

BIRMINGHAM TOWER STANDARD OPERATING PROCEDURES



DECEMBER 1, 2021

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Chapter 1. GENERAL

Section 1. GENERAL

1-1-1. PURPOSE

This Order provides procedures for maintaining a safe and efficient operation. Establishes jurisdictional boundaries for each operational position/sector, and is supplemental to other pertinent directives.

1-1-2. CANCELLATION

This Order cancels the Birmingham section of the Minor Field Quick Reference.

Section 2. DUTY FAMILIARIZATION AND TRANSFER OF POSITION

1-2-1. DUTY FAMILIARIZATION

Essential operational information is contained in the Facility Directives and Announcements Forum.

1-2-2. POSITION RELIEF BRIEFING

- a. All positions require position familiarization prior to assuming the position.
- b. The relieved controller will remain plugged in and monitor the reliving controller for at least two minutes after being relieved of the position.
- c. All control personnel will use a checklist for transfer of control briefing contained in Appendix C. Emphasis to be placed on verbally stating the runway status information for Birmingham and Tuscaloosa (when the Tuscaloosa Tower is open).
- d. Final Radar (FR) will receive a briefing from both NR and SR if both are open.

Section 3. STRIP MARKING PROCEDURES

1-5-1. FLIGHT PROGRESS STRIP

1	4	5	8	12	14	15	16
2		6	9		17	18	19
3		7	10		20	21	22
			11	13			

1-5-2. CLEARANCE DELIVERY STRIP MARKING

Clearance Delivery shall be responsible for receiving the initial flight strip for departing aircraft and pass to the appropriate control position.

Block	Information Recorded
11	“FF” if a VFR departure is requesting Flight Following
12	Filed or amended route in accordance with preferred routings, LOAs, or coordinated TMU or SWAP routings
13	<p>Clearance routing type when routing has been amended.</p> <p>++FRC++ - Full Route Clearance</p> <p>++FRC XXXXX++ - Full Route Clearance to a particular routing waypoint. Substitute XXXXX with the appropriate fix.</p> <p>++EDCT YYYYYz++ - EDCT Time when issued by ZTL</p>
14	Letter of reported ATIS
17	“X” to indicate a correct clearance read back
20	Departure control position ID (S or N)
21	“HOLD” when a departure release is required

1-5-3. GROUND CONTROL STRIP MARKING

Block	Information Recorded
14	Letter of reported ATIS
18	The Taxiway designator for intersection departures

1-5-4. LOCAL CONTROL STRIP MARKING

Block	Information Recorded
21	Assigned departure heading other than runway heading (refer to Local SOP)
22	Departure time. Minutes only
16	“*” When a departure release has been obtained for aircraft with a EDCT time in box 13

Chapter 2. CAB

Section 1. CAB GENERAL

2-1-1. CAB POSITIONS

Frequency	Position
119.9	Local Control One (LC)
118.25	Local Control Two (L2)
121.7	Ground Control (GC)
125.67	Clearance Delivery (CD)

Section 2. CLEARANCE DELIVERY (CD)

2-2-1. RESPONSIBILITIES

- Process flight plan information.
- Assist tower team in meeting situational objectives.
- Observe and report weather information.
- Issue clearances and ensure accuracy of pilot readback.
- Record and transmit the Automated Terminal Information Service (ATIS).

2-2-2. CLEARANCES

- All VFR/IFR aircraft departing KBHM must be assigned the appropriate frequency based on the radar sector they will enter.

NOTE– Aircraft filed direct MEI below 10,000 feet must be given to NR frequency.

- IFR departures must be issued:
 - Birmingham (BHM) SID, maintain 4,000; or
 - Maintain 4,000, runway heading, and expect filed altitude 10 minutes after departure.
- VFR departures.
 - Assign VFR fixed-wing aircraft departing BHM to fly runway heading and VFR helicopters to fly tower assigned heading.
 - Assign VFR aircraft to maintain VFR at or below 3,500 feet.
 - All VFR aircraft requesting Flight Following at or above 3,000 feet, regardless of destination and intentions, must be issued N or S departure frequency.
 - VFR helicopters requesting below 3,000 feet must be placed on a T position symbol and given the LC frequency.

2-2-3. TROUBLE SPOTS

- Failure to issue appropriate frequency in conjunction with the current configuration of radar position.
- Failure to ensure flight progress entries are accurate.
- Failure to recognize FRCs, EDCTs, and inappropriate altitude.
- ATIS information incorrect, incomplete, or recorded too fast.

- e. ATIS code not disseminated.
- f. Lack of teamwork.

Section 3. GROUND CONTROL (GC)

2-3-1. AREA OF JURISDICTION

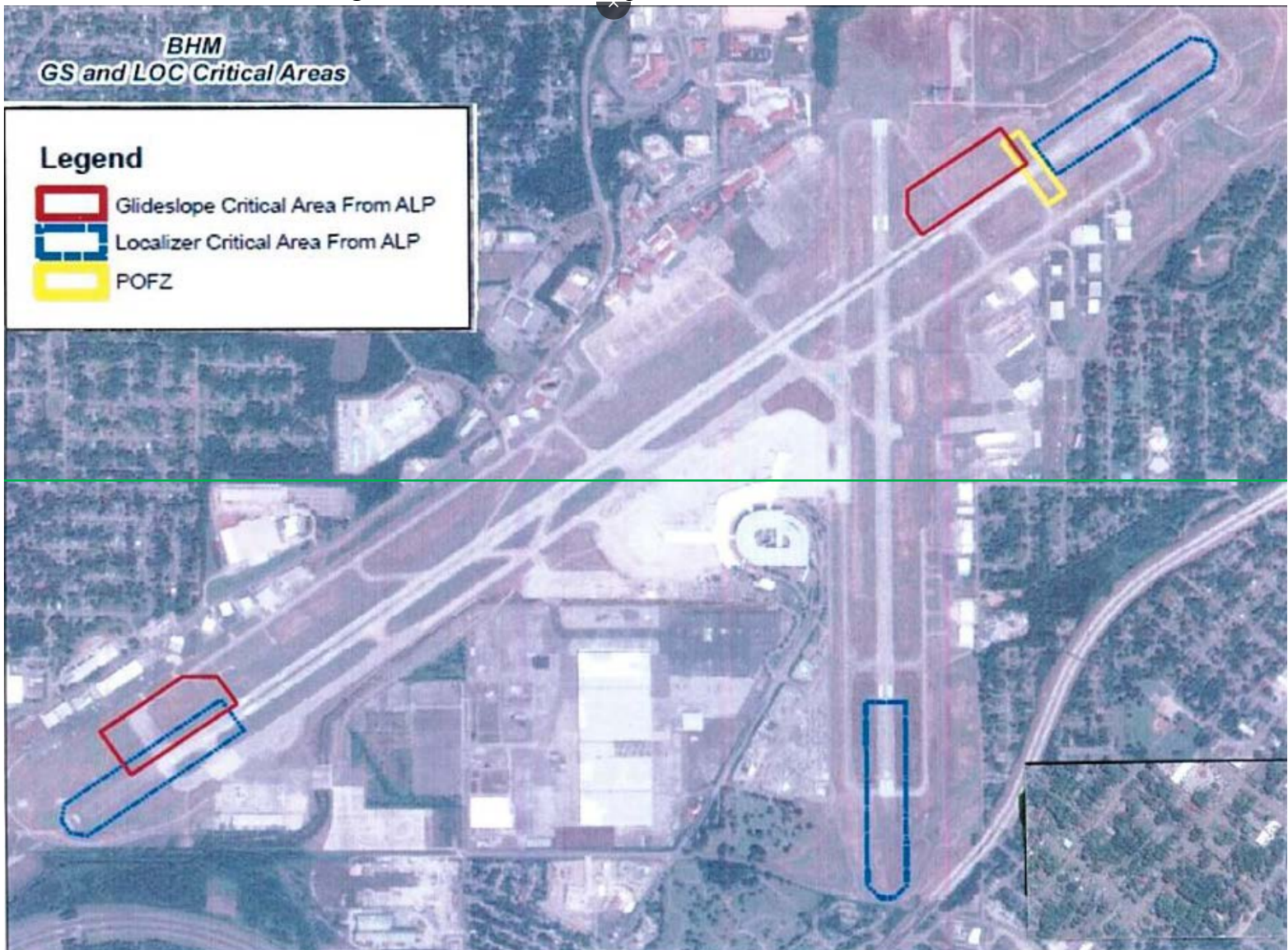
All airport movement areas, except the runways.

