



# Denver ARTCC

D01 TRACON

## Standard Operating Procedures

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## Document Information

### Purpose

This order describes Standard Operating Procedures for the safe and efficient operation of the Denver Terminal Radar Control Facility (D01 TRACON). The provisions and procedures described below are supplemental to and in accordance with Denver ARTCC General Policy and FAA Order JO 7110.65, as well as any published FAA guidelines and procedures. The information contained in this document is to be used for flight simulation purposes only on the VATSIM network. It is not intended, nor should it be used for real-world navigation. This site is not affiliated with the FAA, the actual Denver ARTCC, or any governing aviation body. All content contained herein is approved only for use on the VATSIM network.

### Distribution

This order is distributed to all Denver ARTCC personnel.

### Cancellation

This order cancels D01 SOP dated June 13, 2021.

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## Revisions Log

Date	Revision	Editor/Version
12/16/2020	Initial Release	Raaj Patel/7110.1A
02/04/2020	Added Combined Pos.	Raaj Patel/7110.1B
05/31/2020	Updated scratchpad rules	Raaj Patel/7110.1C

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# Chapter 1. Positions Table

Table 1. Denver TRACON Operational Positions Table

Position	Radio Name	Callsign	Relief	STARS Symbol	Frequency
<b>Quicksand - AR1* (Southwest Feeder)</b>	<b>Denver Approach</b>	<b>DEN_I_APP</b>	I1	I	120.350
Honcho - AR2 (Northwest Feeder)	Denver Approach	DEN_H_APP	H1	H	119.300
Tecate - AR3 (Northeast Feeder)	Denver Approach	DEN_G_APP	G1	G	124.950
Rush - AR4 (Southeast Feeder)	Denver Approach	DEN_X_APP	X1	X	126.550
West Final - FR1	Denver Approach	DEN_W_APP	W1	W	123.850
East Final - FR2	Denver Approach	DEN_E_APP	E1	E	120.800
Center Final - FR3	Denver Approach	DEN_O_APP	O1	O	125.750
Tertiary Final - FR4	Denver Approach	DEN_T_APP	T1	T	133.620
West Departure - DR1	Denver Departure	DEN_L_DEP	L1	L	126.100
North Departure - DR2	Denver Departure	DEN_N_DEP	N1	N	127.050
East Departure - DR3	Denver Departure	DEN_R_DEP	R1	R	128.250
South Departure - DR4	Denver Departure	DEN_S_DEP	S1	S	128.450
West Satellite - SR1	Denver Approach	DEN_J_APP	J1	J	125.120
North Satellite - SR2	Denver Approach	DEN_D_APP	D1	D	134.850
South Satellite - SR4	Denver Approach	DEN_A_APP	A1	A	132.750
Junction Radar - JR1	Denver Approach	GJT_APP	1	J	119.700
Pueblo Radar - PR1	Denver Approach	PUB_APP	1	P	120.100

**Bold/Asterisk** designates the combined position.



# Chapter 2. General

## Section 1: Definitions

### 2-1-1. Standardized Coordination

Coordination contained in Chapter 3 of this document defines specific situations that eliminate the requirement of the controller initiating a handoff or point out to transfer heading, altitude and speed information to the receiving controller.

### 2-1-2. Shuffle Procedures

A set of Pre-Arranged Coordination Procedures (P-ACP) whereby aircraft on a base leg are vectored across one or more active final approach courses, and are integrated with traffic flow to another runway. Shuffle Procedures are contained in Chapter 3, Section 3 Arrival Radar and Section 3 Final Radar.

### 2-1-3. Final Radar (FR) P-ACP Areas

In the Land North and Land South FR airspace, the Short Side Standard Terminal Arrival Routes (STAR) are contained within P-ACP areas depicted in Figures 1 and 2. These areas are delegated to specific FR positions based on the operations being conducted.

### 2-1-4. Mean Sea Level (MSL) Altitudes

Unless otherwise stated, all procedural altitudes are listed as MSL.

## Section 2: Airspace

### 2-2-1. D01 Tracon Airspace

D01 TRACON airspace is depicted in Appendix 5. The airspace is divided into specific positions of operation depicted in Appendices 1 through 3.

### 2-2-2. VFR Airspace Altitudes

In all D01 airspace assignments, the overlying sector owns 500' below their designated airspace altitude for use by Visual Flight Rules (VFR) aircraft only.

### 2-2-3. Class B, D Airspace and Class E Surface Area

1. Class B - Airspace subject to the rules and requirements contained in FAR Part 71, Subpart B, Designation of Class B Airspace. Denver Class B airspace is depicted in Appendix 5 and consists of specified airspace within which all aircraft operators are subject to aircraft equipment requirements, and operating rules (two-way radio communications and ATC clearance to enter).
2. Class D - Centennial (APA), Rocky Mountain Metropolitan (BJC), Buckley Air Force Base (BKF), Colorado Air and Space Port (CFO), Grand Junction Walker Field (GJT), and Pueblo (PUB) airports have Class D airspace.
3. Class E Surface Area - One airport with an ATCT, Northern Colorado Regional Airport (FNL) with a 5NM radius, has a Class E Surface area. Other Class E Surface area extensions, associated with their Class D Areas include: APA, GJT & BKF; and are configured to contain all instrument approaches.

### 2-2-4. Adjacent Terminal Areas

Colorado Springs (COS) Terminal Area airspace and Cheyenne (CYS) Terminal Area airspace are depicted in Appendix 5.

## Section 3: General

### 2-3-1. Video Map Requirements

All DR, SR, AR, and FR positions must display the DEN FR airspace currently in use.

### 2-3-2. ATIS

The first D01 radar position that communicates with aircraft landing at airports within D01 airspace must ensure the pilot has reported the correct Airport Terminal Information Service (ATIS), Airport Weather Observation System (AWOS), or Airport Surface Observation System (ASOS) information.

### 2-3-3. Intra-facility Release of Control

After receiving an intra-facility handoff, the receiving controller may turn no more than 20 degrees, within the transferring controller's airspace, until within the lateral confines of their assigned airspace. FR may exceed 20 degrees of turn when turning toward the airport. The receiving controller may climb or descend into their airspace once within the lateral confines of their assigned airspace.

### 2-3-4. Class B Airspace Containment

If in your best judgment, an aircraft is likely to exit the Denver Class B Airspace, issue appropriate instructions/restrictions to prevent the excursion.

### 2-3-5. STARS Flight Data Information (Scratchpad Entries)

1. All operational positions and handoff positions may utilize scratchpad entries. All arrivals into satellite airports must comply with current LOA procedures.
2. The MULTI FUNC Y (vSTARS) or INSERT (VRC), and/or requested altitude functions may be utilized to transfer information, routing, and/or pilot requests.
3. Scratchpads at Satellite Airports: When utilizing scratchpad entries, use the format of Type of Approach, and Runway Assigned.

- a. General.
  - i. The first alphanumeric indicates the approach type.
  - ii. The second alphanumeric indicates the runway assigned.
  - iii. The second alphanumeric must be omitted if the approach is to an airport itself.
  - iv. The last alphanumeric indicates the approach intent.
  
- b. Runway Assigned must be the first alphanumeric of the assigned runway magnetic heading.

At satellite airports with parallel runways, the first digit indicates the primary runway. Primary runways are 30R/12L at BJC, and 35R/17L at APA.

- 4. Approach Type Abbreviations. An asterisk (\*) indicates exceptions to the standard format.

I - ILS/LOC	T - TACAN	R - RNAV (GPS)
L - LDA/DME	V - Visual	C - CONTACT
G - GPS	H - HI-TACAN	

- 5. Other Approved Entries.

OHD - Overhead	HLD - Holding	AIS - Airport in Sight
WS - Restricted West of Interstate 25	YC - Your Control	

6. Routing/Altitude Scratch Pad Entries.

SPEED	##K	19k, assigned 190KTS
HEADING	H##	H27, assigned heading 270
Assigned Altitude	+###	+090, Assigned Altitude 9,000
Outside Bravo Airspace	OB	Aircraft will remain outside BRAVO airspace.
Direct MILE HIGH VORTAC, then Direct	MD	Direct MILE HIGH VORTAC, then direct fix/destination identified in flight plan.
Direct JEFFCO VOR, then Direct	JD	Direct JEFFCO VOR, then direct fix/destination identified in flight plan.
Direct GILL VOR, then Direct	GD	Direct GILL VOR, then direct fix/destination identified in flight plan.
Direct DENVER VOR, then Direct	DD	Direct DENVER VOR, then direct fix/destination identified in the flight plan.
Direct FALCON VORTAC, then Direct	FD	Direct FALCON VORTAC, then direct fix/destination identified in the flight plan.
Direct Waypoint Example (first three letters)	JOB	Direct JOBOB
Direct to Satellite Airport	D	Direct to Satellite Airport
Weather Deviation	DV#	Weather Deviation left or right of course # of degrees i.e. DV2 = Deviations 20 degrees left and right of course.
At or Below/Above altitude within Class Bravo Airspace	+BAB +BAA	Bravo at or below (Assigned Alt inputted) Bravo at or above (Assigned Alt inputted)

## Section 4. Duty Familiarization and Transfer of Position Responsibility

### 2-4-1. Duty Familiarization

Prior to assuming an operational position, each controller must become familiar with the current status of the air traffic system as it relates to D01. The familiarization must include, but is not limited to:

1. Appropriate briefing information as indicated in paragraph 2-4-2.
2. Current weather and forecasts (including SIGMETs and CWAs).
3. NOTAMS.
4. Flow restrictions and delay programs affecting D01 operations.
5. Other pertinent information.

### 2-4-2. Briefing Information

1. All operational personnel must obtain any mandatory pre-duty information.
2. All operational personnel must ensure they are in compliance with the items listed in vZDV General Policy Section 5.2 prior to receiving a relief briefing from the controller on duty or CIC.
3. During events or times of heavy traffic, any pre-duty information that requires a verbal briefing shall be conducted by the OS, CIC, or OM on duty.

### 2-4-3. Position Relief Briefings

In addition to FAA Order 7110.65, Air Traffic Control Appendix D, the following must apply when conducting a position relief briefing:

1. Procedures
  - a. Position relief briefings are required for all radar positions and radar coordinator positions.
  - b. The specialist being relieved must brief in a manner that satisfies the items listed in vZDV General Policy Sections 5.3 and 5.4.
  - c. After completion of the position relief briefing, both controllers must state their operating initials as a completion/acceptance of the position relief briefing.

# Chapter 3. Position Responsibilities

## Section 1: Controller-in-Charge (CIC) and Traffic Management Unit (TMU)

### 3-1-1. CIC Responsibilities

1. Maintain situational awareness as well as an awareness of traffic management initiatives, airspace changes, and/or any other operational items and maintain a goal of eliminating distractions in the operational environment. Monitors and manages traffic volume/flow.
2. Perform controller duties, coordinate inter/intra-facility activities, and/or assist controllers, particularly during unusual situations.
3. Ensure complete coordination of runway changes.
4. Combine/de-combine positions as traffic conditions warrant.

### 3-1-2. TMU Responsibilities

1. Coordinate all Traffic Management Initiatives and configuration changes with the CIC.
2. Direct flows and runway assignments for DEN arrivals as necessary.

## Section 2: Coordinator and Hand-off Positions

When a coordinator/handoff position is staffed, internal communication (such as instructions from the CIC or TMC) should, if applicable, go through the coordinator/handoff.

### 3-2-1. General Responsibilities

1. Maintain awareness of facility/sector activities.
2. Some other responsibilities may include, but are not limited to:
  - a. Assist in interphone communication as required.
  - b. Assist in accepting and initiating non-automated handoffs as required.
  - c. Assist in inter/intra-facility/sector/position coordination of traffic actions as required.
  - d. Assist in the dissemination and collection of Pilot Reports (PIREP) and hazardous weather alerts.

**NOTE-** *The radar position has the responsibility of managing the overall sector operations, including aircraft separation and traffic flows. When the Radar Coordinator Position is staffed, the Radar Coordinator Position assumes responsibility for managing traffic flows and the Radar Position retains responsibility for aircraft separation.*

### 3-2-2. Arrival Radar Coordinator (ARC) Responsibilities

Monitor AR positions and relay coordination.

**NOTE-** *When assigning the ARC position, the OS/CIC will give specific instructions on which radar position to assist.*

### 3-2-3. Final Radar Coordinator (FRC) Responsibilities

Monitor FR and MO positions and coordinate control actions on aircraft vectored off the final approach course by FR or DEN ATCT.

**NOTE-** *When assigning the FRC position, the OS/CIC will give specific instructions on which radar position to assist.*



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## Section 3: Arrival Radar (AR)

### 3-3-1. AR Airspace Assignment

AR shall control traffic in airspace depicted in Appendix 1.

1. AR1 is assigned airspace associated with the metering fixes SSKII and TBARR and shall normally use the frequencies as outlined in Table 1.
2. AR2 is assigned airspace associated with the metering fixes LONGZ and FLATI and shall normally use the frequencies as outlined in Table 1.
3. AR3 is assigned airspace associated with the metering fixes AALLE and LAWGR and shall normally use the frequencies as outlined in Table 1.
4. AR4 is assigned airspace associated with the metering fixes CLASH and NIIXX and shall normally use the frequencies as outlined in Table 1.

### 3-3-2. AR Responsibilities

1. Issue runway assignment to all DEN arrivals under AR control.
2. AR must ensure the radar display is set to encompass at least 10NM outside the TRACON airspace.
3. Prerequisites to satisfy P-ACP:
  - a. Ensure all DR positions are aware of untracked targets in AR airspace.
  - b. Ensure all DR positions are aware of non-standard formation flights.
  - c. Coordinate with adjacent DR positions prior to instructing an aircraft to climb to previously vacated altitudes.
  - d. Coordinate with adjacent DR positions prior to issuing an IFR clearance to a VFR aircraft.
4. AR must ensure scratchpad data remains accurate.
  - a. AR must ensure data blocks of DEN arrivals contain the assigned runway and may contain one of the following:
    - i. "RNZ" for aircraft that have been instructed to expect an RNAV-Z (RNP) approach.
    - ii. "HDG" for RNAV capable turbojets entering FR Land South and Land North airspace on vectors.
    - iii. Aircraft vectored off RNAV STARs to FR Land East or Land West airspace do not require "HDG" in the data block.
    - iv. "DEN" for non-RNAV capable aircraft entering FR airspace on vectors.

5. During dual or triple dependent instrument approaches, the following must be assigned when the SSKII STAR transition to RWY34L/R or the LONGZ STAR transition to RWY16L/R are in use:
  - a. Aircraft vectored off the CLASH/SSKII STAR for RWY35L: “Expect vectors to the ILS runway 35L CHAPP transition”; or “Expect ILS Runway 35L BOSSS/LDORA transition.”
  - b. Aircraft vectored off the LAWGR/LONGZ STAR for RWY17R: “Expect vectors to the ILS runway 17R HISSY transition”; or “Expect ILS Runway 17R KIPPR/TSHNR transition.”
  - c. “HDG” must be in the data block.

