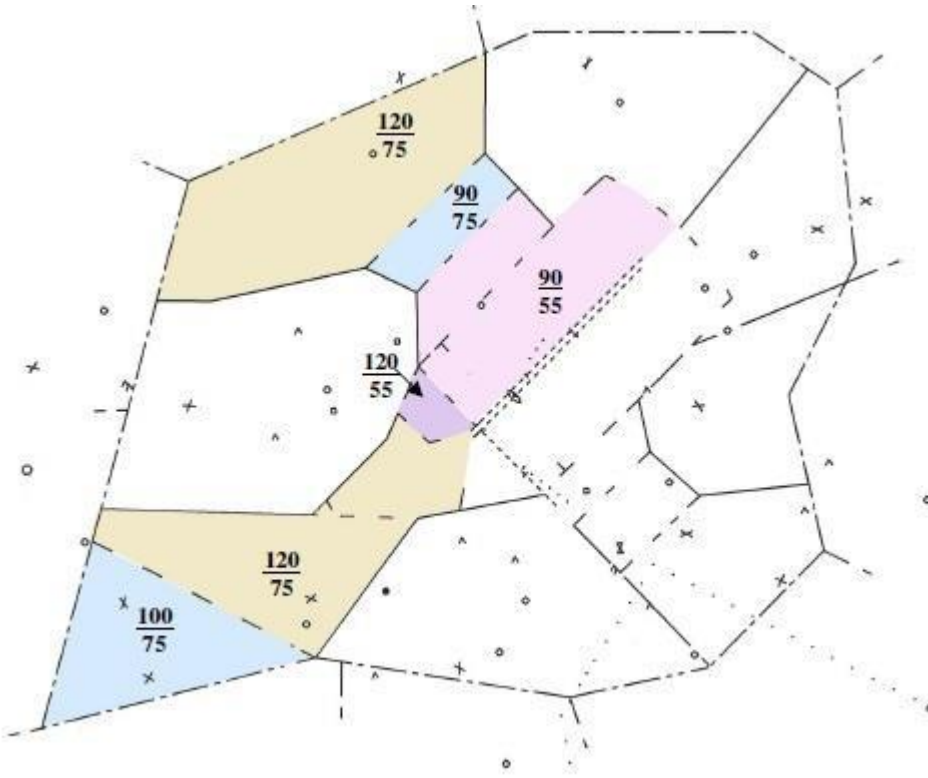
Runway 5 Operations



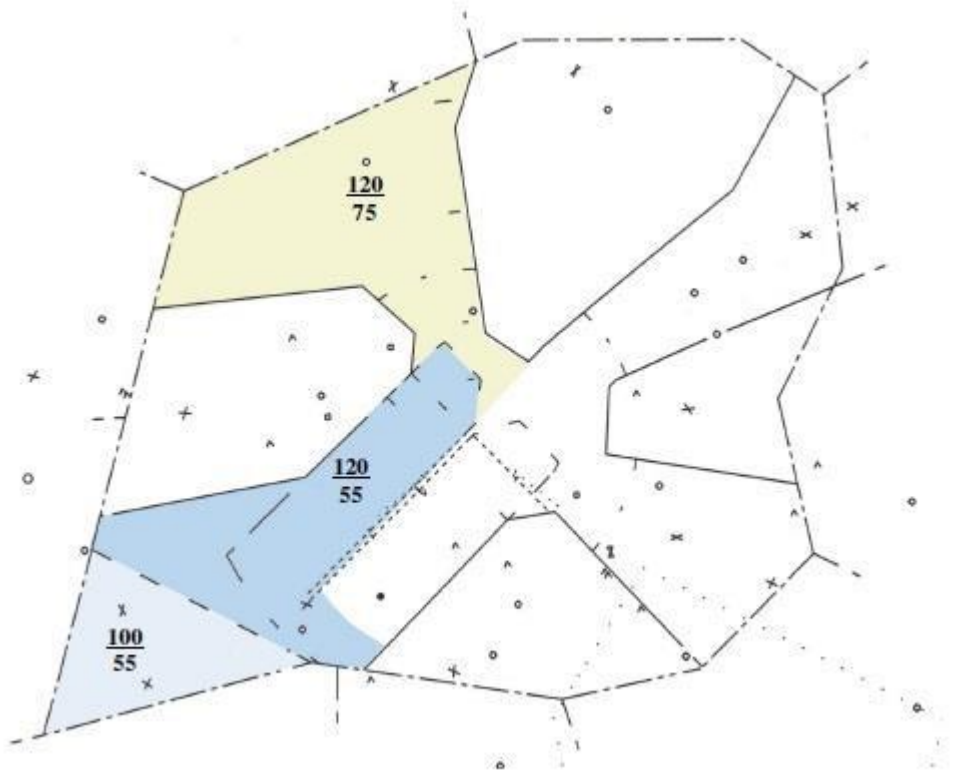
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West Arrival Radar