2-3-2. POSITION PROCEDURES

GC will:

- a. Control all traffic on designated movement areas except active runways. GC will not authorize a vehicle/aircraft to operate beyond the "Hold Lines" of an active runway without specific approval from LC.
- b. Adhere to all ILS Critical Areas and Precision Obstacle Free Zones (in accordance with FAAO 7110.65) for all inbound/outbound taxiing aircraft (Figure 2-3-1).

Figure 2-3-1. BHM Glideslope and Localizer Critical Areas



- c. Taxi departing aircraft to the active runway most advantageous for the overall operation.
- d. Handle requests for opposite direction departures on an individual basis. Coordinate opposite direction departures with LC. Coordinate with the radar sector that will provide service to the aircraft. Remember opposite direction departures are only for operational necessity or emergencies, and the pilot must state "it is" or words to that effect. Controllers must never solicit opposite direction operations. Enter assigned departure runway or intersection in block
- e. Ensure receipt of the latest ATIS or weather information by all departing aircraft.
- f. Ensure only authorized ground traffic is permitted to taxi through the Air National Guard ramp.

2-3-3. TROUBLE SPOTS

- a. Not specifying crossing points.
- b. Distracting LC from higher priority duties.
- c. Not scanning the cab environment.
- d. Not considering approach control or LC/s workload/traffic for runway assignments.
- e. Wake turbulence effects on small aircraft taxiing behind large, especially at run-up area for Runway 24.
- f. Allowing aircraft requiring extended run-ups or EDCTs to block access to the runway.
- g. Similar sounding runways (6 and 36).

Section 4. LOCAL CONTROL (LC)

2-4-1. POSITION PROCEDURES

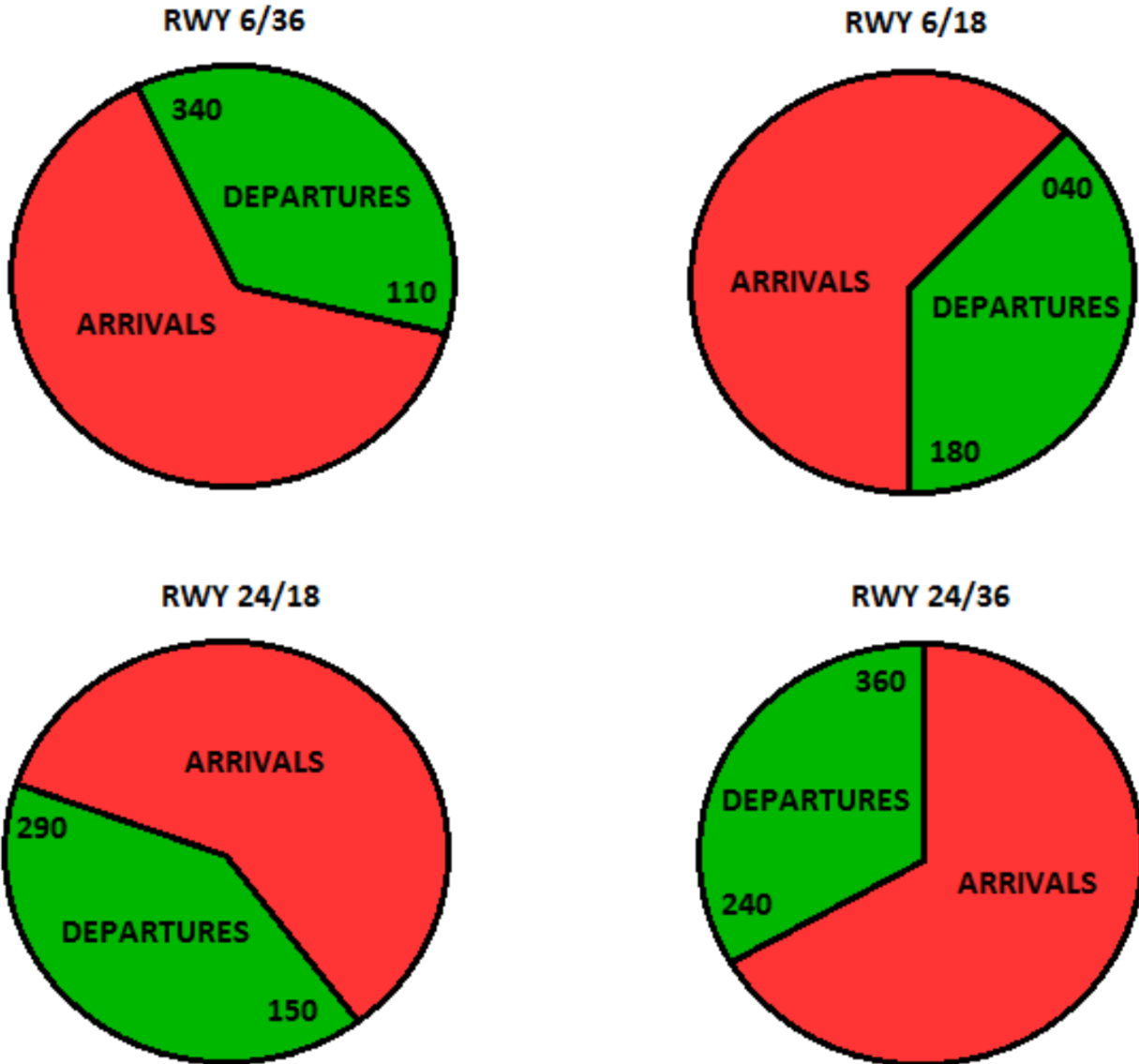
- a. Coordinate active runway changing with CD, GC, and the TRACON.
- b. Local Control must Quick Look North Radar, South Radar, and Final Radar.
- c. Have automatic release of departures off the active runways unless specifically coordinated otherwise.
- d. Be responsible for the separation of aircraft within the Tower's airspace. Local Control must remember that the Departure controller has control on contact and may turn aircraft up to and including a heading on course unless previously coordinated restricting control for turns. **NOTE:** *Aircraft conducting multiple practice approaches may be turned on either downwind requiring LC to separate subsequent departures from them.*

2-4-2. DEPARTURE HEADINGS

- e. Assign runway heading to all practice and missed approach aircraft. Assign 4,000 feet to all IFR and instruct all VFR aircraft to maintain VFR at or below 3,500 feet.
- f. In box 21 of the flight progress strip, enter:
 - i. Assigned heading if not runway heading.
 - ii. Assigned heading with an asterisk if that heading is to be used for separation. LC is responsible for separation of subsequent departures in Tower airspace.
 - iii. "OC" if given on course.
- g. Ensure all departures are established on a heading to enter the appropriate sector's airspace in accordance with the following runway configurations prior to communications changeover:
NOTE: *These headings do not account for winds or traffic.*
 - i. Runway 6/36 or Runway 6 during single runway operations - Heading 340–110
 - ii. Runway 6/18 - Heading 040–180
 - iii. Runway 24/18 or Runway 24 during single runway operations - Heading 150–290
 - iv. Runway 24/36 - Heading 240–360
- h. IFR helicopters are to be treated as if they were a small fixed wing IFR aircraft in all situations. Separation includes IFR vs VFR, and IFR vs IFR in all areas including arrival/arrival, departure/arrival, and departure/departure. In-trail wake turbulence requirements must also be met. IFR separation must exist between the helicopter and any other VFR aircraft regardless of type (fixed wing or helicopter). They will also be separated from other VFR aircraft regardless of type (fixed wing or helicopter) using the appropriate separation minima. They will also be separated from obstructions and must meet MVA altitude requirements just like a small fixed wing IFR aircraft.
- i. IFR helicopters departing Birmingham must be established on a heading in the departure area for the respective runway pairing in use at the time.
- j. IFR helicopters will be assigned 4,000 feet unless otherwise coordinated.