### 3-3-3. AR Procedures

1. DEN Arrivals
  - a. AR shall initiate handoff to FR 1, 2, 3 and 4 positions at least 10NM from FR boundary.
  - b. Aircraft must be established on and descending via an RNAV STAR or one of the following:
    - i. Assigned a heading that will maintain a track perpendicular to the final approach course or up to 20 degrees towards the airport. Aircraft must be descended to 13,000 or lower available AR altitude.
    - ii. Assigned a heading that will maintain a track parallel to the final approach course (downwind) assigned an altitude of 11,000.
  - c. AR must ensure aircraft assigned runway 16L or 16R are delivered to FR in a manner that allows compliance with section 3-4-5.5 of this order. An aircraft left on a “descend via” clearance on the LONGZ Arrival for runway 16R, if 16R is designated as the low runway, is not in a position to comply.
  - d. Aircraft assigned the “High” runway, as described in 3-4-5.5, must be instructed to expect the ILS approach.
  - e. Assign speed as follows:
    - i. Base leg- assign a speed of 210 knots or less prior to transferring communication. Aircraft descending via an RNAV STAR satisfy this requirement. Higher airspeeds may be assigned if required to establish a workable sequence with aircraft on the adjacent or opposing STARs.
    - ii. Downwind- assign a speed of 210 knots or less prior to transferring communication. Aircraft descending via an RNAV STAR satisfy this requirement.
  - f. During dual or triple dependent instrument approaches, LAWGR arrivals must be vectored off the STAR unless assigned runway 17L. CLASH arrivals must be vectored off the STAR unless assigned runway 35R.
  - g. After FR has accepted a radar handoff, transfer communication of aircraft as soon as practical, but no later than 5NM from the FR lateral boundary.
  - h. Shuffle Procedure:
    - i. AR determines when Shuffle Procedures are necessary and initiates the procedure.

- ii. AR must ensure shuffled aircraft are timed to eliminate two shuffled aircraft from opposing base legs from using the FR P-ACP airspace simultaneously.
- iii. When shuffling on the CLASH/LAWGR STARs when two or more FR sectors are open, assign aircraft descend via except maintain 11,000.
- i. Satellite Arrivals  
For satellite arrival traffic, AR shall handoff to DR:
  - i. Established on and descending via an RNAV STAR.
  - ii. Established on Legacy STAR and descending to the lowest available AR altitude.

#### **3-3-4. Pre-Arranged Coordination (P-ACP)**

After receiving a hand-off from AR, FR has control for descent to AR's lowest available altitude and turns towards the airport.

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## Section 4: Final Radar

### 3-4-1. General

1. FR controls aircraft in airspace depending on landing direction.
2. Upon transfer of communication, FR has control for descent to AR's lowest available altitude.
3. FR may initiate an automated point out on DEN arrival aircraft within five miles of the FR airspace boundary to DR for descent and turns toward the airport.
4. Ensure the assigned runway is properly displayed in the STARS full data block.
5. Ensure all aircraft established on the correct final approach course prior to communications transfer to tower.  
**NOTE-** *Aircraft on RNP approaches must be established on the unique path to the appropriate runway prior to communications transfer.*
6. During dual or triple dependent instrument approaches, ensure all aircraft executing the ILS/RNAV are switched to tower frequency prior to losing separation with aircraft on parallel final approach courses.
7. Automatic altitude readout of an aircraft under another controller's jurisdiction may be used for separation purposes.
8. Due to runway 16R occupancy times and highspeed taxiway locations, D01 FR controllers must provide a minimum of 3 MIT at the threshold for runway 16R.
9. When conducting approaches to Runway 16L and Runway 16R, workload permitting, issue parallel traffic that will be in close proximity.
10. When DEN is using ILS Approaches to Runway 35R, SR4 must relinquish the SR4 Shelf to FR at 9,000. FR is responsible to request the SR4 Shelf (see Appendix 3).
11. When visual approaches are in use, use phraseology that instructs aircraft to fly a heading to intercept the final approach course.

#### **Examples --**

*"United four forty-five, fly heading XXX until established on the final approach course, cleared visual approach runway XXX"*

*"United four forty-five, fly heading XXX to join final, cleared visual approach runway XXX"*

*"United four forty-five, proceed direct <fix on final> to join final, cleared visual approach runway XXX"*

12. Give first priority to issue a safety alert to all aircraft affected by any overshoot of the final approach course when separation between aircraft will decrease to less than 3 miles and/or 1000 feet.
  - a. Issue alternate control instructions to separate aircraft, as appropriate, ending with the word "immediately".
  - b. If one of the aircraft is on another frequency, coordinate with the other position or facility without delay.
  - c. Once the pilot informs you that action is being taken to resolve the situation, you may discontinue the issuance of further alerts.

**Example-** *"Traffic Alert, United three forty-five. 10 'o clock, 1 mile. Advise you turn right and climb immediately."*

**3-4-3. Airspace**

1. Land North designated airspace and P-ACP areas.

**FR LAND NORTH**

Operation	FRW Areas	FRC Areas	FRE Areas
2 Final Visual	TELLR LDORA		BOSSS PURRL
2 Final ILS	BOSSS TELLR LDORA		PURRL
3 Final	TELLR	BOSSS LDORA	PURRL

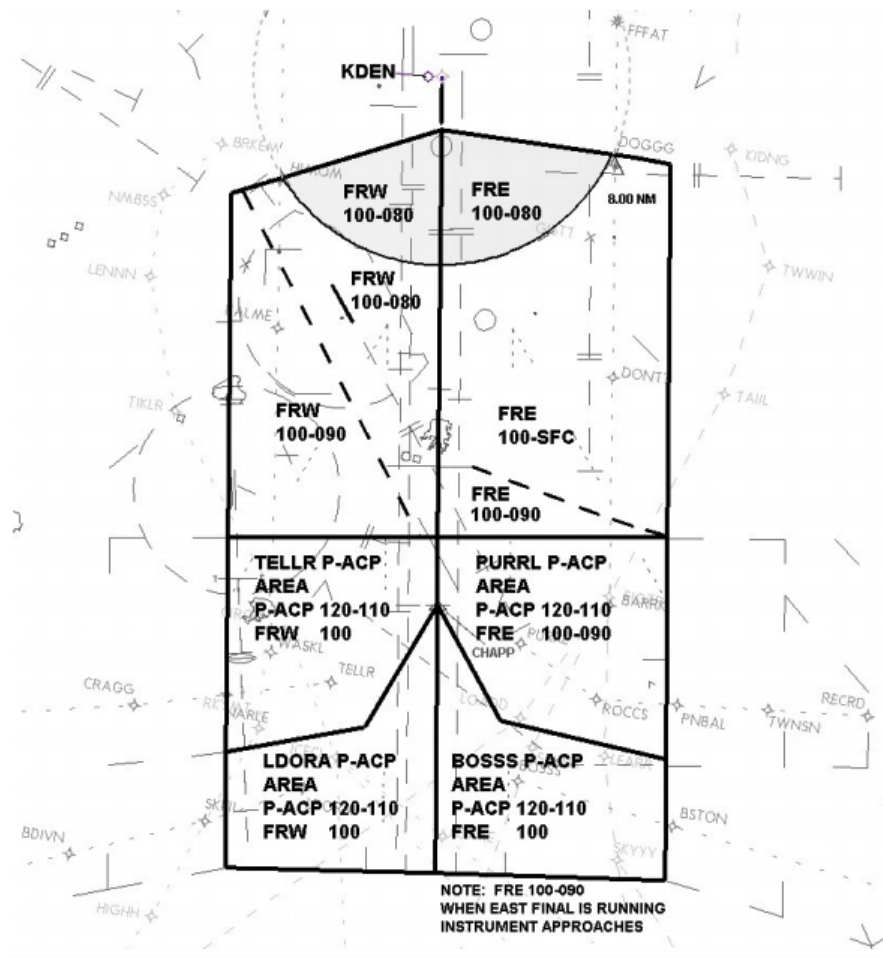


Figure 1. FR Land North

2. Land South designated airspace and P-ACP areas.

**FR LAND SOUTH**

Operation	FRW Areas	FRC Areas	FRE Areas
2 Final Visual	TSHNR KAILE		KIPPR WAHUU
2 Final ILS	KAILE		TSHNR KIPPR WAHUU
3 Final	KAILE	TSHNR KIPPR	WAHUU

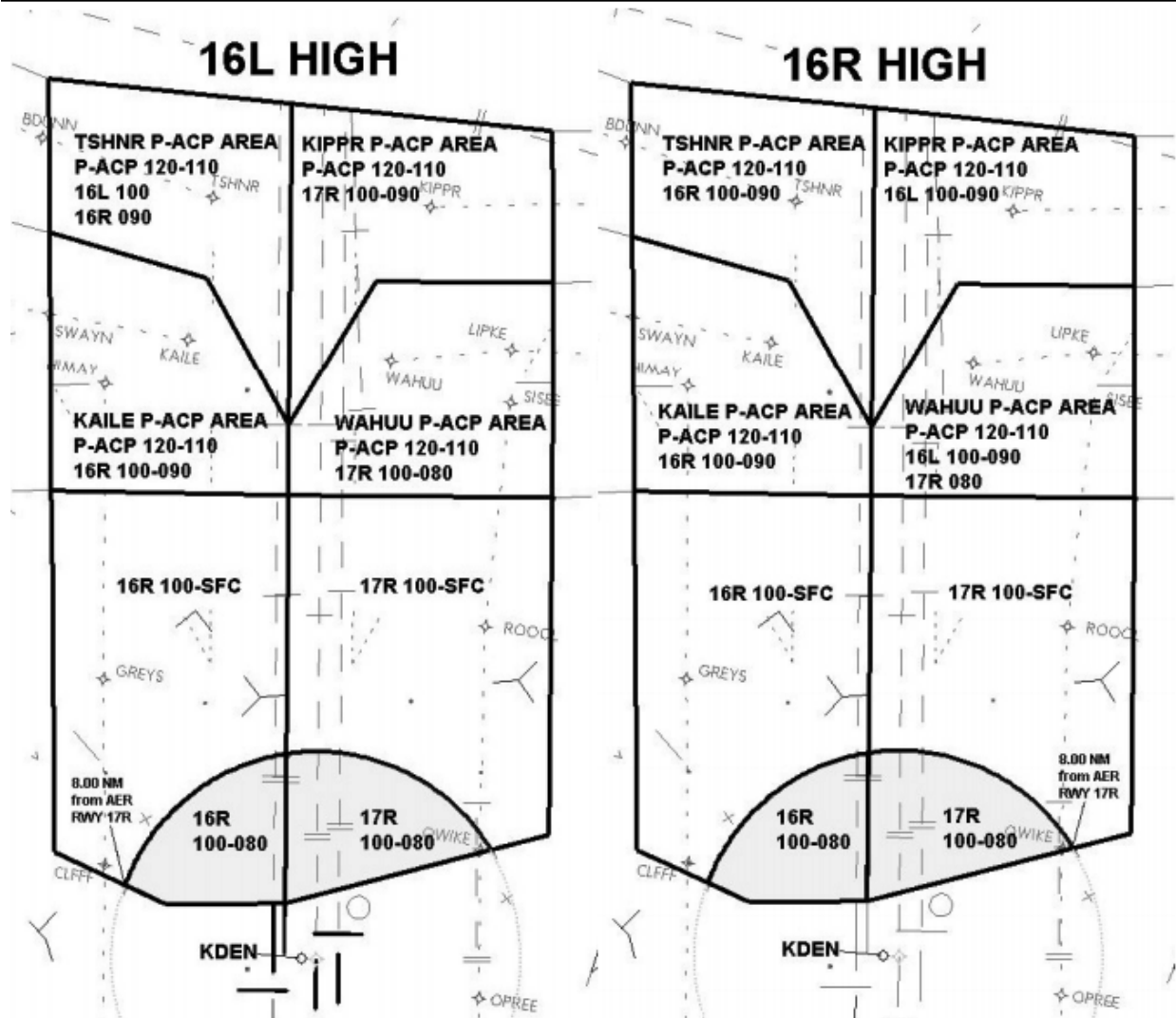


Figure 2. FR Land South



3. Land West and Land East designated airspace.

### FR LAND WEST & FR LAND EAST

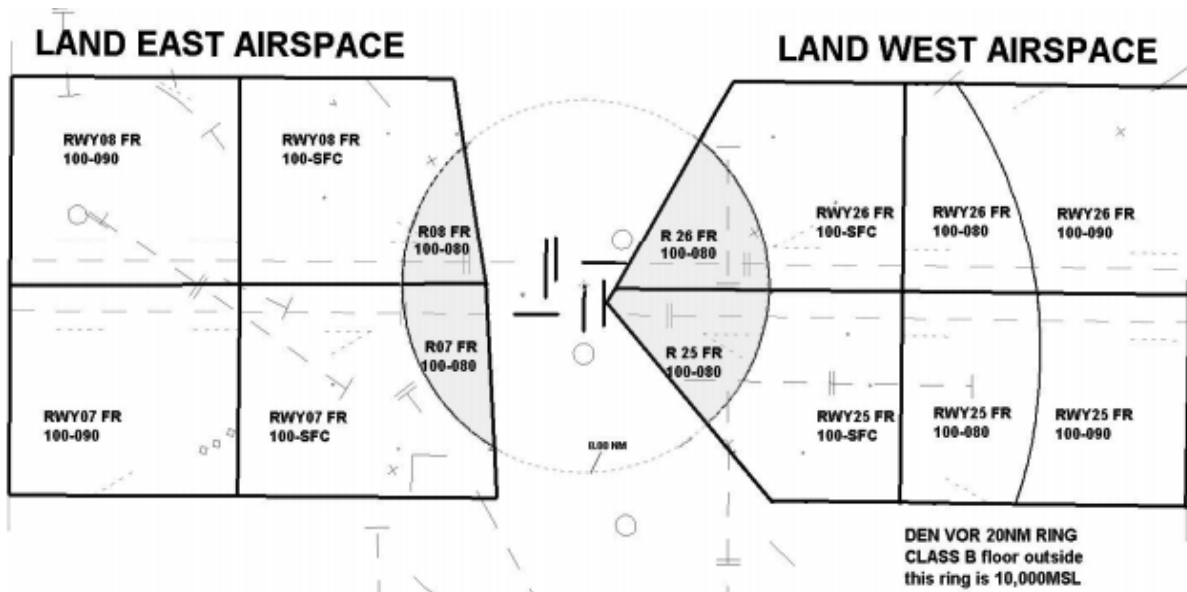


Figure 3. FR Land West & FR Land East

4. During converging operations, overlapping airspace is owned by the controller using the Land North and/or Land South airspace.

### 3-4-4. FR P-ACP

1. General Requirements:
  - a. FR may utilize the designated P-ACP Areas to deliver DEN Arrivals to runways other than the closest or normal arrival runway. This results in the aircraft crossing one or more active final approach courses.
  - b. Separation Responsibility. Within the P-ACP Areas, the controller working the succeeding aircraft is responsible for maintaining separation from the preceding aircraft.
  - c. The FR position using the P-ACP airspace must ensure shuffle aircraft are established on the final approach course and issued an approach clearance prior to leaving the P-ACP airspace and/or are vertically/laterally separated from all other aircraft.