Runway 23 Operation



Runway 5 Operation

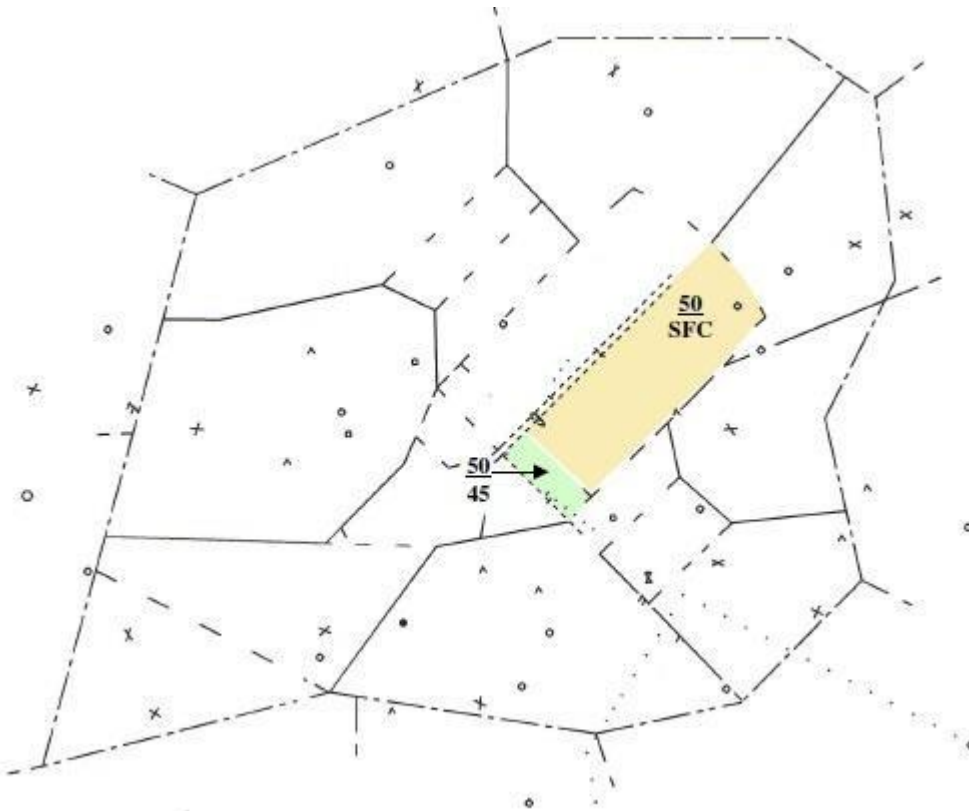


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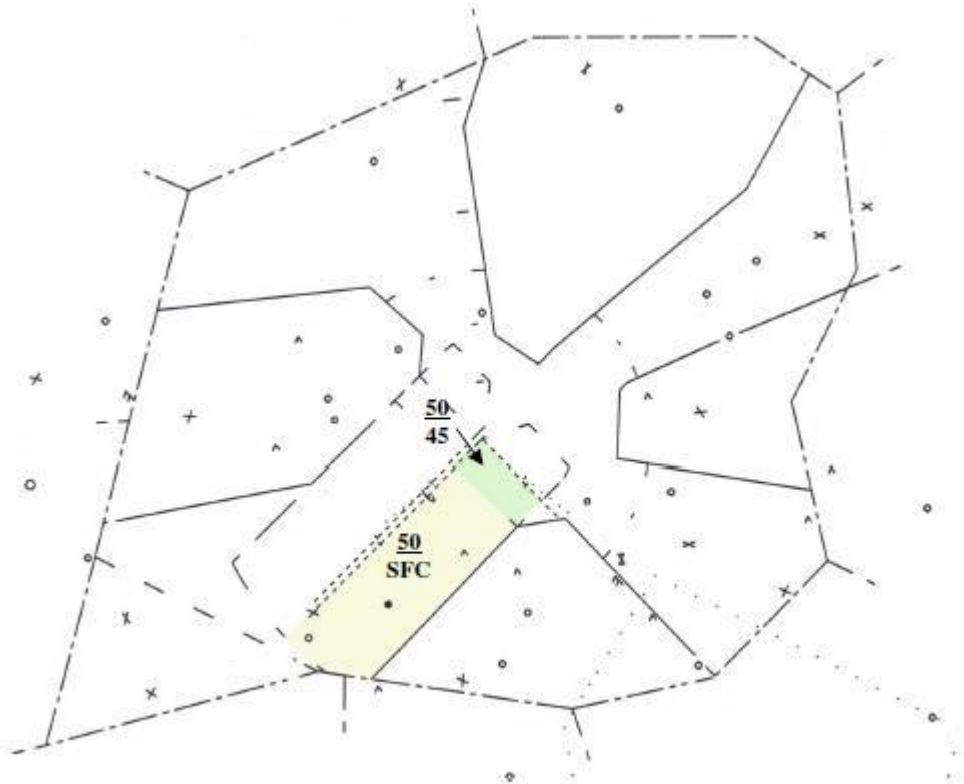
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East Final Radar