- k. Assign heading that ensure departures will maintain the appropriate separation minima from the arrival areas depicted in figure 2-4-1

Figure 2-4-1. Arrival and Departure Areas



2-4-3. PRACTICE APPROACHES

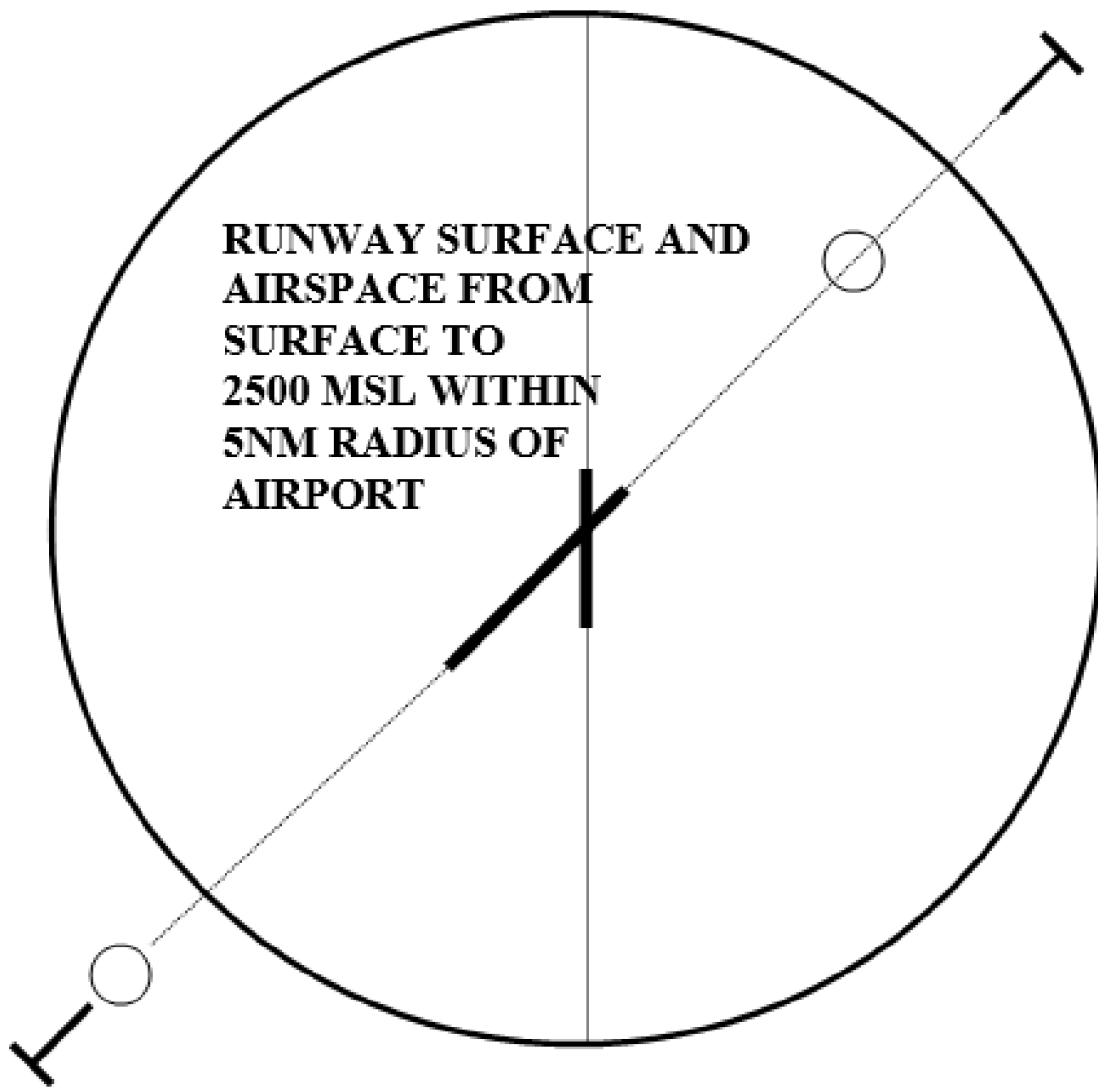
- a. Local Control is responsible for turning aircraft conducting practice approaches on runway 18/36 into the appropriate sector.
- l. Unless otherwise restricted by the controller, Local Control may coordinate low/missed approaches either verbally or by using the scratchpad of the aircraft STARS data block. The following procedures may be used when utilizing the STARS scratchpad in lieu of verbal coordination for aircraft executing a low/missed approach and returning to radar:
 - i. Scratchpad entries must be an "H" following by the first two digits of the assigned heading (i.e., H35 for heading 350). Local Control will only assign heading within the departure areas for the runway in use.
 - ii. Information may be passed on tracked data blocks by either verbal coordination or automated handoff.

- iii. When the receiving controller accepts the handoff, LC cannot deviate from the scratchpad entry unless verbally coordinated.

2-4-4. DELEGATED AIRSPACE

All runway surface areas and airspace within a 5 mile radius of the Birmingham Airport, up to 2,500 feet. See figure 2-4-2.

Figure 2-4-2. Local Control Airspace

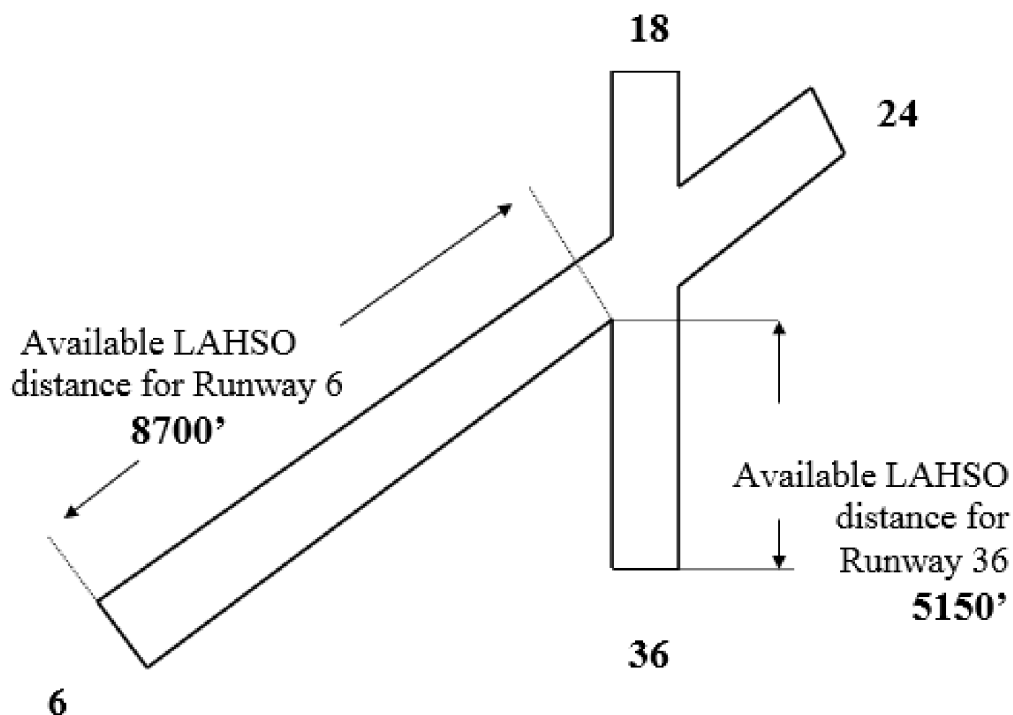


2-4-5. LAND AND HOLD SHORT OPERATIONS (LAHSO)

LAHSO refers to aircraft landing on a specified runway and stopping short of the full length of the runway, at a predetermined point. See figure 2-4-3 for available LAHSO distances for Runway 6 and 36. Only those aircraft identified in TBL 1 with a LAHSO Group number are authorized for LAHSO. All participating group 6 and smaller aircraft may land on Runway 36 and hold short of Runway 06/24. All participating aircraft in all groups may land and hold short of Runway 18/36. LAHSO is not authorized for aircraft landing Runway 24 or Runway 18. All conditions in FAA Order 7110.118 must be met.