**NOTE** - *The intent of this requirement is to eliminate the practice whereby an FR will attempt to turn in front of, behind or in-between two arrivals without having vertical separation. Once the required spacing is established, then vertical separation may be discontinued.*

2. Land South P-ACP. FR positions may use P-ACP in the Land South P-ACP Areas as depicted in Figure 4.

### Land South P-ACP Area

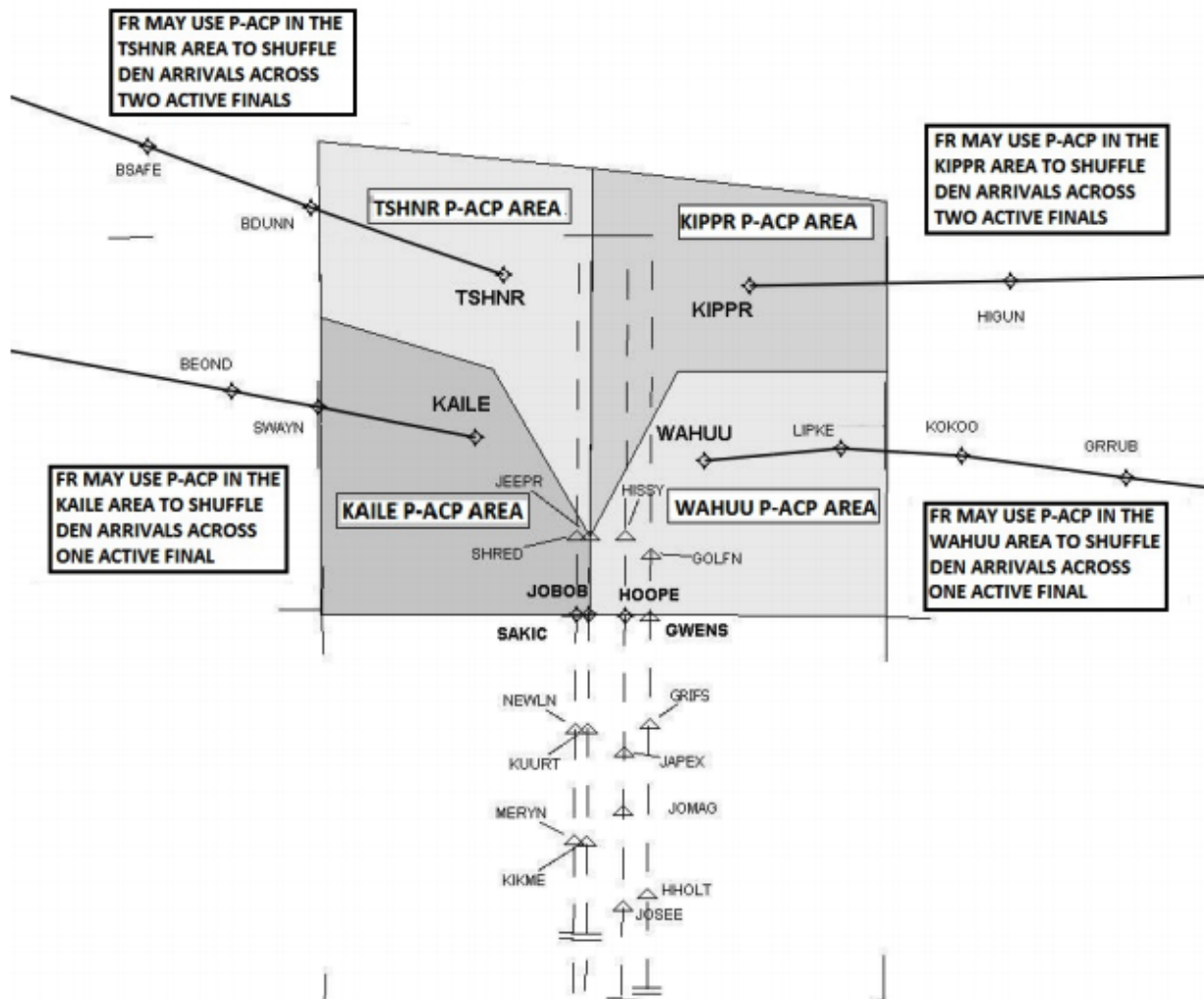


Figure 4. Land South P-ACP

3. Land North P-ACP. FR positions may use P-ACP in the Land North P-ACP Areas as depicted in Figure 5.

### Land North P-ACP Area

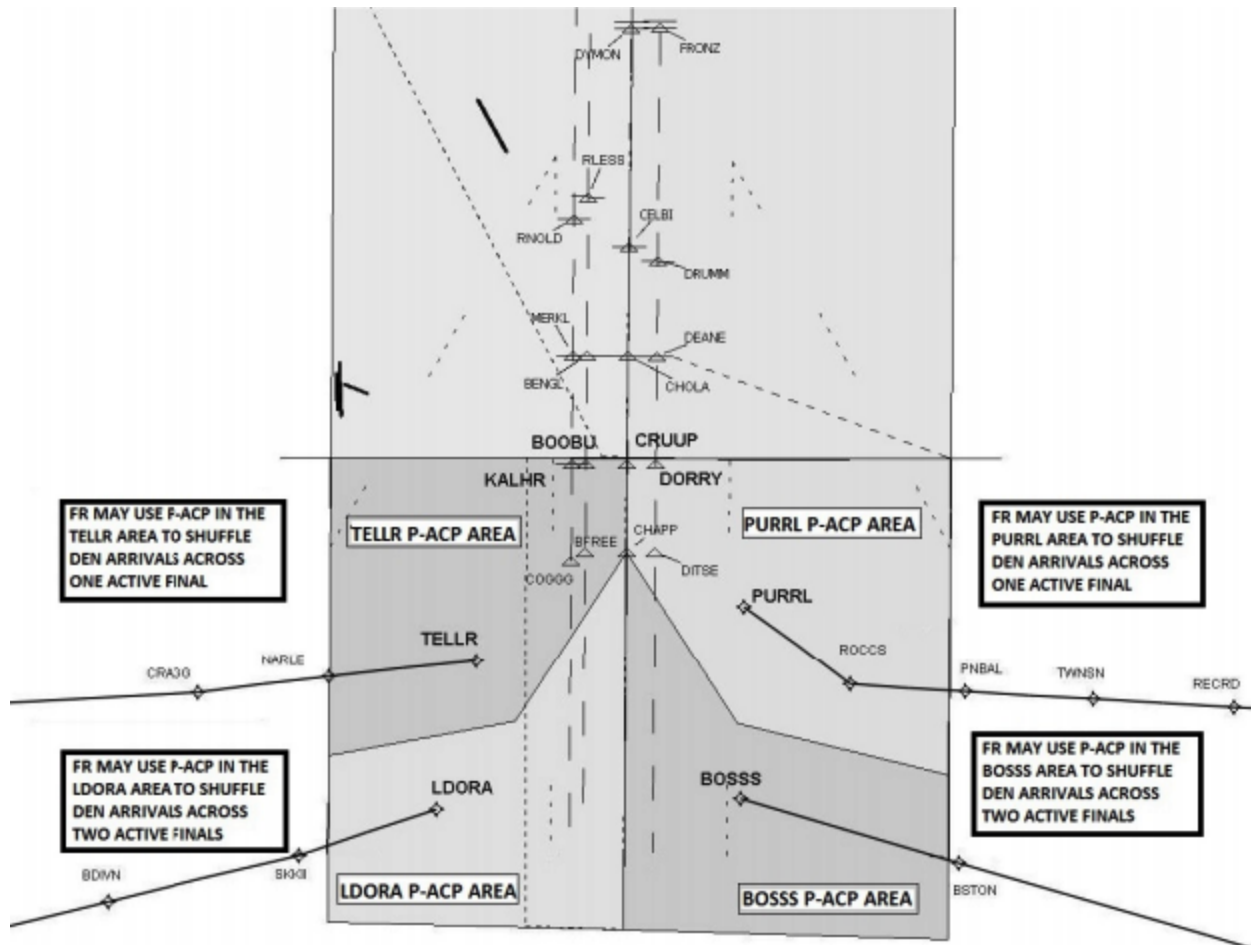


Figure 5. Land North P-ACP

4. Land East and Land West P-ACP. FR positions may use P-ACP in the Land East and West P-ACP Areas as depicted in Figure 6.

### Land East / West P-ACP Area

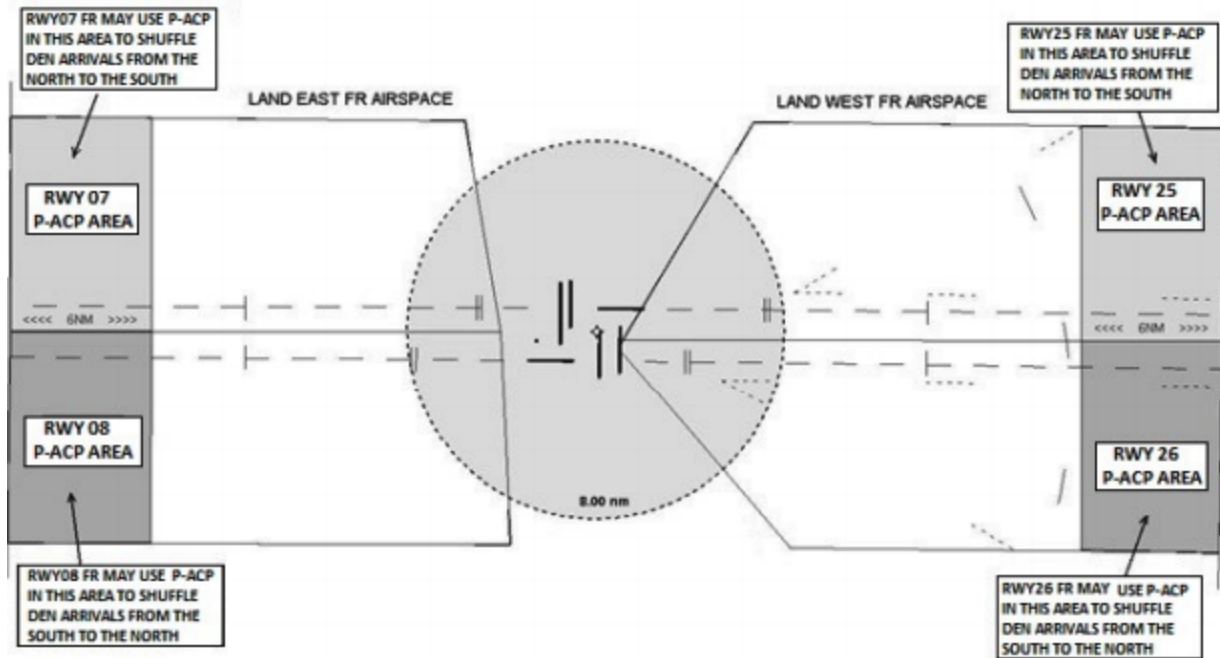


Figure 6. Land East / West P-ACP

### 3-4-5. Dual & Triple Visual/Instrument Approaches

1. DUAL VISUALS (VV): FR must remain 3NM from adjacent final approach course in use until visual approach clearance is issued and acknowledged, unless another form of separation is provided.
2. ONE VISUAL & ONE INSTRUMENT (VI): One FR issues ILS / RNAV Y / RNAV Z approach clearance and ensures the aircraft is established on an approach segment, or on a 30-degree intercept heading to join the final approach course, prior to 3NM from the adjacent final approach course in use. The other remains 3NM from the adjacent final approach course in use, until visual approach clearance is issued and acknowledged, unless another form of separation is provided.
3. TRIPLES (VIV): (VISUAL OUTBOARDS & INSTRUMENT CENTER): The FRs working the outboard runways must remain 3NM from adjacent final approach course in use until visual approach clearance is issued and acknowledged, unless another form of separation is provided. The FR working the center runway must not exit their airspace until the aircraft is established on final and an approach clearance (Visual, ILS or RNAV) is issued, unless another form of separation is provided.
4. TRIPLES (IVI): (RNAV Z/VISUALS OUTBOARDS & VISUAL CENTER): The FR working the outboard runways must remain 3NM from adjacent final approach course in use until visual approach clearance or RNAV Z is issued and acknowledged, unless another form of separation is provided. The FR working the center runway must not exit their airspace until the aircraft is established on final and a visual approach clearance is issued, unless another form of separation is provided.

**NOTE-** *Visual Separation is not acceptable between 16L and 16R; or 34L and 34R.*

5. Procedures for Joining Straight-in Final for Runways 16L and 16R.
  - a. When runways 16L and 16R are both in use and multiple FR positions are being utilized, all FR positions must designate a “High” runway. The other runway will be considered the “Low” runway.
  - b. The FR position responsible for the Low runway must ensure aircraft under their control join final 1,000 feet below the step-down fixes on the High runway ILS or RNAV “Y” final approach, unless 3 miles lateral separation will be maintained until both aircraft are established on their final approach courses.

- c. The FR position responsible for the High runway must ensure aircraft under their control join the final approach course outside SAKIC for 16R, or JOBOB for 16L, and be cleared for the ILS or RNAV "Y" approach, at published altitudes, unless coordination is accomplished with the FR position responsible for the Low runway. Coordination must ensure 3 miles lateral or 1,000 feet vertical separation between aircraft when joining final.

**NOTE-** *The requirements of FAAO 7110.65 7-4-4 c.2 still apply if using 1,000 feet vertical separation.*

6. RNAV-Z Approaches to South Runways.

Simultaneous independent instrument approaches (RNAV-Z and ILS) are not authorized to runways 16L and 16R under any circumstances.

- a. **16L High Runway:** aircraft assigned 16R may not be cleared for the RNAV-Z approach unless coordination has been accomplished with the FR position responsible for 16L. Any 16L aircraft which would be less than 3 miles from the RNAV-Z aircraft must be cleared for a visual approach. The provisions of FAAO 7110.65 5-9-6a.2. may be applied, but only after both aircraft are established on the straight-in final approach course.

Aircraft assigned 17R may not be cleared for the RNAV-Z approach unless 3 miles lateral separation will be maintained with aircraft on the ILS approach to 16L until both aircraft are established on the straight-in final approach course. The provisions of FAAO 7110.65 5-9-6a.3. may be applied, but only after both aircraft are established on the straight-in final approach course.

**NOTE-** *To avoid excessive coordination with the FR position responsible for 16L, and because of the dependent nature of 16L/16R procedures, the FR position responsible for 17R should not request 16L to conduct visual approaches in order to accommodate RNAV-Z approaches to 17R.*

- b. **16R High Runway:** aircraft assigned 16L must be established on the straight in final approach course and cleared for a visual approach prior to losing 3 miles lateral separation with aircraft on the RNAV-Z to 16R. RNAV-Z approaches may be conducted to 17R independent of aircraft on final for 16L and 16R.

#### **3-4-6. ILS/RNAV General Procedures**

During simultaneous instrument approach procedures, each FR is required to ensure aircraft under their control are separated from all aircraft on adjacent/parallel finals until established on the final approach course. If conducting dual or triple dependent instrument approaches where visual separation is not available, aircraft must also be on DEN ATCT frequency prior to losing separation with aircraft on adjacent/parallel finals.



### 3-4-7. Dual ILS/RNAV Land North

Approaches may be conducted in conjunction with visual approaches to a converging runway. In addition, approaches may be conducted in conjunction with instrument approaches to those converging runways specified in the DEN and D01 LOA.