Runway 23 Operation



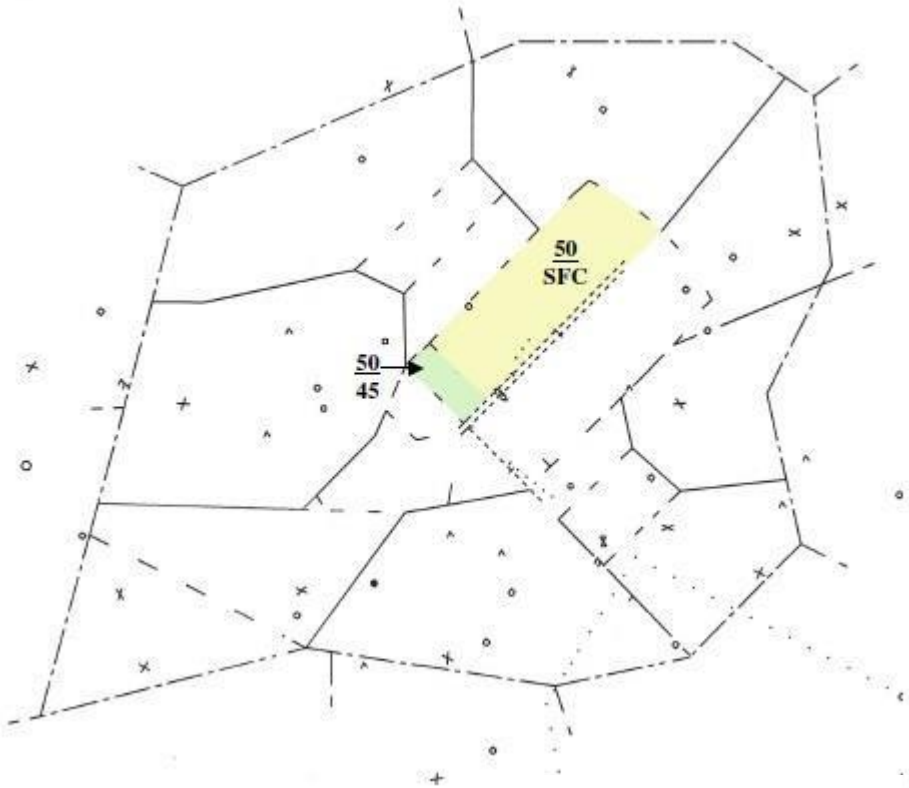
Runway 5 Operation



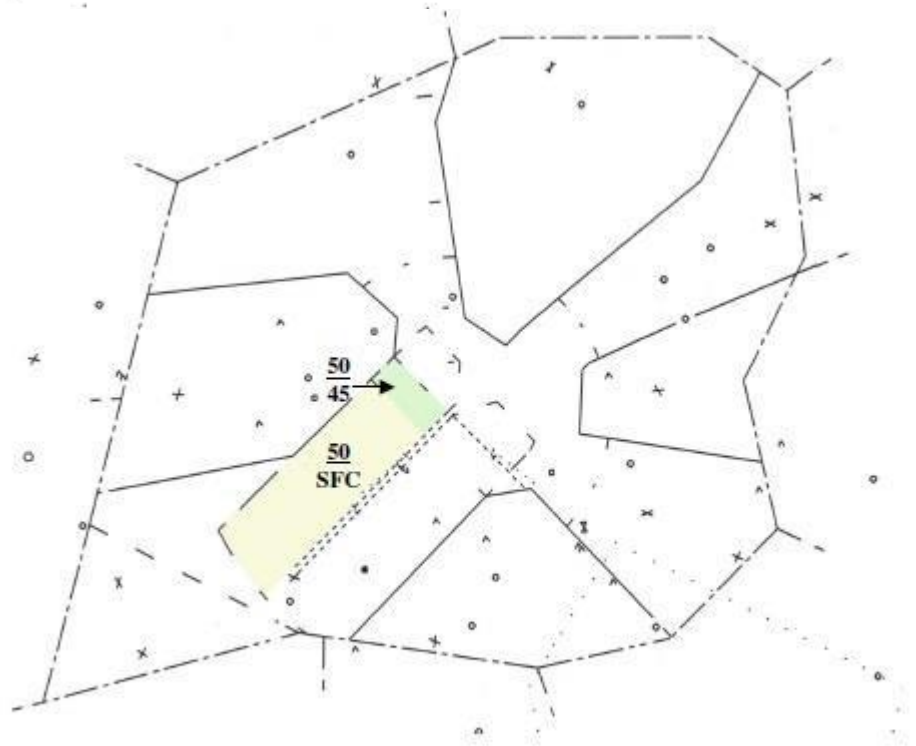
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West Final Radar