NOTE: Air Carrier involved LAHSO is only authorized for arrival/arrival operations (not arrival/departure).

Figure 2-4-3. Available LAHSO Distances



2-4-6. LINE UP AND WAIT (LUAW)

LUAW is not authorized.

2-4-7. TROUBLE SPOTS

- When authorizing the crossing of a runway, ensure your communication is clear, concise, and understood. When authorizing a runway crossing, know exactly where GC is requesting to cross. (Approach end, Taxiway N, etc.)
- Use caution during missed approaches to Runway 6 and 24, reference pattern traffic on Runway 18 or 36.
- Use caution during missed approaches to Runway 18 reference pattern traffic to and departures from Runway 6 and 24.
- The antennas 4 miles SW when turning IFR and Class C aircraft left when departing Runway 24. Be cautious.
- When dealing with any aircraft requesting an overhead approach give specific instructions if needed regarding initial altitude, point, and direction of breaks.
- Lack of consideration for departure controller.

- g. Similar sounding Runways (6 and 36).
- h. Be aware of high-performance Runway 6 departures, which may conflict with Runway 18/36 pattern traffic, particularly during cooler weather.
- i. The Departure controller has control of aircraft on contact and may turn the departure up to and including on course, which may take the aircraft back through protected airspace for subsequent departures.

Chapter 3. TRACON

Section 1. TRACON GENERAL

3-1-1. TRACON POSITIONS

Frequency	Position
127.67	North Radar (NR)
123.8	South Radar (SR)
120.15	West Satellite Radar (WR)
120.05	East Satellite Radar (ER)
126.15	Final Radar (FR)

3-1-2. PREARRANGED COORDINATION PROCEDURES (PCP)

- a. PCP are the following:
 - i. Automatic releases for departures off Birmingham Airport. See paragraph 2-4-2 and figure 2-4-1 for arrival and departure airspace.
 - ii. Use of the final approach course for runways 6 and 24 by both NR and SR positions.
 - iii. Use of runway heading course for runways 6 and 24 by both NR and SR positions.

3-1-3. VISUAL REPORTING POINTS

Control personnel are authorized use of the following reporting points as a means of instant radar identification when a target is observed and corresponds with a direct position report received from an aircraft and the observed track is consistent with the reported heading or route of flight. Bearing and distance are based on the BHM ASR antenna.

Reporting Point	Bearing/Distance	Reporting Point	Bearing/Distance	Reporting Point	Bearing/Distance
Alabaster	191/019	Lake Purdy	137/018	Wilsonville Steam Plant	140/024
Calera	182/027	Leeds	098/011		
Chelsea	157/015	Montevallo	193/018		
Childersburg	132/026	Mount Pinson	127/009		
Columbiana	164/024	Pelham	192/017		
Flat Creek	288/018	Pell City	087/024		
Gorgas	186/022	Smith Lake Dam	320/028		
Helena	197/017	Sumiton	309/019		
Inland Lake	137/019-027	Warrior	350/016		

Section 2. RADAR POSITION PROCEDURES

3-2-1. PROCEDURES

- a. Provide radar approach control service for IFR/SVFR/CLASS C aircraft within delegated airspace as depicted in Chapter 3 Section 3.
- b. Protect departure corridors for all active runways when automatic releases are in effect.
- c. Aircraft departing KBHM may be turned on course, except for the following scenarios:
 - i. NR/SR is responsible for IFR separation when turning a departing aircraft towards the reciprocal of the departure runway with subsequent runway heading departures from the same runway.
 - ii. Aircraft with a splatted heading (e.g. 240*) must not be turned until clear of the tower's lateral airspace boundary.
- d. Assign the following climb outs to KBHM practice approach aircraft:
 - i. IFR aircraft – runway heading and maintain 4,000 feet
 - ii. VFR aircraft – runway heading and maintain VFR at or below 3,500 feet
- e. Issue releases for opposite direction departures off runway 06/24. Releases shall include heading, altitude, and departure frequency.
- f. Unless verbally coordinated, all KBHM aircraft shall be established in the final approach area for the active runway of intended landing (see Section 3) prior to the lateral limits of tower airspace. Also, aircraft should be switched to the Tower frequency prior to the aircraft reaching the lateral airspace boundary, but no sooner than 16 NM from the airport. The scratchpad data shall contain the runway and approach if required (see Appendix A).

3-2-2. TROUBLE SPOTS

- a. Incomplete position relief briefing.
- b. Attention diverted by engaging in conversation.
- c. Unaware of individual capacity. Failure to request assistance.
- d. Use of nonstandard phraseology.
- e. Over coordination and/or unclear, not concise.
- f. Not abiding by SOP or LOAs.
- g. Improper or inaccurate strip marking.
- h. Failure to speak when you observe questionable situations.
- i. Similar sounding Runways (6 and 36).
- j. The Surface to 3,000 MSL area around EKY, which belongs to West Radar when Runway 06 is in use.