1. FR working 35L must cross CHAPP at or above 12,000, except when the TELLR P-ACP Area is not in use to Runways 34L/R, then they may cross CRUUP at or above 11,000.
2. For ensured procedural separation, comply with the following:

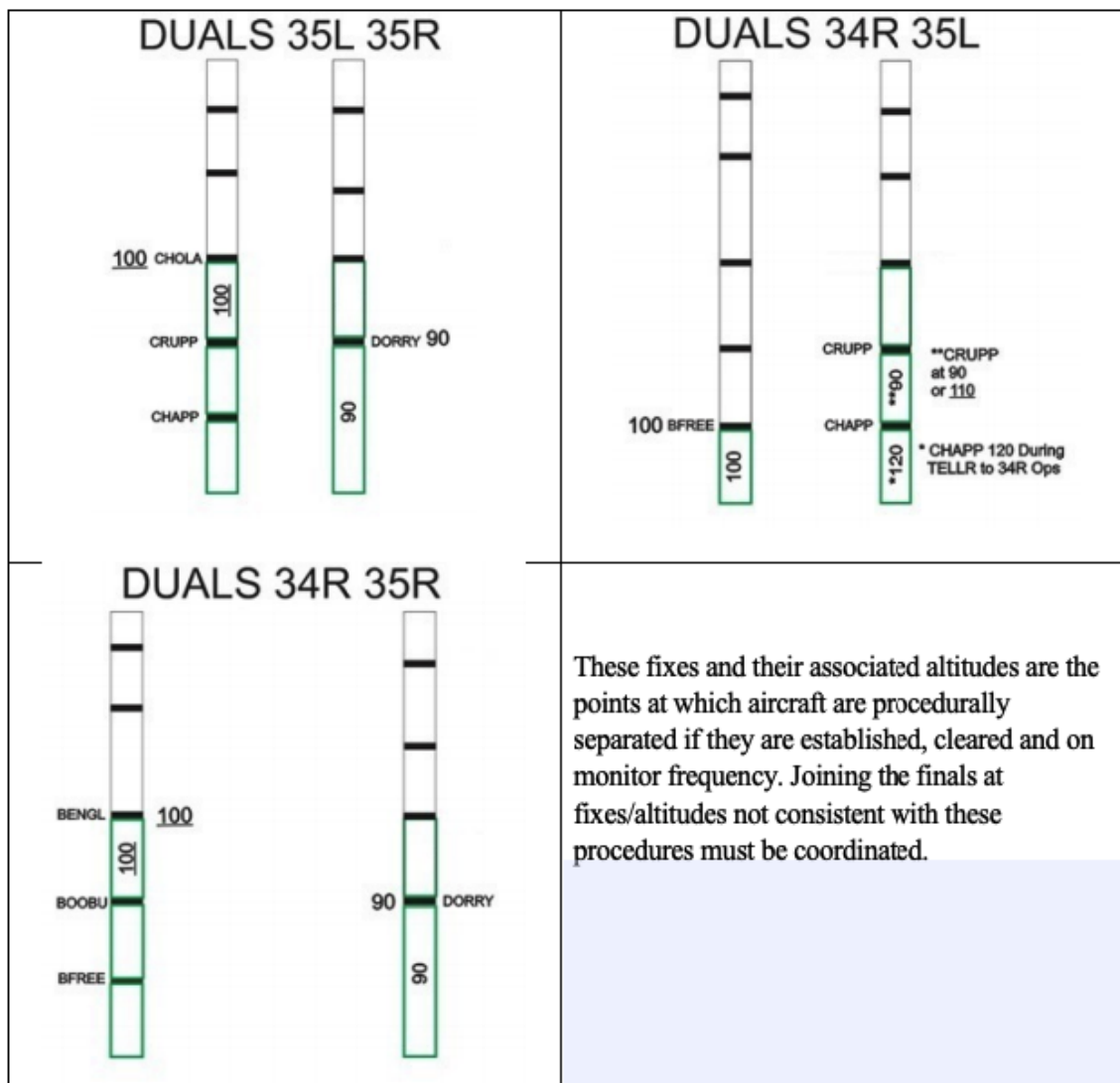


Figure 7. Dual ILS/RNAV Land North

### 3-4-8. Dual ILS/RNAV Land South

Approaches may be conducted in conjunction with visual approaches to a converging runway. In addition, approaches may be conducted in conjunction with instrument approaches to those converging runways specified in the DEN and D01 LOA.

1. FR working 17R must cross HISSY at or above 12,000, except when the KAILE P-ACP Area is not in use to Runways 16L/R, then they may cross HOOPE at or above 11,000.
2. For ensured procedural separation, comply with the following:

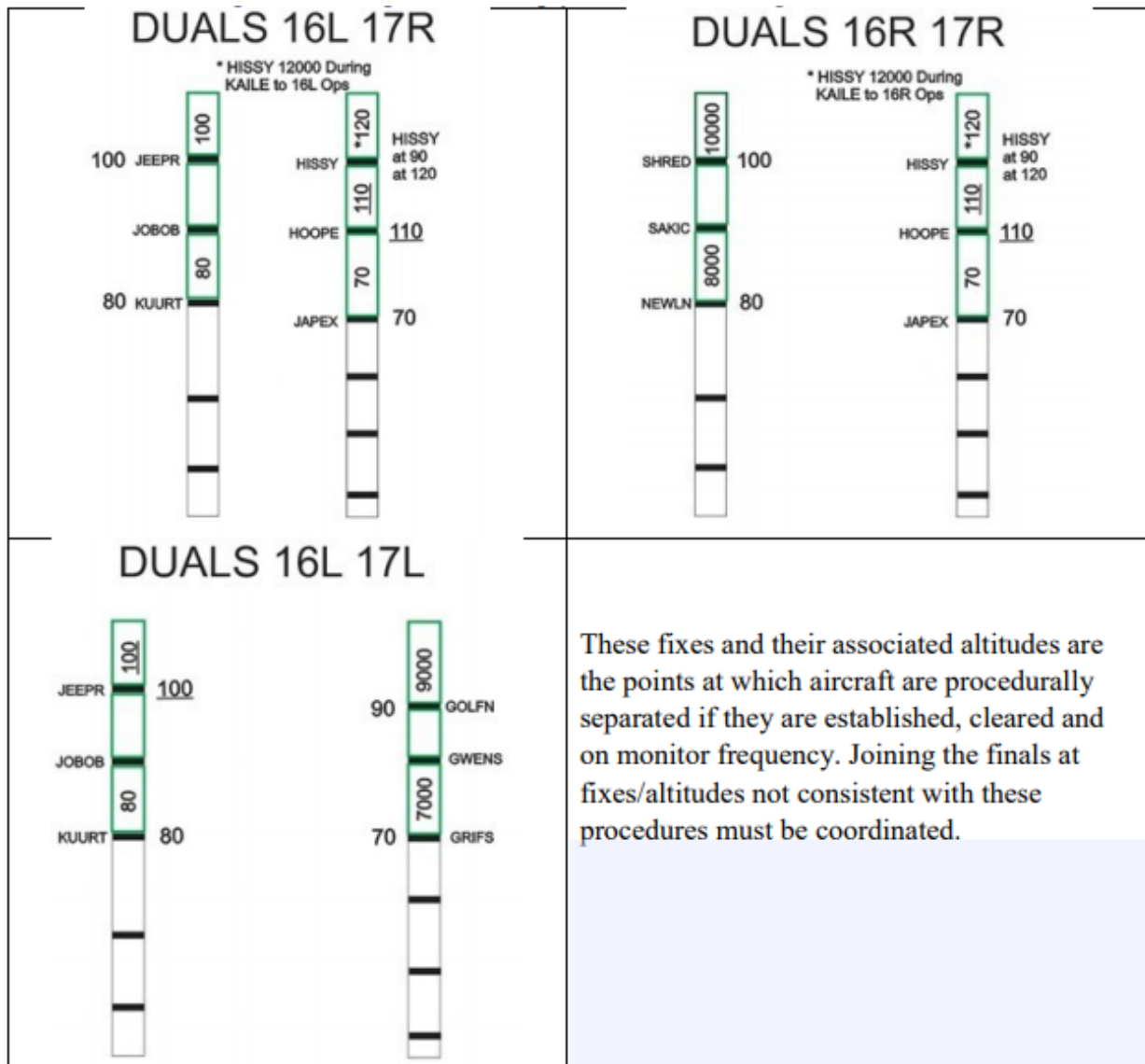


Figure 8. Dual ILS/RNAV Land South

**3-4-9. Dual ILS/RNAV Land West**

When conducting dual dependent instrument approaches in a Land West configuration, the following must apply:

1. FR working Runway 26 must be established 3NM outside of FUZZZ at 9000.
2. FR working Runway 25 must be established outside of ETHAL at 10000.

**3-4-10. Dual ILS/RNAV Land East**

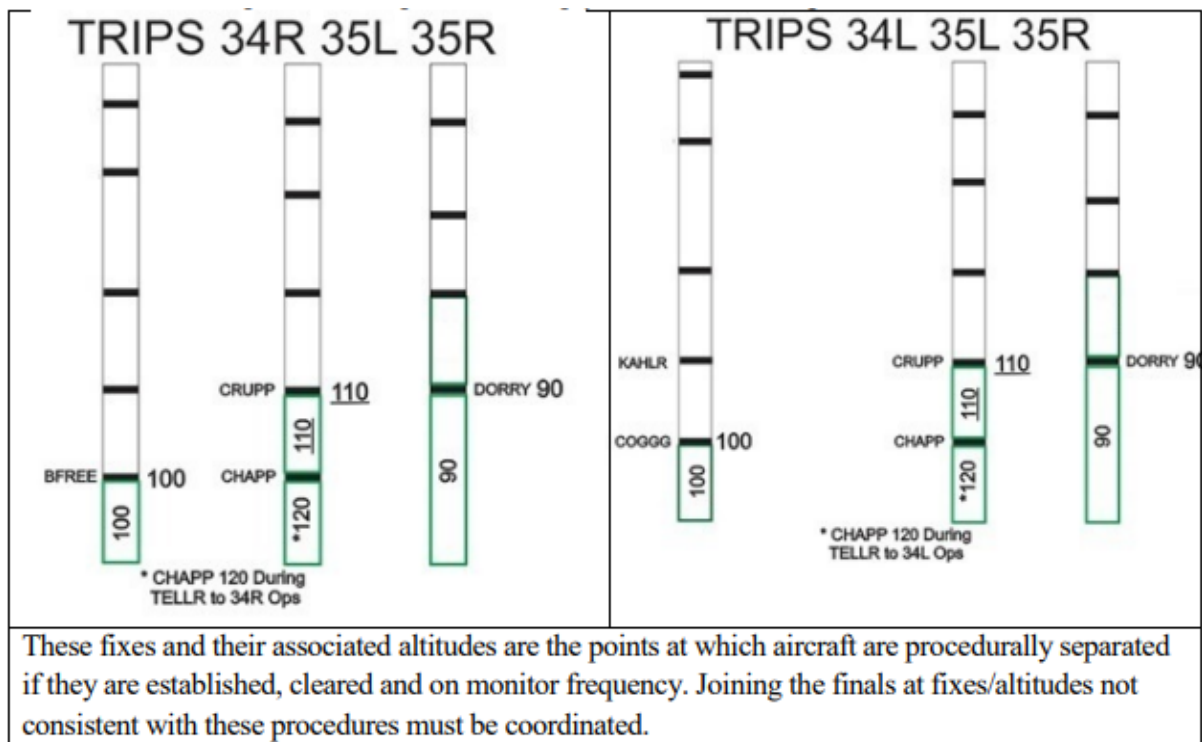
When conducting dual dependent instrument approaches in a Land East configuration, the following must apply:

1. FR working Runway 7 must be established 3NM outside of SARAH at 9000.
2. FR working Runway 8 must be established outside of LIPPS at 10000.

**3-4-11. Triple ILS/RNAV Land North**

When conducting triple dependent instrument approaches to the north, the following must apply:

1. FRC must cross CHAPP at or above 12,000 except when the TELLR P-ACP Area is not in use to Runways 34L/R, then FRC may cross CRUUP at or above 11,000.
2. For ensured procedural separation, comply with the following:



**3-4-12. Triple ILS/RNAV Land South**

When conducting triple dependent instrument approaches to the south, the following must apply:

1. FRC must cross HISSY at or above 12,000, except when the KAILE P-ACP Area is not in use to Runways 16L/R, then FRC may cross HOOPE at or above 11,000.
2. For ensured procedural separation, comply with the following:

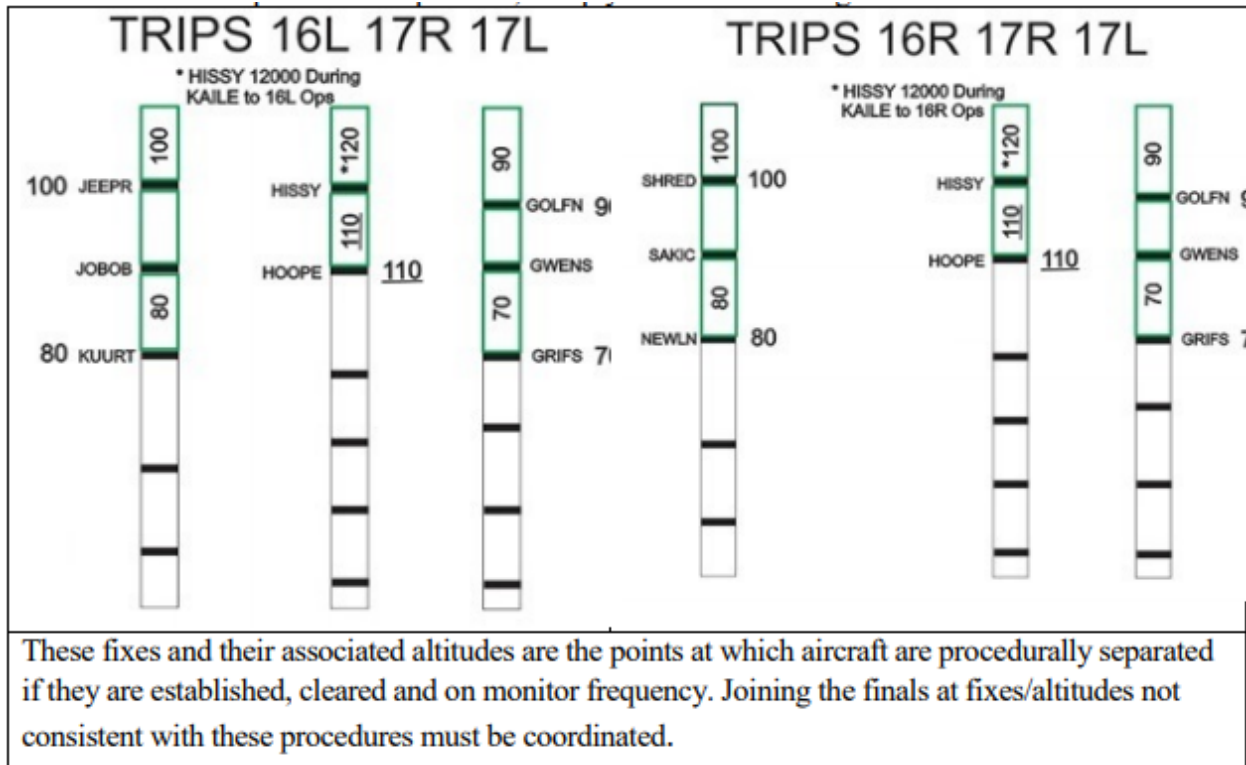


Figure 10. Triple ILS/RNAV Land South

**3-4-13. Simultaneous Independent ILS/RNAV Approaches**

Simultaneous Independent Parallel Approaches to the parallel runway pairs listed in the table below are approved.

RUNWAY PAIR	CENTERLINE SPACING
RWYs 34L & 35L	10,200 feet
RWYs 34L & 35R	15,500 feet
RWYs 34R & 35R	12,900 feet
RWYs 16R & 17R	10,200 feet
RWYs 16R & 17L	15,500 feet
RWYs 16L & 17L	12,900 feet

Table 2. EoR Runway Pairs for Widely Spaced

**Note-** Operations conducted are subject to the DEN and D01 LOA.

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## Section 5. Departure Radar (DR)

### 3-5-1. Departure Radar Airspace Assignment

DR shall control traffic in the airspace depicted in Appendix 2.