Runway 23 Operation

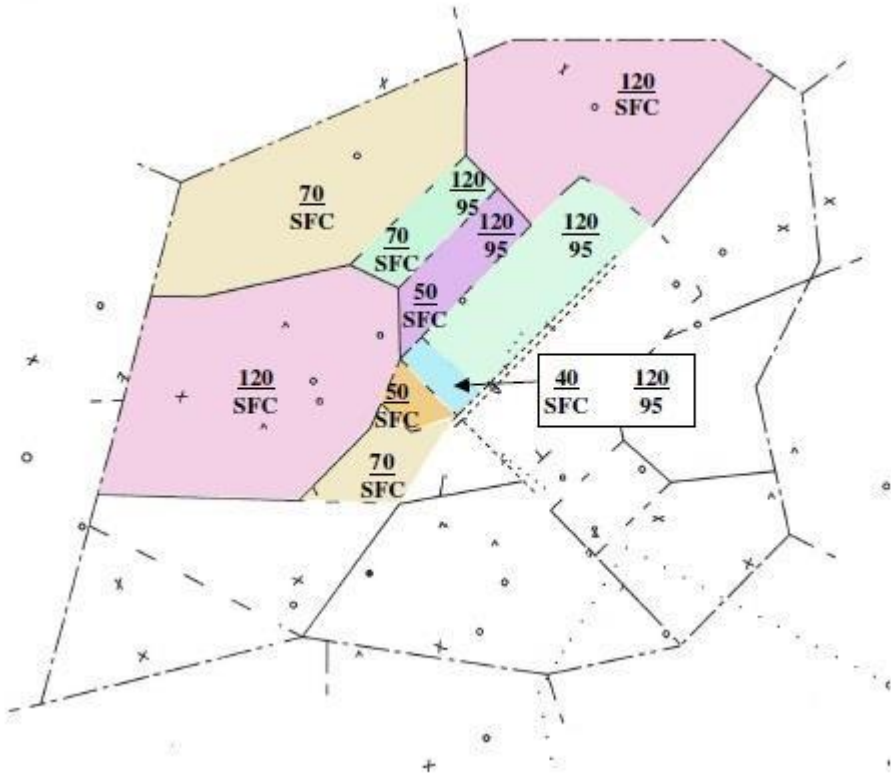


Runway 5 Operation

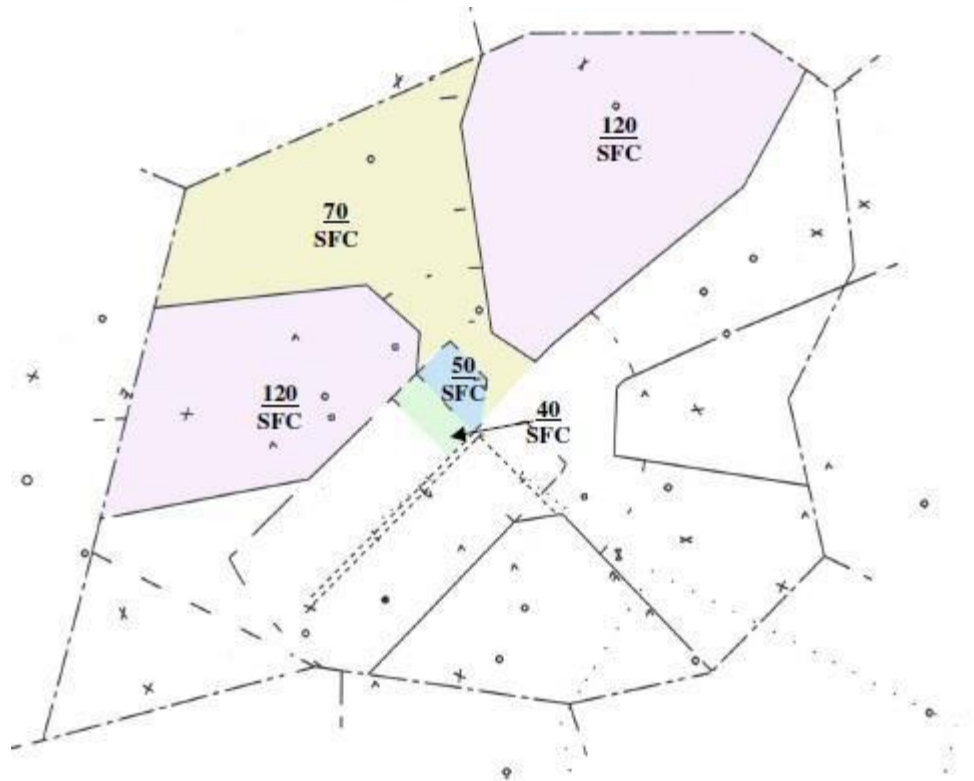


North Departure Radar