Section 3. TRACON AIRSPACE

Figure 3-3-1. South Radar Airspace

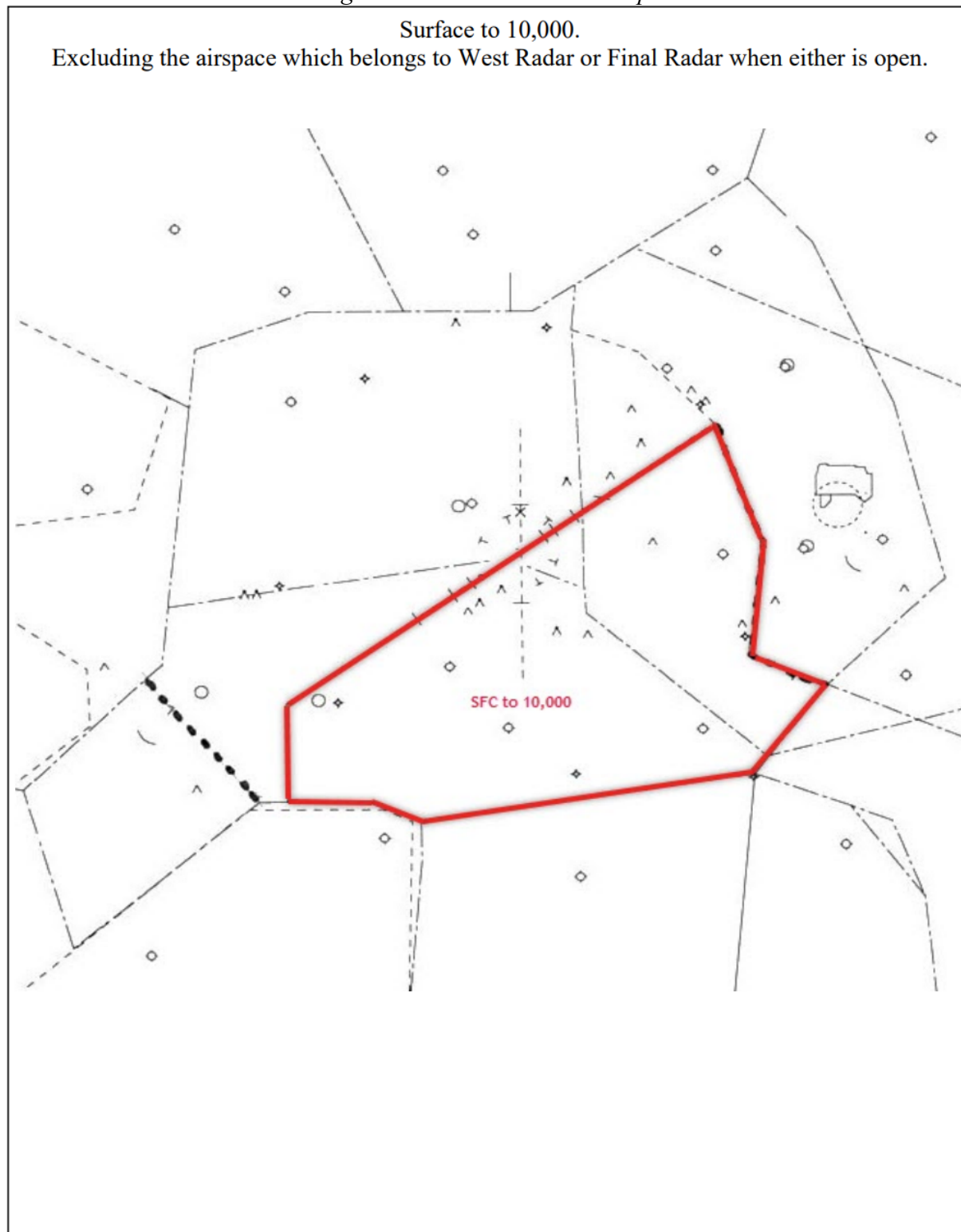


Figure 3-3-2. North Radar Airspace

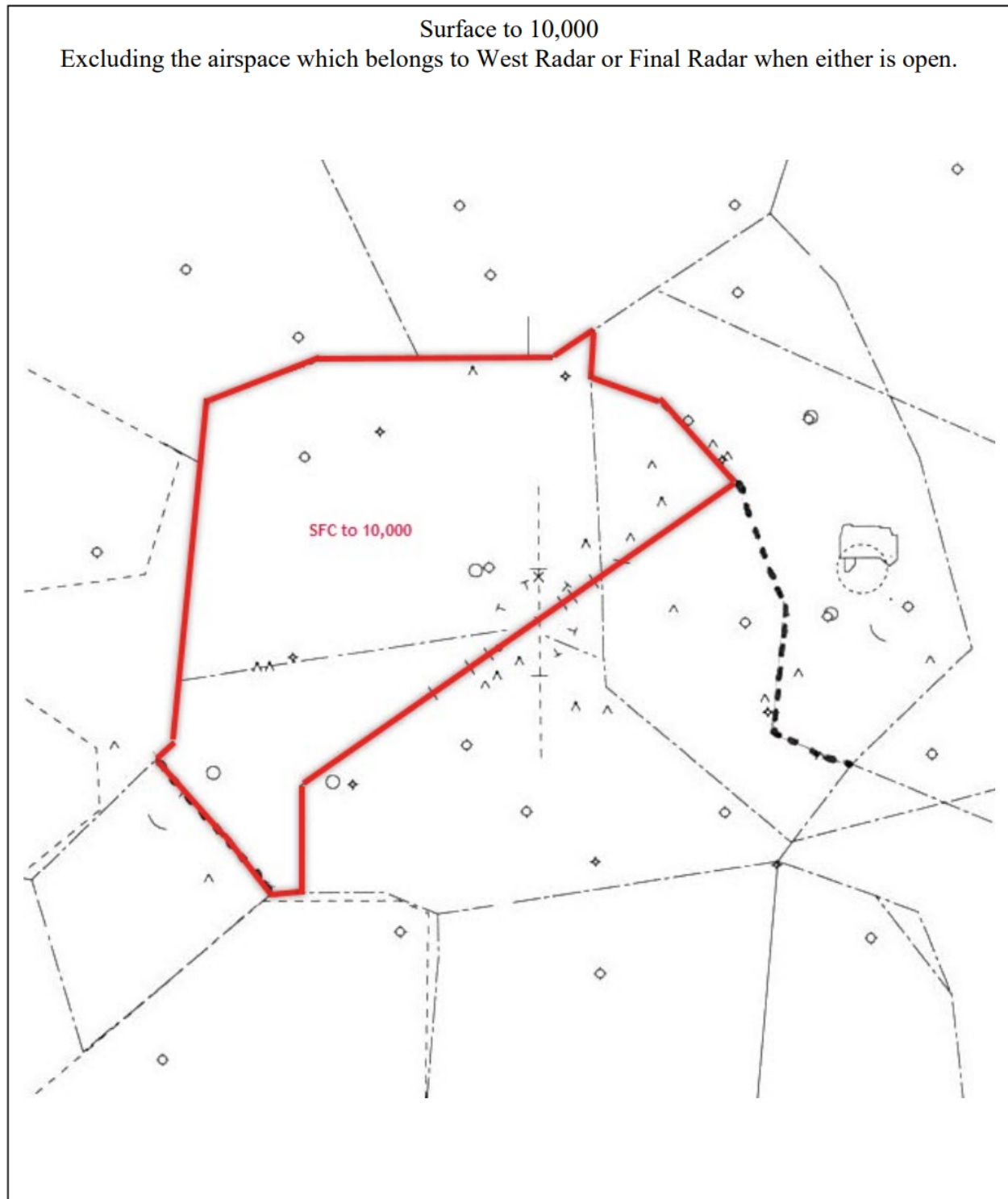


Figure 3-3-3. Final Airspace (Runway 6 and 18)

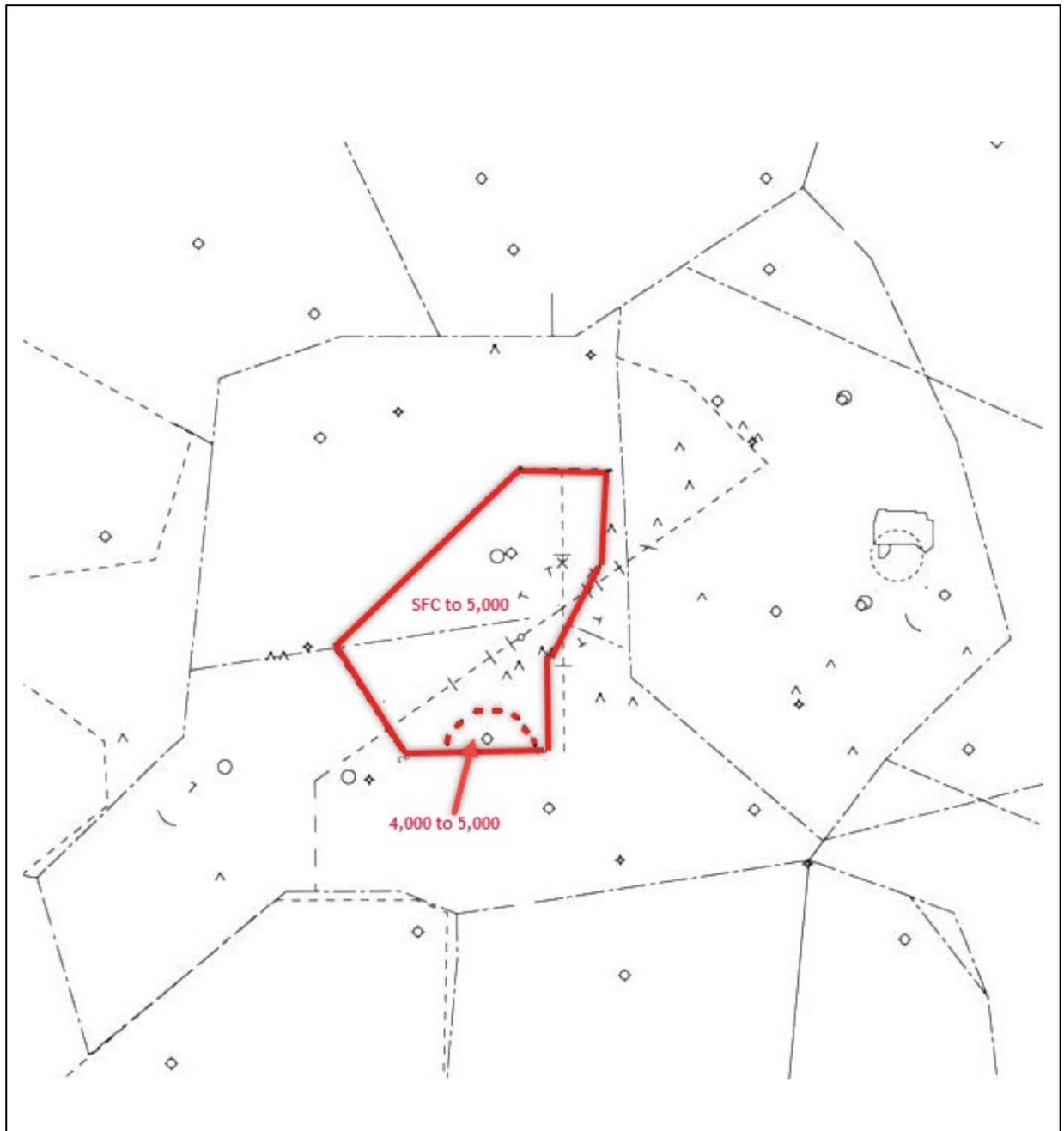


Figure 3-3-4. Final Airspace (Runway 6 and 36)