### 3-5-2. Departure Radar Responsibilities

1. DR must ensure all DEN arrival STARS data blocks under their control are forced onto all AR scopes through the use of quicklook or point out.
2. DR3 controls departures from, and arrivals to CFO. In the event P-ACP is not being utilized, these aircraft must be coordinated with the appropriate FR position.
3. DR4 controls departures from, and arrivals to BKF. In the event P-ACP is not being utilized, these aircraft must be coordinated with the appropriate FR and SR4 positions. DR4 must initiate the BKF 'SLIDE' (F16, BKF) or BUCKLEY ONE SID.
4. DR4 must state the portion of the sandbox (Sandbox South or Sandbox North and South) and specify if it will be used for an arrival or departure when coordinating use of the Sandbox. The global entry to display the appropriate BKF sandbox area ("F16, SBS" or "F16, SBA") must be used when the Sandbox is active.

### 3-5-3. Departure Radar Procedures

1. 'Climb Via' procedures should be used to the extent possible.
2. When handing off to another DR sector, heading and altitude need not be coordinated when the aircraft is cleared direct to a SID exit fix located on the D01 and ZDV boundary or on a heading to join a departure SID radial climbing to 12,000, FL230, or lower filed altitude. RNAV satellite departures filed over YAMMI may be cleared direct TIMEH.
3. DEN Arrivals. DR/SR must handoff aircraft to FR positions at least 10 NM from the lateral boundary and as follows:
  - a. Assigned a heading that will maintain a track perpendicular to the final approach course, or 20 degrees toward the airport. Exception; Aircraft entering FR airspace at or below 9000 may be assigned any heading.
  - b. Established on the final approach course or assigned a heading to be established prior to 5NM inside the FR airspace.
    - i. Aircraft assigned Runway 34R will be at 10,000.
    - ii. Aircraft assigned Runway 35L will be at 12,000.
    - iii. Aircraft assigned Runway 35R will be at 9,000.

- c. Prior to transferring communication, assign a speed of 210 knots or less.
  - d. Transfer communication of aircraft as soon as practical, but no later than 5NM from the FR lateral boundary, after FR has accepted a radar handoff.
- 4. Satellite Arrivals. DR may handoff satellite airport arrival aircraft to the SR positions:
  - a. 'Descending Via' an RNAV STAR/Runway Transition.
  - b. Established on a heading that will maintain a track within 20 degrees of direct to the satellite arrival airport or perpendicular to the final approach course, plus or minus 20 degrees.
  - c. Aircraft on a downwind must be on a track parallel to the final approach course.
  - d. Aircraft not 'Descending Via' an RNAV STAR/Runway Transition must be descending to the lowest altitude available to the radar position initiating the handoff, based on MVAs and airspace and assigned a speed of 250 knots or less.
- 5. Satellite Departures.
  - a. SR4 releases control (in SR4 airspace) to DR1/SR1 for climb and turns toward the assigned departure gate for aircraft handed off in accordance with 3-6-3.2a.
  - b. SR4 releases control to DR4 for climb and turns toward the assigned departure gate for aircraft handed off in accordance with 3-6-3.2c.
- 6. AR may hand off satellite airport arrival aircraft to DR/SR "Descending Via" an RNAV STAR/Runway Transition, or descending to maintain the lowest altitude available to the AR position, based on MVA and assigned airspace, at an assigned airspeed at 250 knots or less.
- 7. DR4 may initiate an automated point out to SR4 on an arrival aircraft descending to 9,000.
- 8. DR positions may initiate an automated point out to another DR position on satellite airport departures or overflights. Acceptance of the automated point out allows the aircraft to proceed into the departure gate climbing to FL230 or filed lower altitude as long as the departure is on course within 15NM of the departure airport.

- 
9. DR positions may initiate an automated point out to another DR or SR position on VFR satellite arrivals. Acceptance of the automated point out allows the aircraft to proceed direct to the landing airport indicated in the scratchpad. The landing airport must be within the receiving controller's airspace, and the aircraft must remain outside Class B airspace.
  10. DR4 must:
    - a. During dual or triple dependent instrument approaches, ensure BKF Runway 32 arrivals maintain 8,000 or lower until established on the localizer or final approach course.
    - b. During dual or triple dependent instrument approaches, depart BKF Runway 32 or via the BUCKLEY ONE DEPARTURE to the maximum extent practical.
  11. When DR1/SR1 or DR4 initiate a handoff to SR4 on an APA arrival, they release control to SR4 for descent and turns toward the airport.
  12. When DR1/DR4 or SR4 initiate a handoff to SR1 on a BJC arrival, they release control to SR1 for descent and turns toward the airport.
  13. DR2/SR2 does not need to coordinate headings, altitude and speed when handing off to SR1 - when aircraft are via an RNAV arrival or direct BJC VOR at 9,000.
  14. DR3 does not need to coordinate heading, altitude and speed when handing off aircraft to SR4 - on a heading to enter SR4's 9,000 airspace shelf at 9,000.

#### **3-5-4. Pre-Arranged Coordination Procedures**

1. Prerequisites to utilizing P-ACP.
  - a. General
    - i. STARs must be used.
    - ii. All radar positions must ensure filter limits are set to ensure data blocks display the position symbol and Mode C readout.
      1. Update your POF/Alias/SCT and vSTARS files to the most current file in order to comply with this requirement.
  - b. DR must:
    - i. Be responsible for maintaining approved separation between aircraft under their control and all AR and FR aircraft within the approved P-ACP area for the departure sector.
  - c. DR is required to use P-ACP any time there is FR airspace contained in a departure gate and the respective departure controller is receiving aircraft



on tower assigned heading/RNAV routes, not encompassed within their delegated airspace. The DR controller must use P-ACP between their traffic and all traffic in the departure's airspace in which the tower assigned headings/RNAV routes are contained. If the departure will proceed beyond 20NM from the approach end of Runway 17R, a point out to the appropriate DR is required.

- d. DR may use P-ACP with AR & FR in accordance with the following:
  - i. The aircraft must be within the lateral boundaries of D01 airspace between the surface and FL230 and within the departure controller's P-ACP area.
  - ii. Under the provisions of paragraph 3-5-4, DR may allow aircraft under their control to enter AR and/or FR airspace from outside their P-ACP area provided the aircraft is turning toward the airspace of the DR position utilizing P-ACP.
  - iii. Prior to entering the FR P-ACP Areas depicted in paragraph 3-4-4, DR must determine which FR position is using the area. This may be determined by observing the control position data block of aircraft in the area.
  - iv. All DR positions are authorized to use Mode C for vertical separation purposes provided the procedures contained in this order are applied.

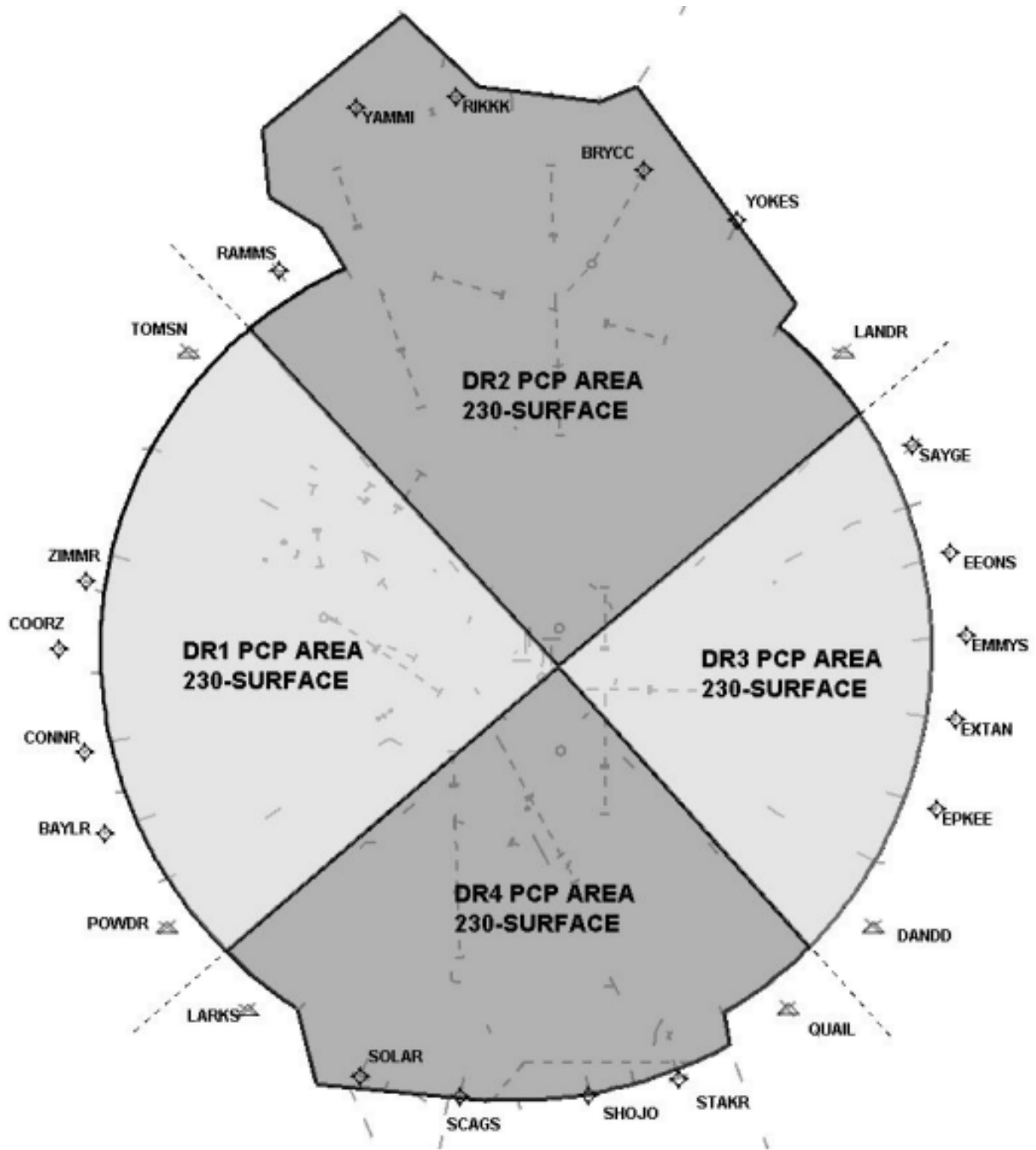


Figure 11. DR P-ACP Areas

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## Section 6. Satellite Radar (SR)

### 3-6-1. SR1, 2, and 4 Airspace Assignment

1. SR must control traffic in the airspace depicted in Appendix 3.
2. When landing north at DEN and in Duals or Trips feed, SR4 must relinquish the SR4 Shelf airspace to FR (See Appendix 3).

### 3-6-2. Satellite Radar Responsibilities

1. SR must ensure all DEN arrival STARS data blocks under their control are forced onto all AR scopes through the use of quicklook or point out.

### 3-6-3. Satellite Radar Procedures

1. Satellite Arrivals. SR will not receive heading/speed/altitude coordination in the following situations:
  - a. 'Descending Via' an RNAV STAR/Runway Transition.
  - b. Established on a heading that will maintain a track within 20 degrees of direct to the satellite arrival airport or perpendicular to the final approach course, plus or minus 20 degrees.
  - c. Aircraft on a downwind must be on a track parallel to the final approach course.
  - d. Aircraft not 'Descending Via' an RNAV STAR/Runway Transition must be descending to the lowest altitude available to the radar position initiating the handoff, based on MVAs and airspace and assigned a speed of 250 knots or less.
2. SR4 is not required to coordinate heading, speed, or altitude when handing off APA departures to the following:
  - a. SR1/DR1 - When exiting the West, North, or East departure gate and assigned a heading between 300 and 320, climbing to 8000 if APA is landing north; or climbing to 9000 if APA is landing south. SR4 releases control (in SR4 airspace) to SR1 for climb and turns toward the assigned departure gate.

**NOTE-** *If the aircraft is given to DR1, a point out must be accomplished with SR1.*
  - b. DR3 – On an assigned heading toward the receiving controller's airspace at 8000.
  - c. DR4 - When exiting the South gate and assigned a heading between 150 and 200, or when exiting the East or North gate and assigned a heading between 070 and 125, climbing to the highest usable SR4 altitude. SR4

releases control to DR4 for climb and turns toward the assigned departure gate.

3. SR4 has control for descent and turns toward the airport on APA arrivals handed off from DR1/SR1 or DR4, but only within the airspace of the controller who initiated the handoff.
4. SR1 is not required to coordinate heading, speed, or altitude when handing off to the following:
  - a. DR1 – Highest usable SR1 altitude – SR1 releases control to DR1 for climb and turns toward assigned departure gate.
  - b. DR2 – On an assigned heading towards the receiving controller’s airspace at 8000.
  - c. SR4 – Aircraft landing APA at 9000 if APA is landing north, or 8000 if APA is landing south.
  - d. DR4 – Highest usable SR1 altitude. SR1 releases control to DR4 for turns toward the departure gate, and climbs.  
**NOTE:** *if the aircraft is given to DR4, a point out must be accomplished with SR4.*
5. SR1 has control for descent and turns toward the airport on BJC arrivals handed off from DR1, DR2, SR2, SR4, or DR4, but only within the airspace of the controller who initiated the handoff.
6. SR positions may initiate an automated point out to another SR or DR position on VFR satellite arrivals. Acceptance of the automated point out allows the aircraft to proceed direct to the landing airport indicated in the scratchpad. The landing airport must be within the receiving controller’s airspace, and the aircraft must remain outside Class B airspace.
7. Issue IFR clearances to aircraft at uncontrolled airports.
  - a. When contacted by an aircraft on the ground at an uncontrolled airport requesting an IFR clearance, issue the clearance as follows:
    - i. Clear aircraft to their destination as filed on the Flight Strip or flight plan window including all amendments.
    - ii. Assign an initial altitude of 8,000.
    - iii. Advise the aircraft to expect filed altitude 10 minutes after departure.
    - iv. Assign the aircraft a discrete Beacon Code.
    - v. Advise the aircraft to hold for release.

8. IFR Clearances via Obstacle Departure Procedures.

- a. Clear all aircraft departing 1V6 via the Fremont County Obstacle Departure Procedure.
- b. If requested by the pilot, issue the ODP as part of the initial clearance.

**Example** - "CLEARED TO (DESTINATION) VIA THE ERIE MUNI OBSTACLE DEPARTURE PROCEDURE, THEN AS FILED"

- c. If the final fix of the ODP is not on the route of flight, clear aircraft from the final ODP fix direct to the first fix on their route of flight.

**Example** - "CLEARED TO (DESTINATION) VIA THE FREMONT COUNTY OBSTACLE DEPARTURE PROCEDURE, PUB, DIRECT RODDY, THEN AS FILED."

Airport	Final Fix
GXY	GLL
LMO	GLL
FNL	GLL
EIK	BJC
BJC	DEN
CFO	DEN
1V6	PUB

Table 3. ODP Final Fixes

- d. Depending on route of flight, the LMO ODP may require aircraft to cross GLL at an altitude above 8000. Aircraft assigned the LMO ODP whose route and requested altitude would necessitate crossing GLL above 8000 shall have their clearance limit changed to GLL and assigned an initial altitude of 8000.

**Example** - "CLEARED TO GILL VOR VIA THE VANCE BRAND OBSTACLE DEPARTURE PROCEDURE. EXPECT NO DELAY AT GILL. MAINTAIN 8000."

9. The airports listed in Table 4 have established Diverse Vector Areas (DVAs). Aircraft may be vectored below the MVA, as long as the following criteria are met:
- a. Aircraft must be assigned an altitude at or above the MVA.
  - b. Aircraft must exit the confines of the DVA at or above the MVA.
  - c. The assignment of the initial heading within the DVA must be given prior to departure (either as part of the initial clearance or as part of the takeoff clearance).