Runway 23 Operation

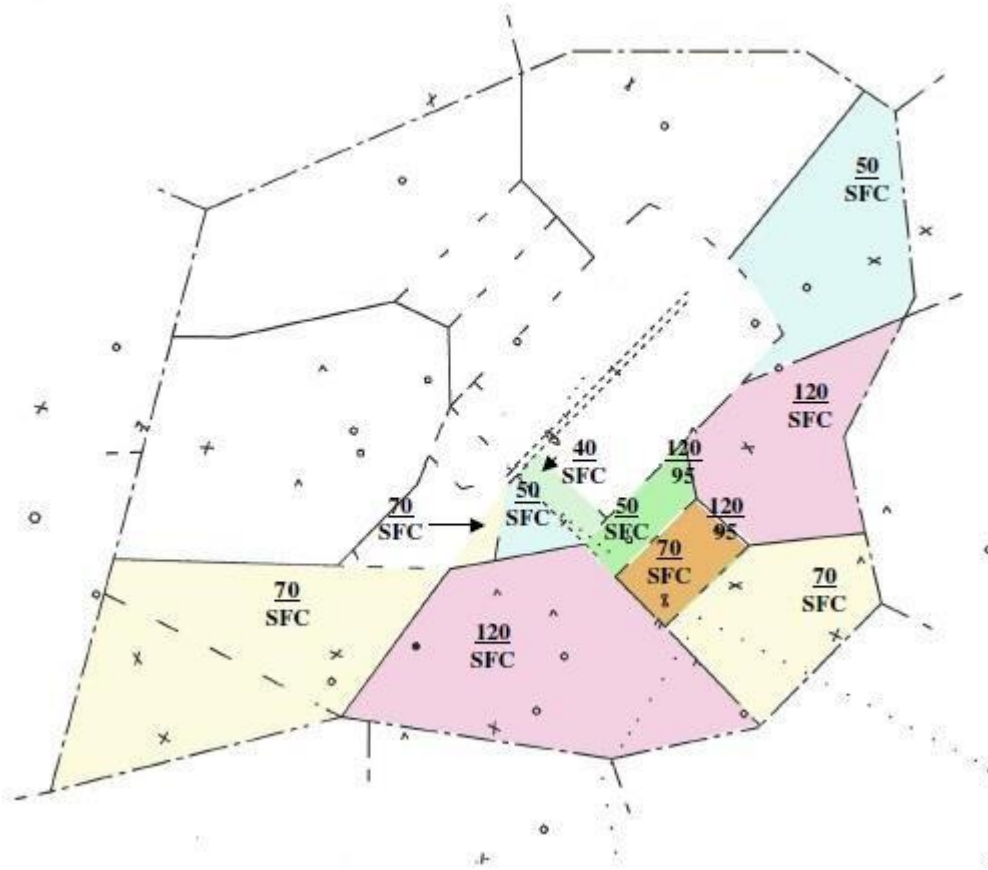


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