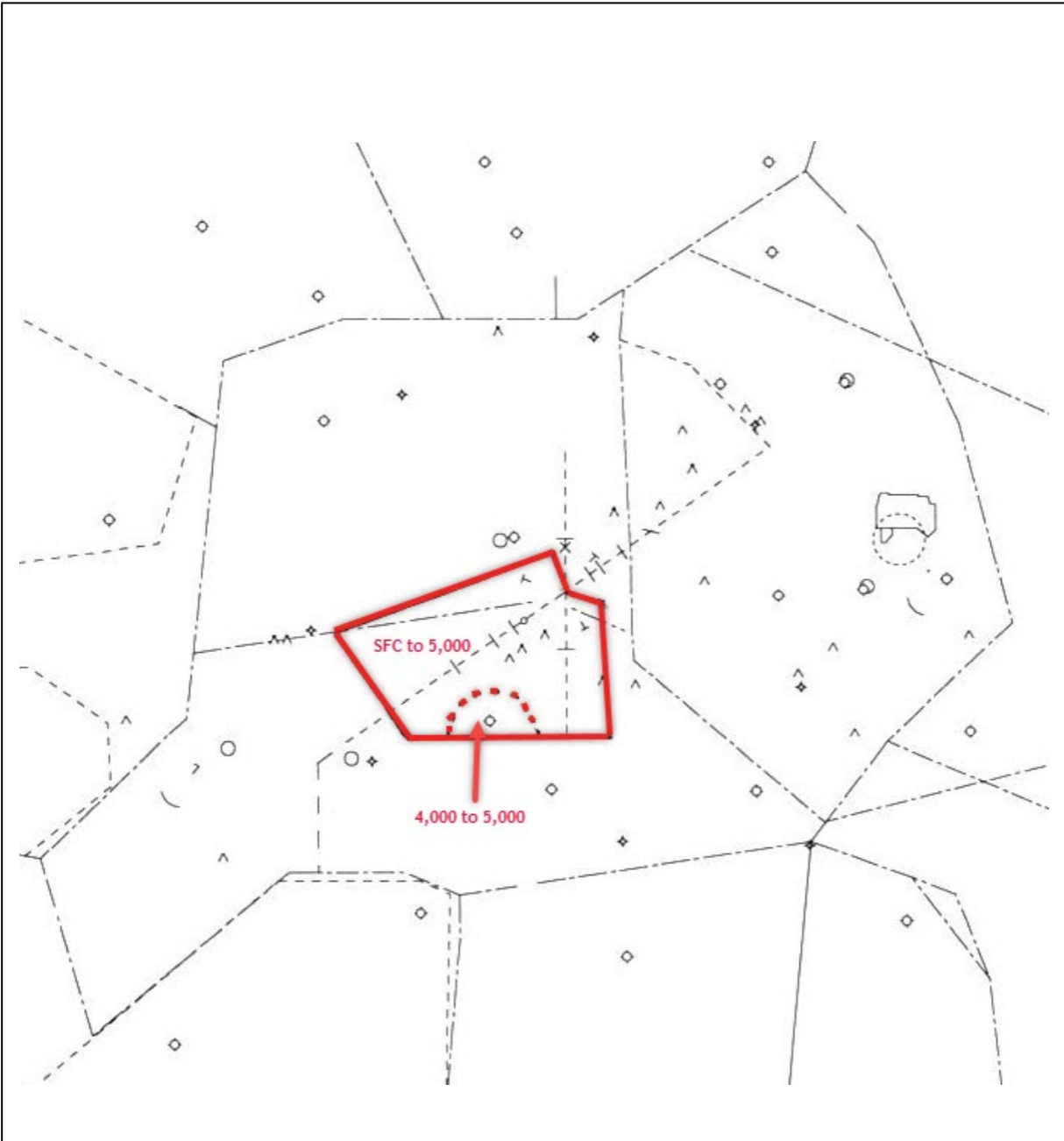


Figure 3-3-5. Final Airspace (Runway 24 and 18)

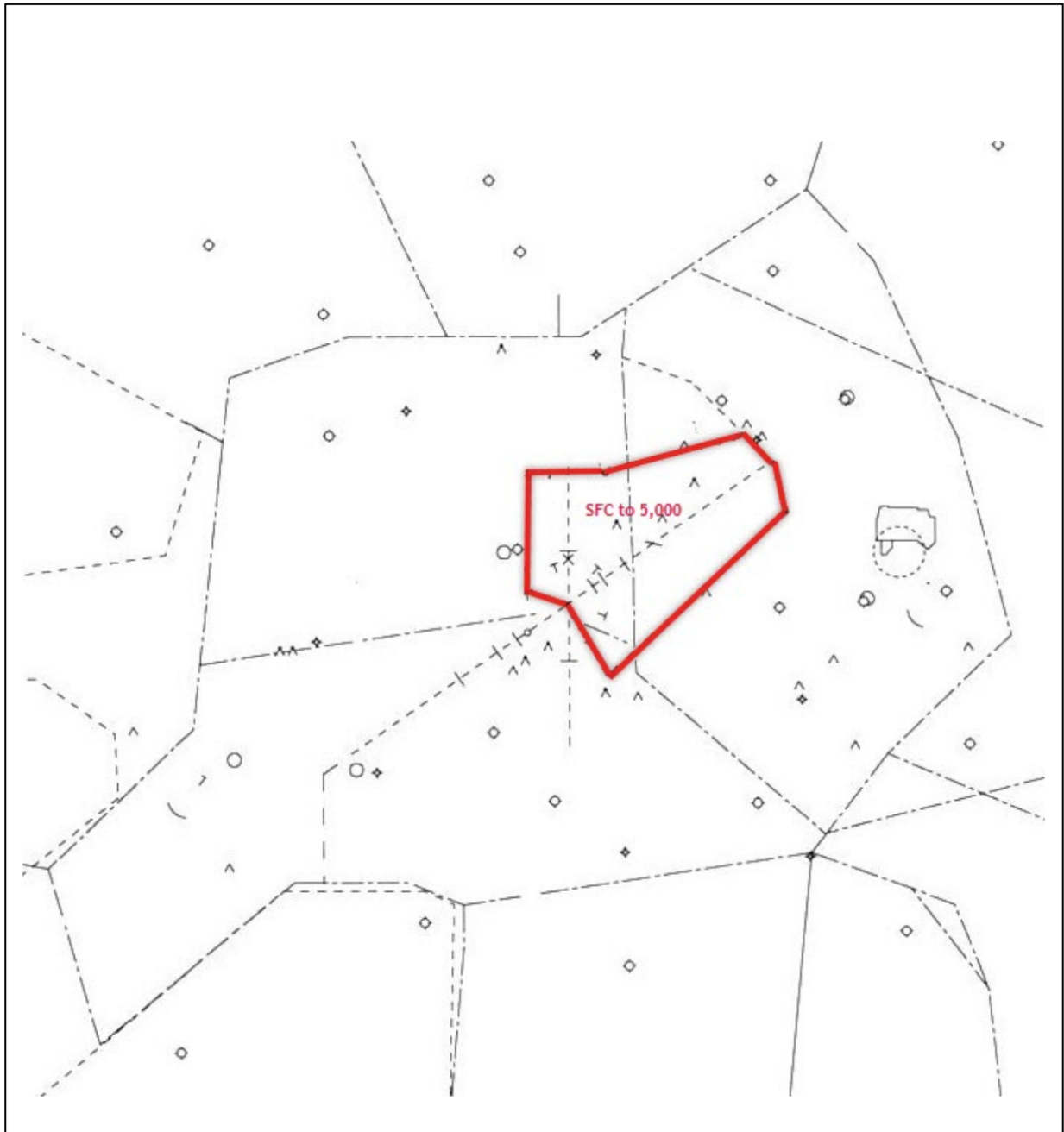


Figure 3-3-6. Final Airspace (Runway 24 and 36)