Airports	Runways	Headings	Distance from Airport
BJC	30L & 30R	345 Clockwise 150	15 NM
	12L & 12R	335 Clockwise 165	
	3	340 Clockwise 170	
	21	030 Clockwise 160	
FNL	All	350 Clockwise 180	15 NM
GXY	All	Any	14 NM

Table 4. DVA Headings

10. BJC Diverse Vector Area. When BJC Tower is closed, the Class D surface area reverts to Class G, uncontrolled airspace. ATC may not assign a direction of turn to aircraft departing in Class G airspace. Therefore, controllers who wish to use the DVA must ensure compliance with the direction of turn requirements via some other method before vectoring an aircraft below the MVA.
11. CFO Free Vector Area. A Free Vector Area exists at CFO that is functionally identical to a DVA, without specific runway, heading, or distance restrictions.
12. Release IFR aircraft from uncontrolled airports via one of the following methods:
- a. Assign an initial heading from Table 5.

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<b>Airport</b>	<b>Headings</b>
FNL	Any within DVA (Include direction of turn)
BJC	Any within DVA
GXY	Any
CFO	Any
BDU	020-145
LMO	020-160
EIK	350-170

Table 5. Assignable Headings

- i. For FNL departures, specify a direction of turn within the DVA. Departures from Runway 33 must be assigned a right turn.
  - ii. For all airports except FNL, assign the heading to be flown when entering controlled airspace.
  - iii. For all other airports not listed in Table 5, controllers must use their best judgment in determining an initial heading.
- b. Assign the Obstacle Departure Procedure (ODP).

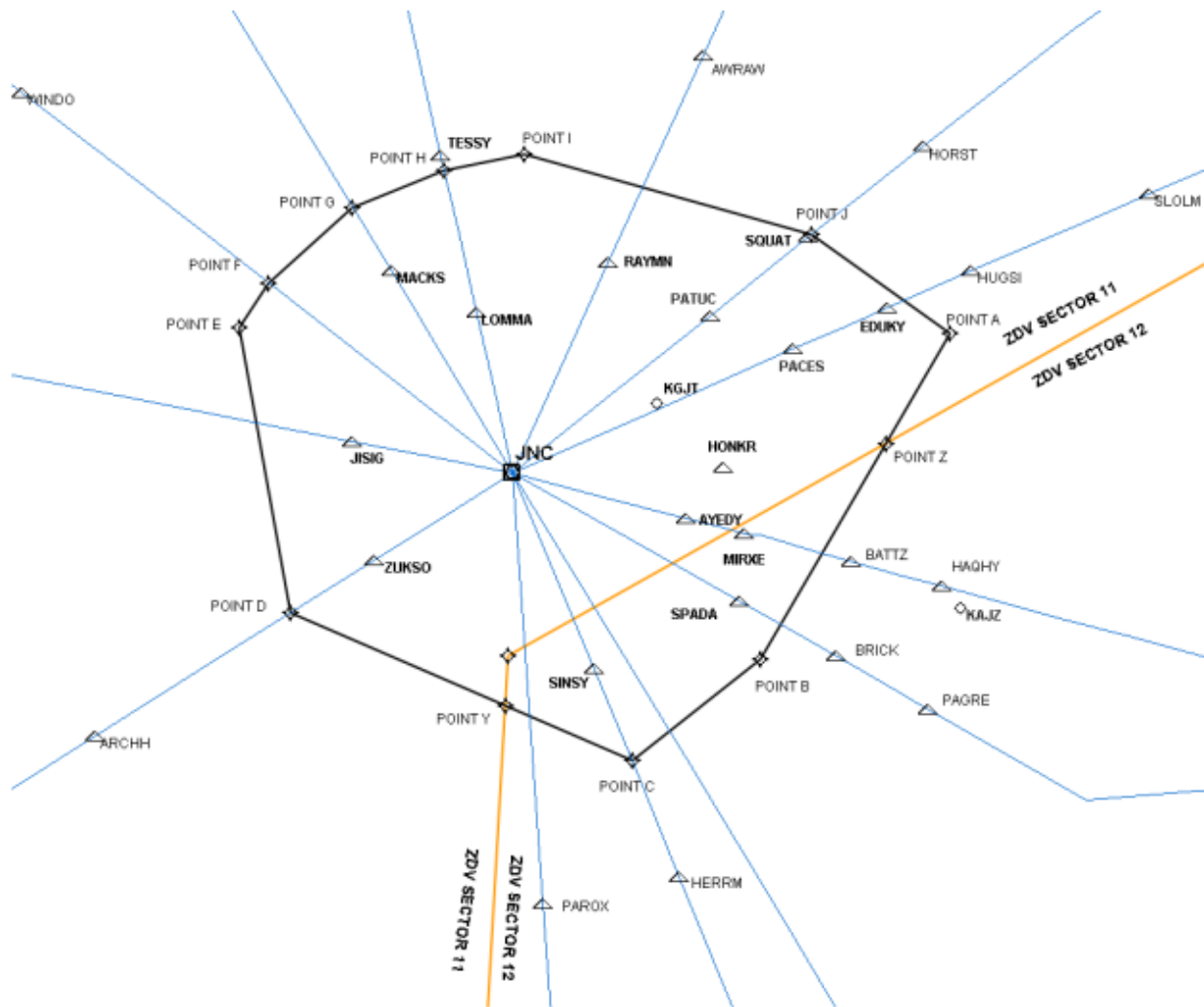
## Chapter 4. Grand Junction

### 4-1-1. Airspace

14,000 MSL and below as depicted in the ZDV and D01 LOA and Figure 12.

### 4-1-2. Junction Radar (JR) Responsibilities

JR must control traffic in the airspace depicted in Figure 12.



Grand Junction Airspace 14,000 to Surface  
(Effective October 15, 2015)

Figure 12. JR Airspace



## Chapter 5. Pueblo

### 5-1-1. Airspace

12,000 MSL and below as depicted in the ZDV and D01 LOA and Figure 13.

### 5-1-2. Pueblo Radar (PR) Responsibilities

1. PR must control traffic in the airspace depicted in Figure 13.
2. All IFR departures at Fremont County (1V6) shall be cleared via the obstacle departure procedure.

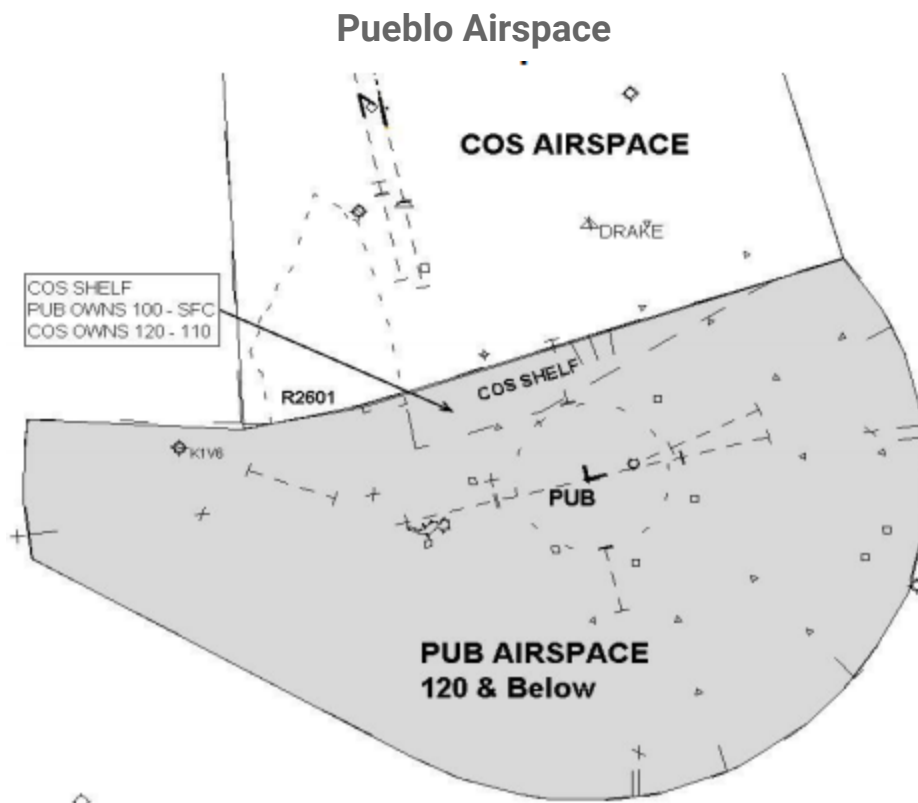
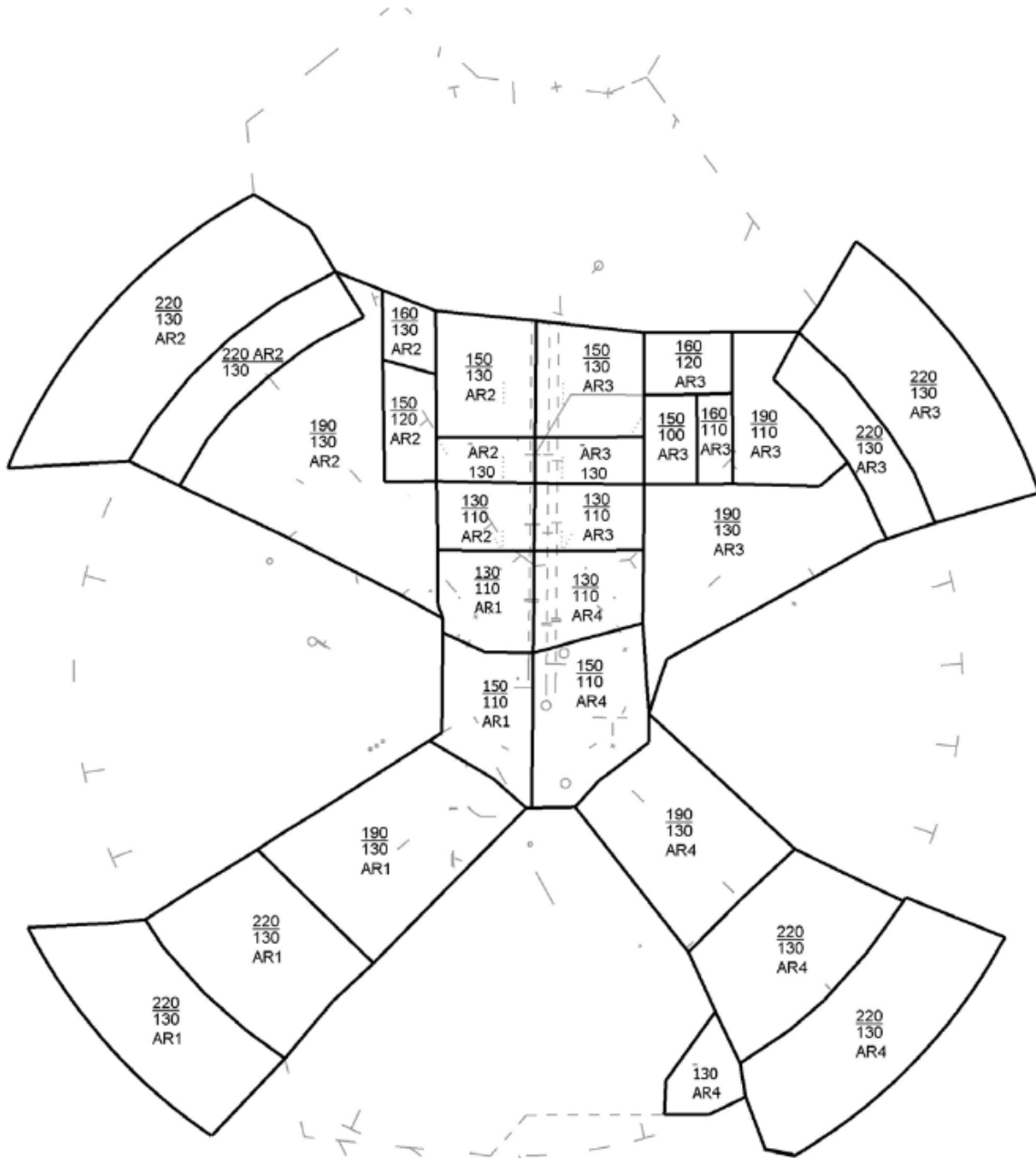