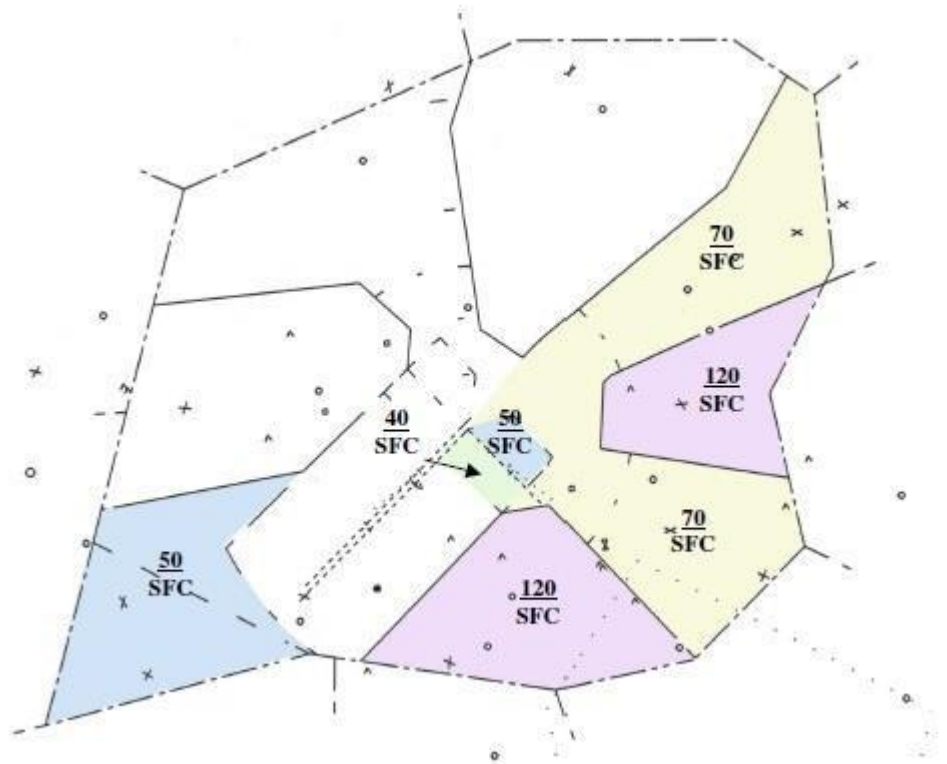


South Departure Radar

Runway 23 Operation



Runway 5 Operation



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