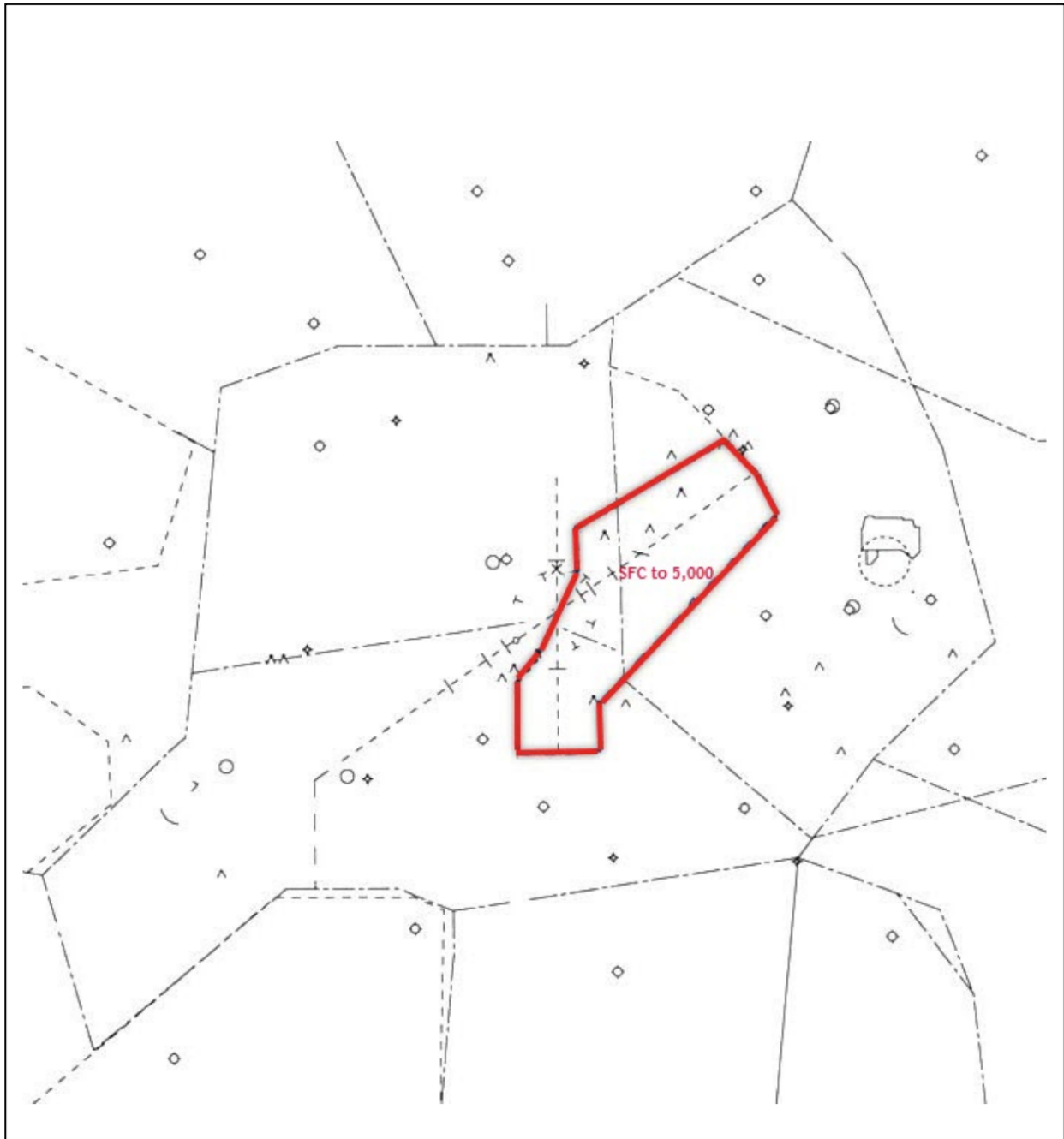


Figure 3-3-7. West Satellite Airspace

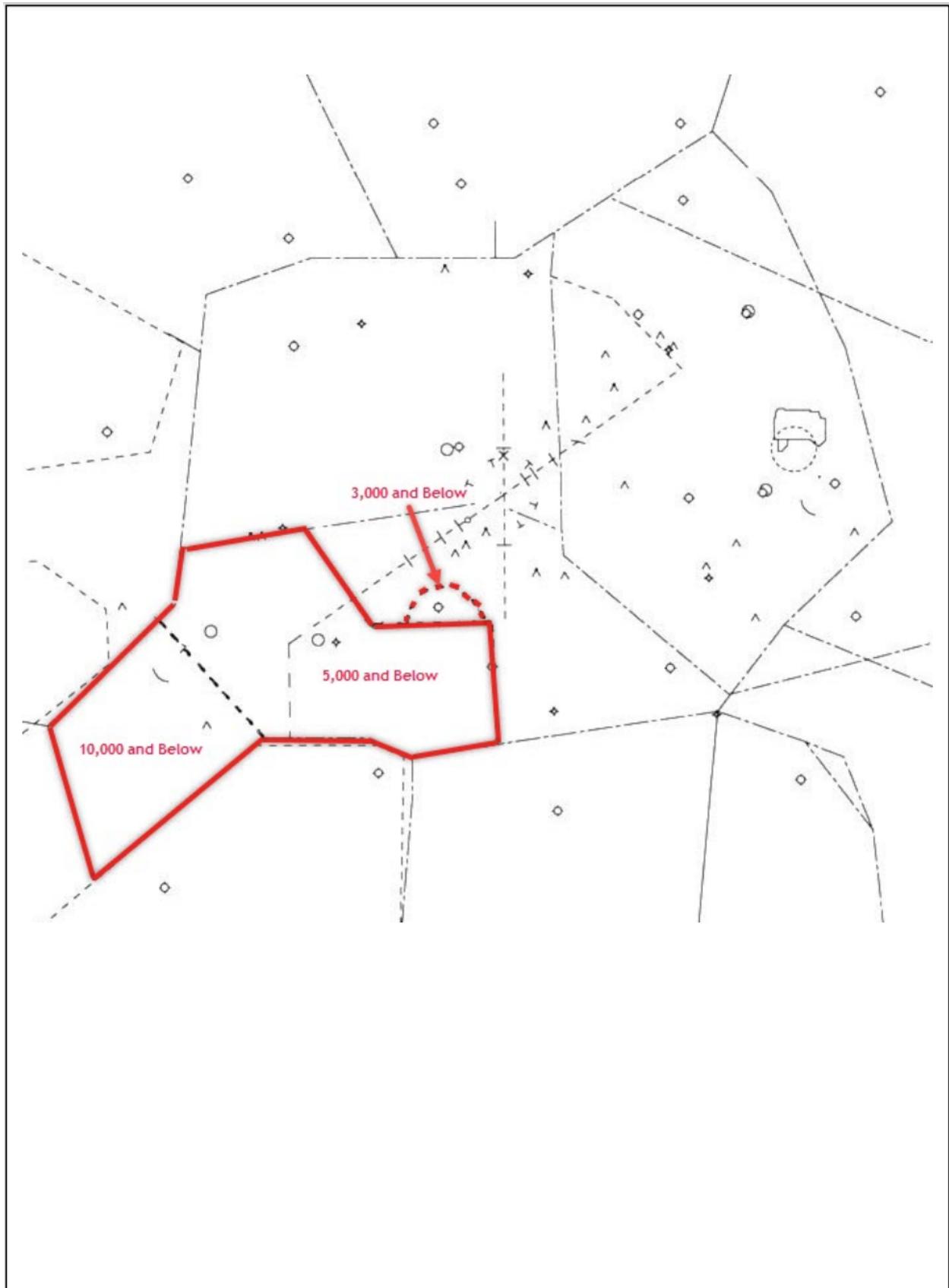
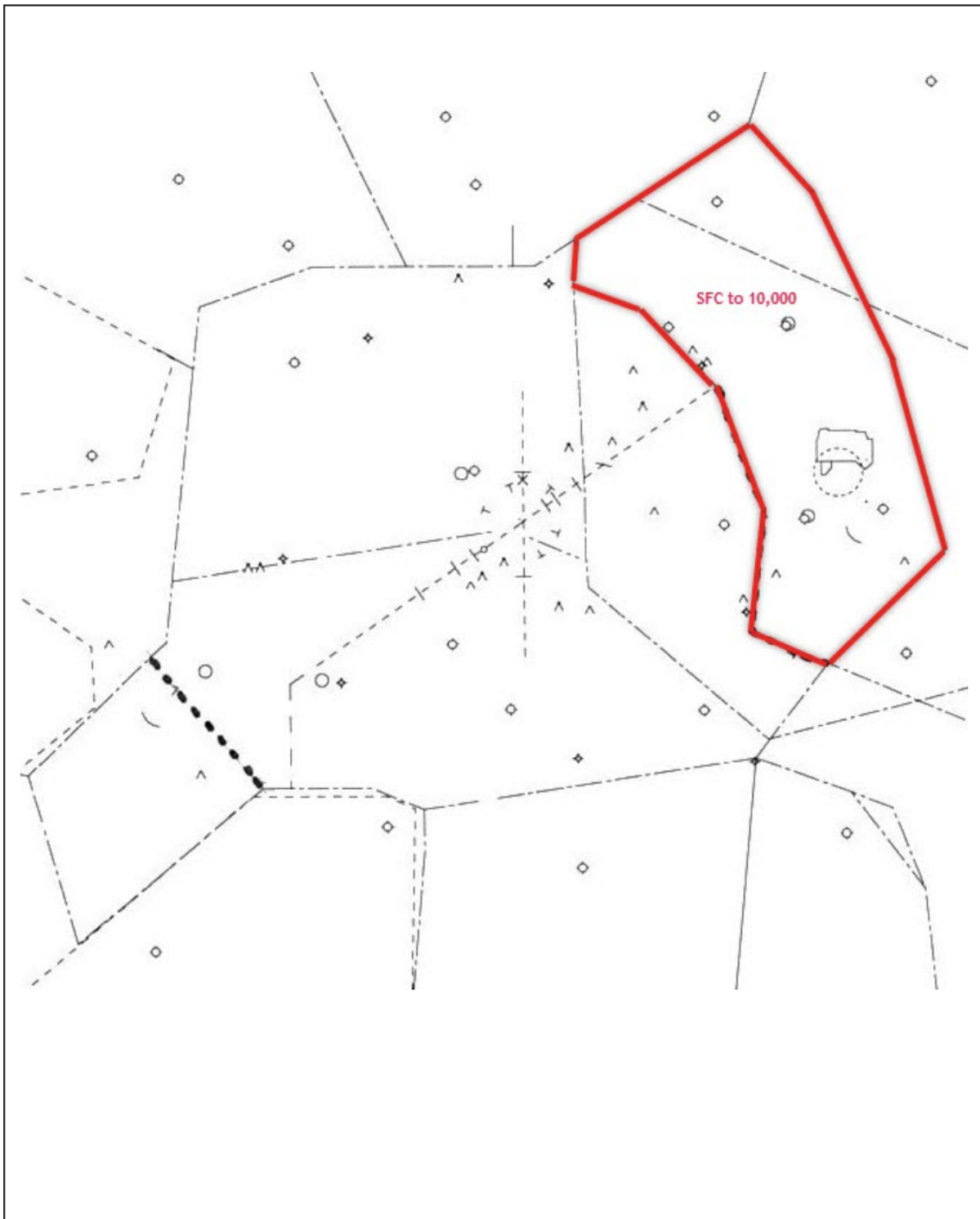