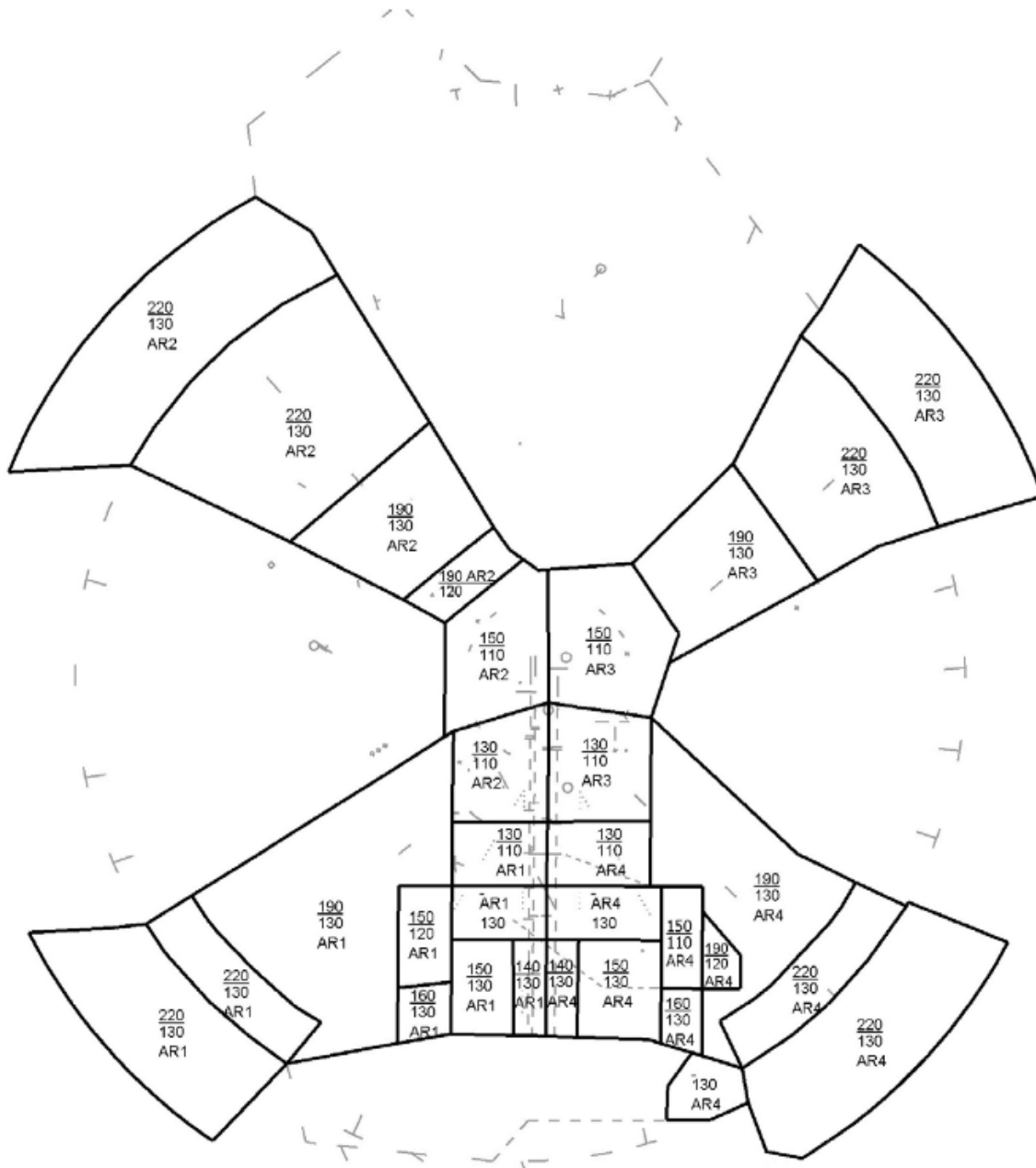
Figure 13. PR Airspace

# Appendix 1: AR Airspace

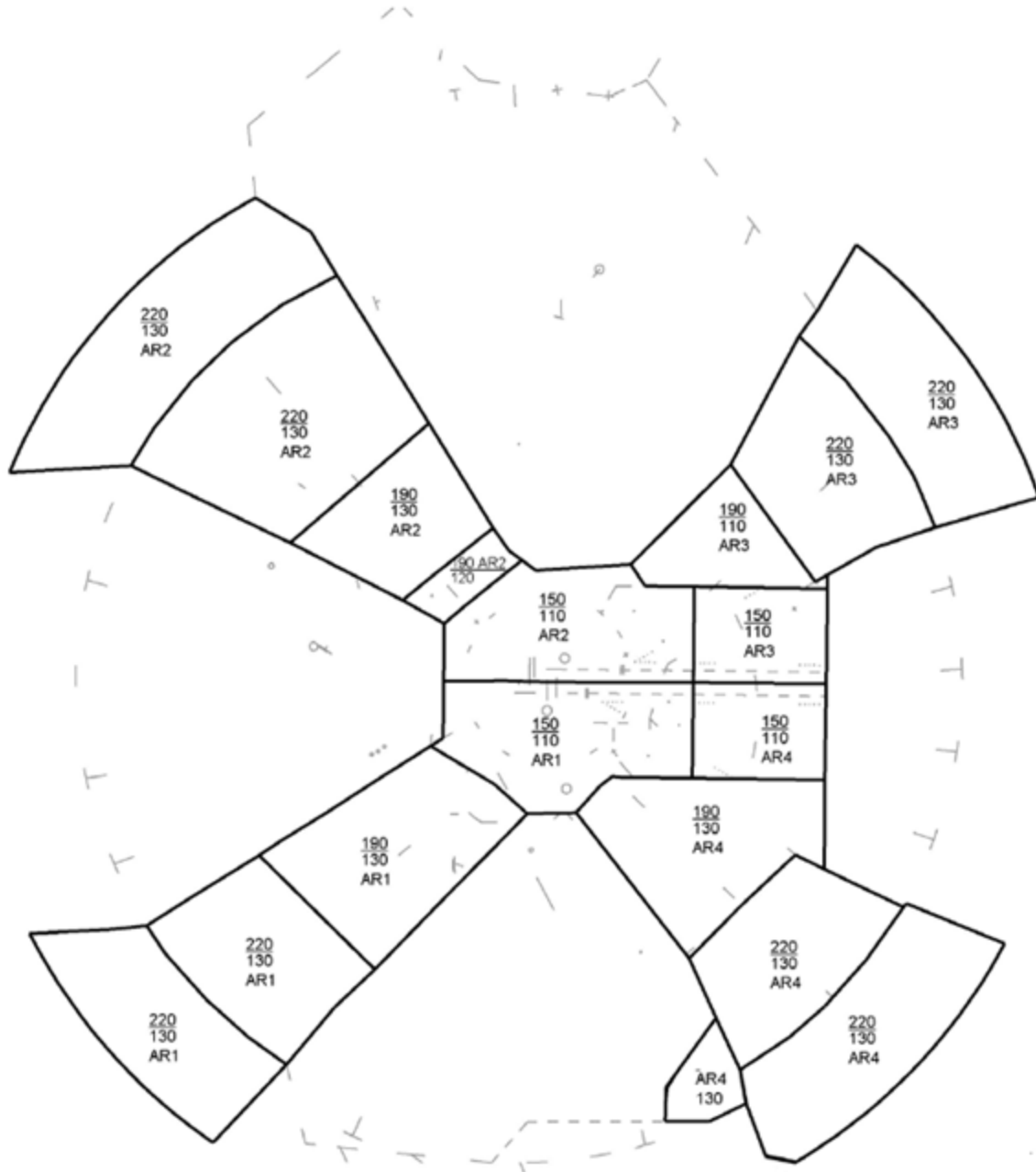
## Appendix 1A: AR Airspace Land South



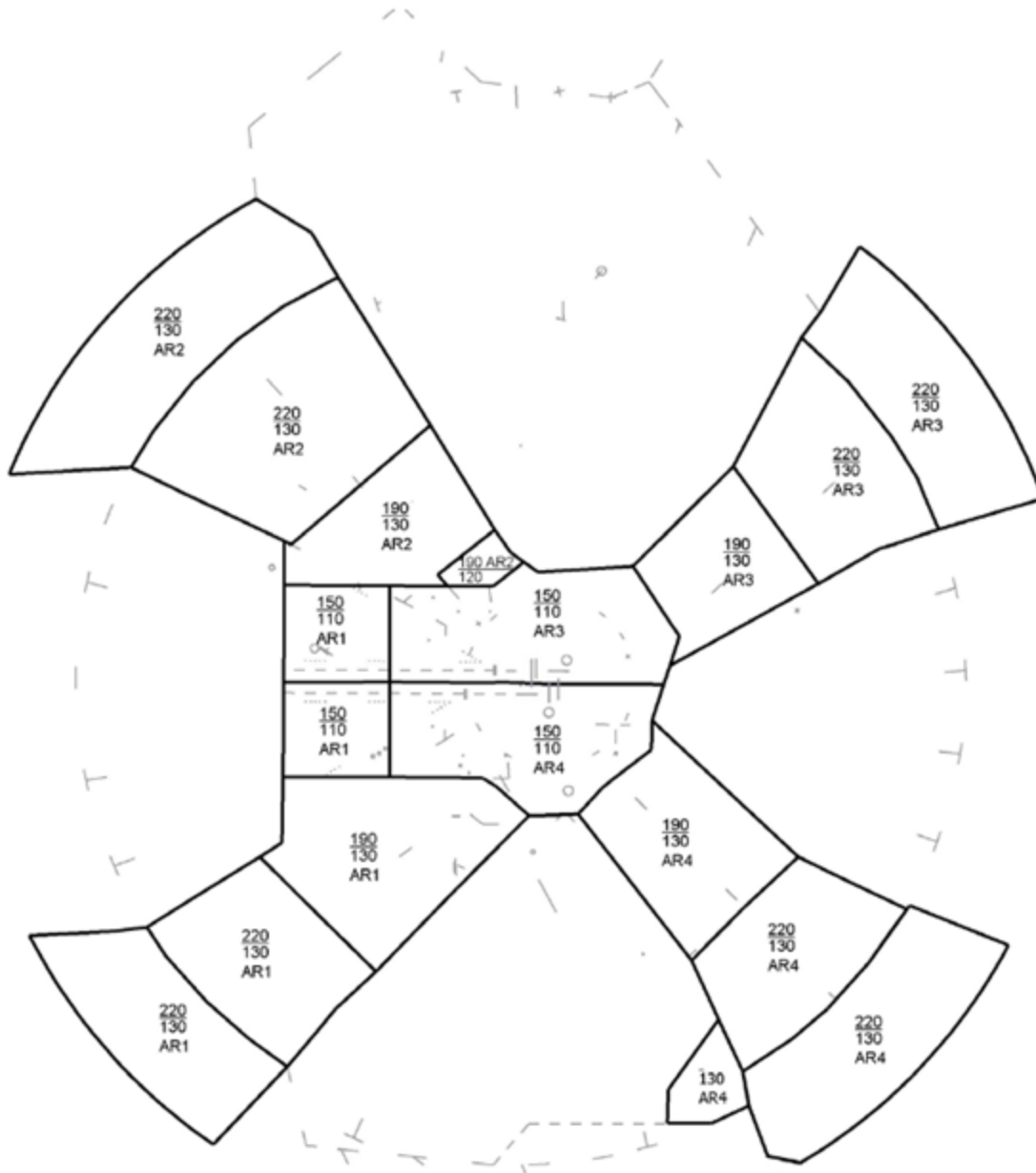
## Appendix 1B: AR Airspace Land North



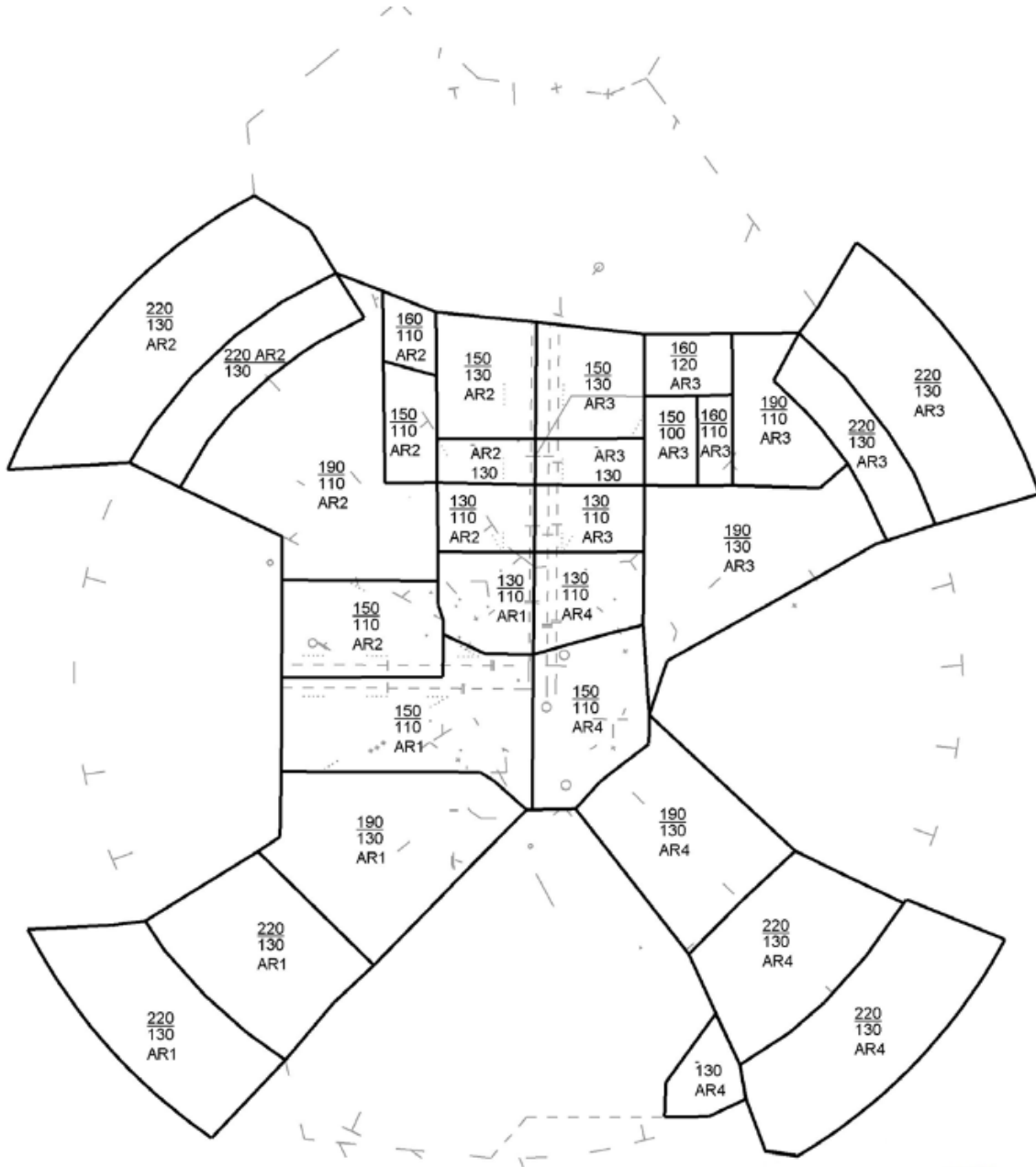
## Appendix 1C: AR Airspace Land West



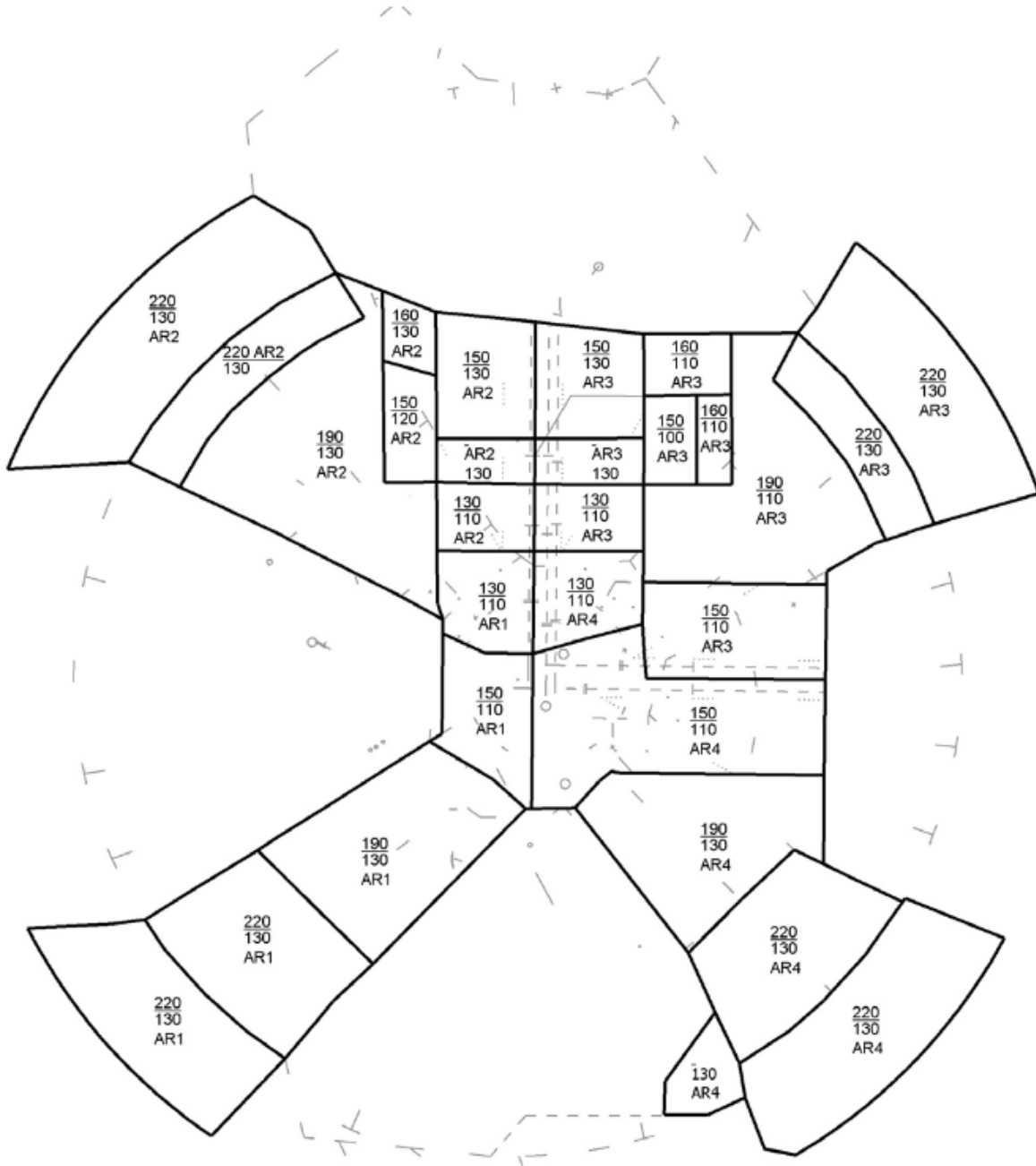