Figure 3-3-8. East Satellite Airspace



APPENDIX A. SCRATCHPAD ENTRIES

Entry	Definition
[##]	Approach Advertised in ATIS to the runway entry [##].
I[##]	ILS Approach to runway [##]
L[##]	LOC Approach to runway [##]
G[##]	RNAV or RNAV Y approach to runway [##]
Z[##]	RNAV Z approach to runway [##]
V[##]	Visual approach to runway [##] with preceding traffic in sight
N[##]	Visual approach to runway [##] with preceding traffic NOT in sight
SDF	SDF approach
T[##]	TACAN Approach to runway [##]
OHL or OHR	Overhead Maneuver Left runway or Overhead Maneuver Right runway
PTN	Aircraft requesting pattern work
OPT	Aircraft is requesting the Option
JFA	Just Flying Around

APPENDIX B. ZTL LETTER OF AGREEMENT

Refer to Birmingham under ZTL - Minor ATCT Letter of Agreement.

APPENDIX C. POSITION RELIEF BRIEFING

APPENDIX C-1. CD BRIEFING

- 1) Status Information Areas: Applicable IDS and PIREP page, etc.
- 2) Equipment Status: Radios (proper frequencies (de)selected), Visibility Range and Center, ATIS, RADAR(s), etc.
- 3) Staffing: Adjacent and inter-facility staffing.
- 4) Airport Conditions/Status: Airspace configuration, Runway(s) in use, Runway and taxiway closures, etc.
- 5) Airport Activities: Gate hold procedures, Braking action reports, etc.
- 6) Weather: Trends, Windshear, ATIS, PIREPs, SIGMETs, AIRMETs, etc.
- 7) Flow Control: Special programs, Reportable ATL delays, etc.
- 8) Special Activities: Events, Evaluations, Emergency, etc.
- 9) Special Instructions: Coordination, CIC instructions, etc.
- 10) Training in Progress.
- 11) Traffic information:
 - a) Aircraft standing by for clearance or TMU release, etc.
 - b) Coordination agreements with other positions.
 - c) Ground Stop or Ground Delay Program information.

APPENDIX C-2. GC AND LC BRIEFING

- 1) Status Information Areas: Applicable IDS and PIREP page, etc.
- 2) Equipment Status: Radios (proper frequencies (de)selected), Visibility Range and Center, ATIS, RADAR(s), etc.
- 3) Staffing: Adjacent and inter-facility staffing.
- 4) Airport Conditions/Status: Airspace configuration, Runway(s) in use, Runway and taxiway closures, etc.
- 5) Weather: Trends, Windshear, ATIS, PIREP, SIGMETs, AIRMETs, etc.
- 6) Flow Control: Special programs, Reportable ATL delays, etc.
- 7) Special Activities: Events, Evaluations, Emergency, etc.
- 8) Special Instructions: Coordination, CIC instructions, etc.
- 9) Training in Progress.
- 10) Traffic Information:
 - a) Status of each aircraft.
 - b) Point-outs and approvals.
 - c) Primary targets. Non-radar operations. VFR advisory aircraft.

APPENDIX C-3. RADAR BRIEFING

- 1) Status Information Areas: Applicable IDS and PIREP page, etc.
- 2) Equipment Status: Radios (proper frequencies (de)selected), Visibility Range and Center, ATIS, RADAR(s), etc.
- 3) Staffing: Adjacent and inter-facility staffing.
- 4) Airport Conditions/Status: Airspace configuration, Runway(s) in use, Runway and taxiway closures, etc.
- 5) Airport Activities: Gate hold procedures, Braking Action reports, etc.
- 6) Weather: Trends, Windshear, ATIS, PIREP, SIGMETs, AIRMETs, etc.
- 7) Flow Control: Special programs, Reportable ATL delays, etc.
- 8) Special Activities: Events, Evaluations, Emergency, etc.

- 9) Special Instructions: Coordination, CIC instructions, etc.
- 10) Training in Progress.
- 11) Verbally State Runway Status: Unavailable, closed or occupied.
- 12) Traffic Information:
 - a) Status of each aircraft and/or vehicle.
 - b) Point-outs.
 - c) Primary targets. Non-radar operations. VFR advisory aircraft.
 - d) Aircraft affected by TMU initiatives.
 - e) Coordination agreements with other positions.
 - f) Aircraft holding or standing by for service.