## Appendix 1D: AR Airspace Land East



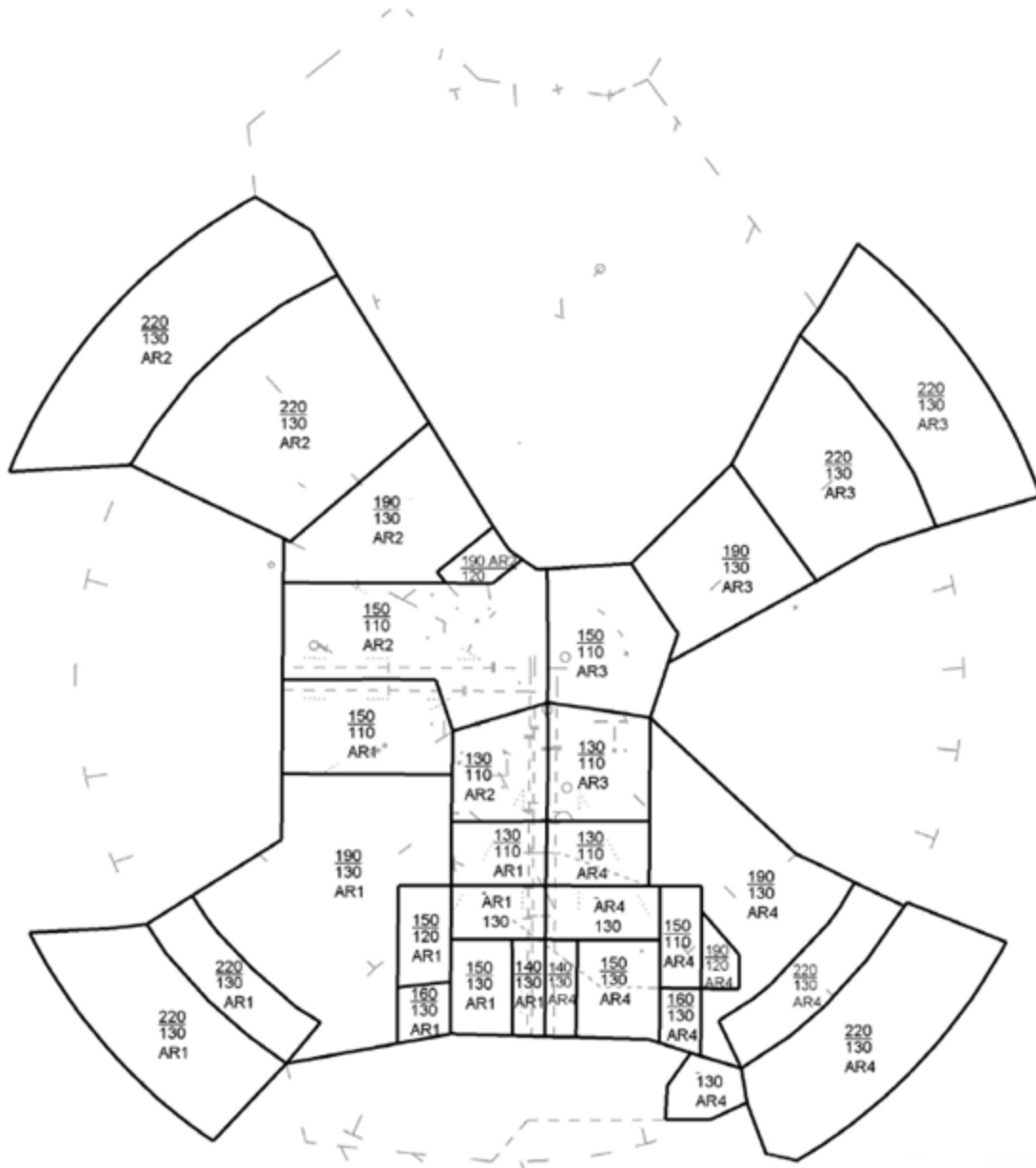
## Appendix 1E: AR Airspace Land South and East



## Appendix 1F: AR Airspace Land South and West

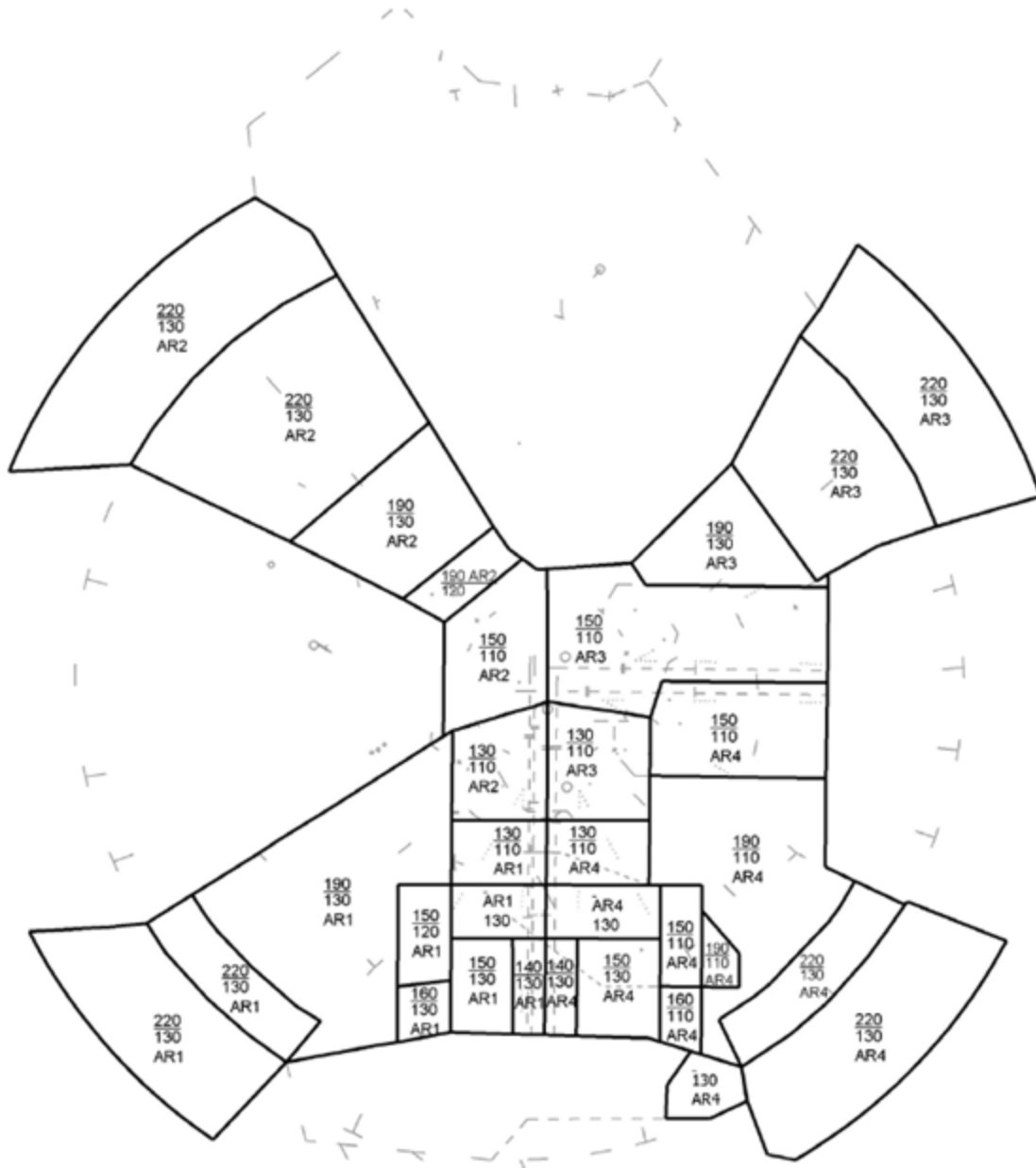


## Appendix 1G: AR Airspace Land North and East

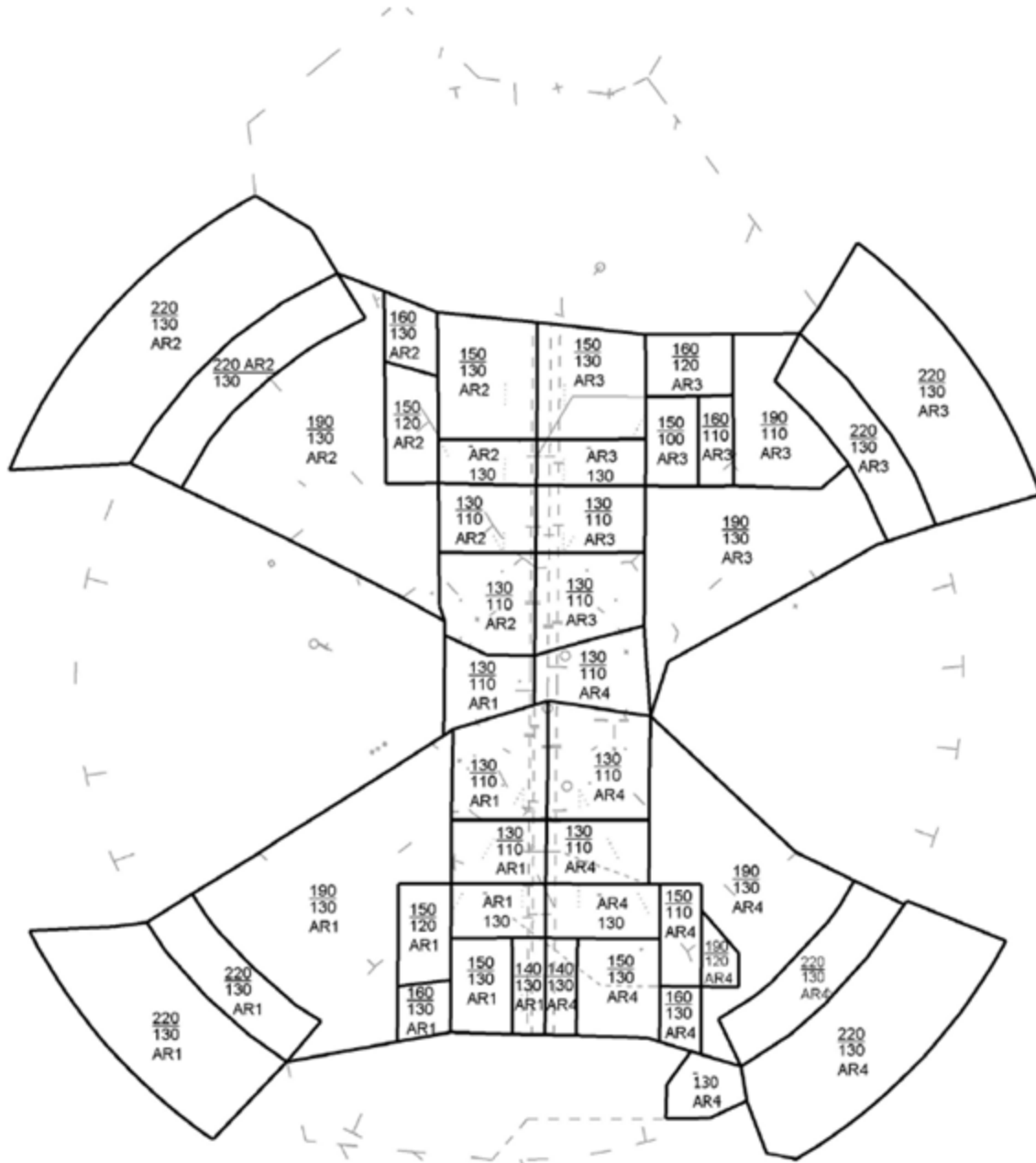




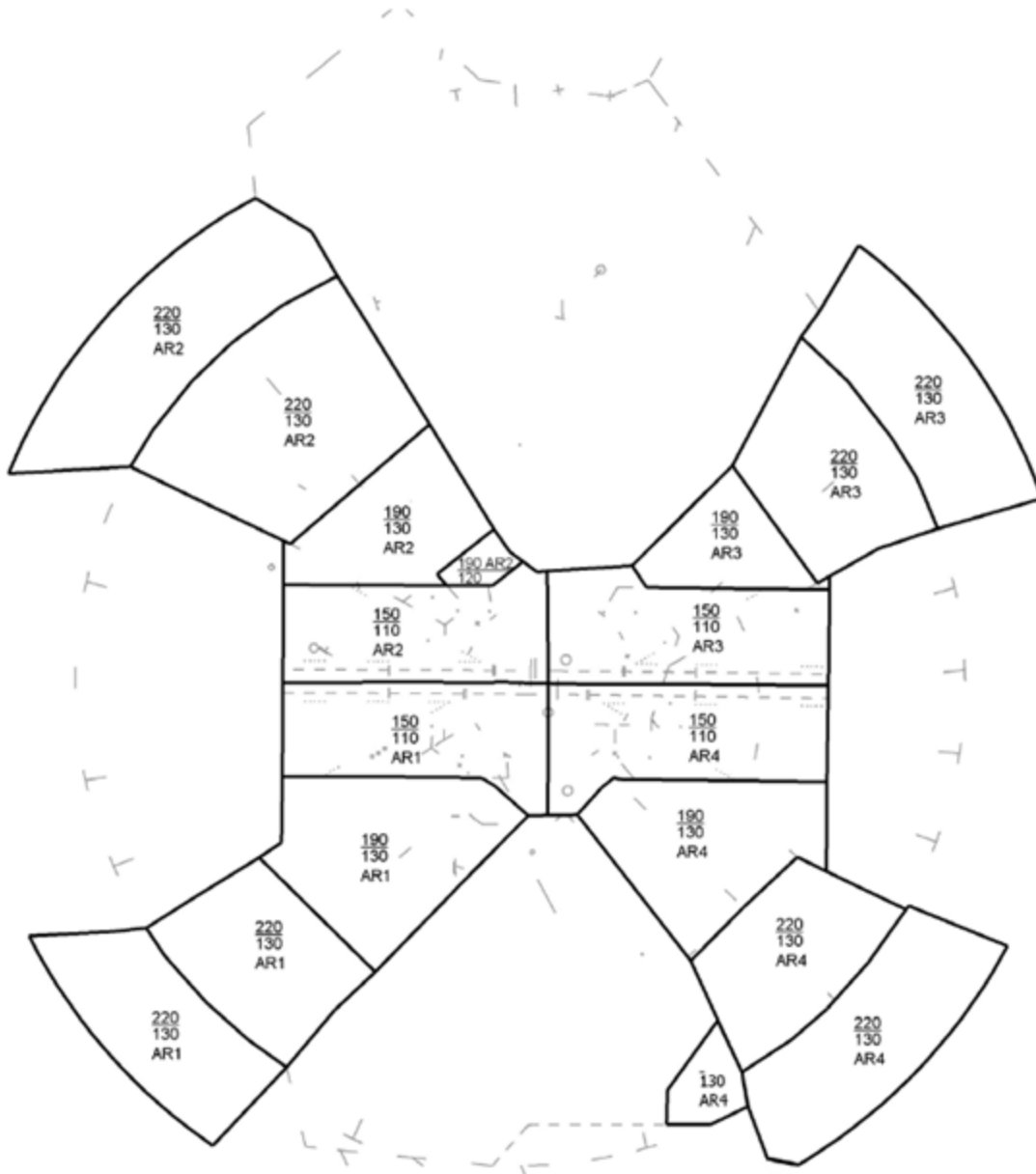
## Appendix 1H: AR Airspace Land North and West



## Appendix 1I: AR Airspace Land North and South

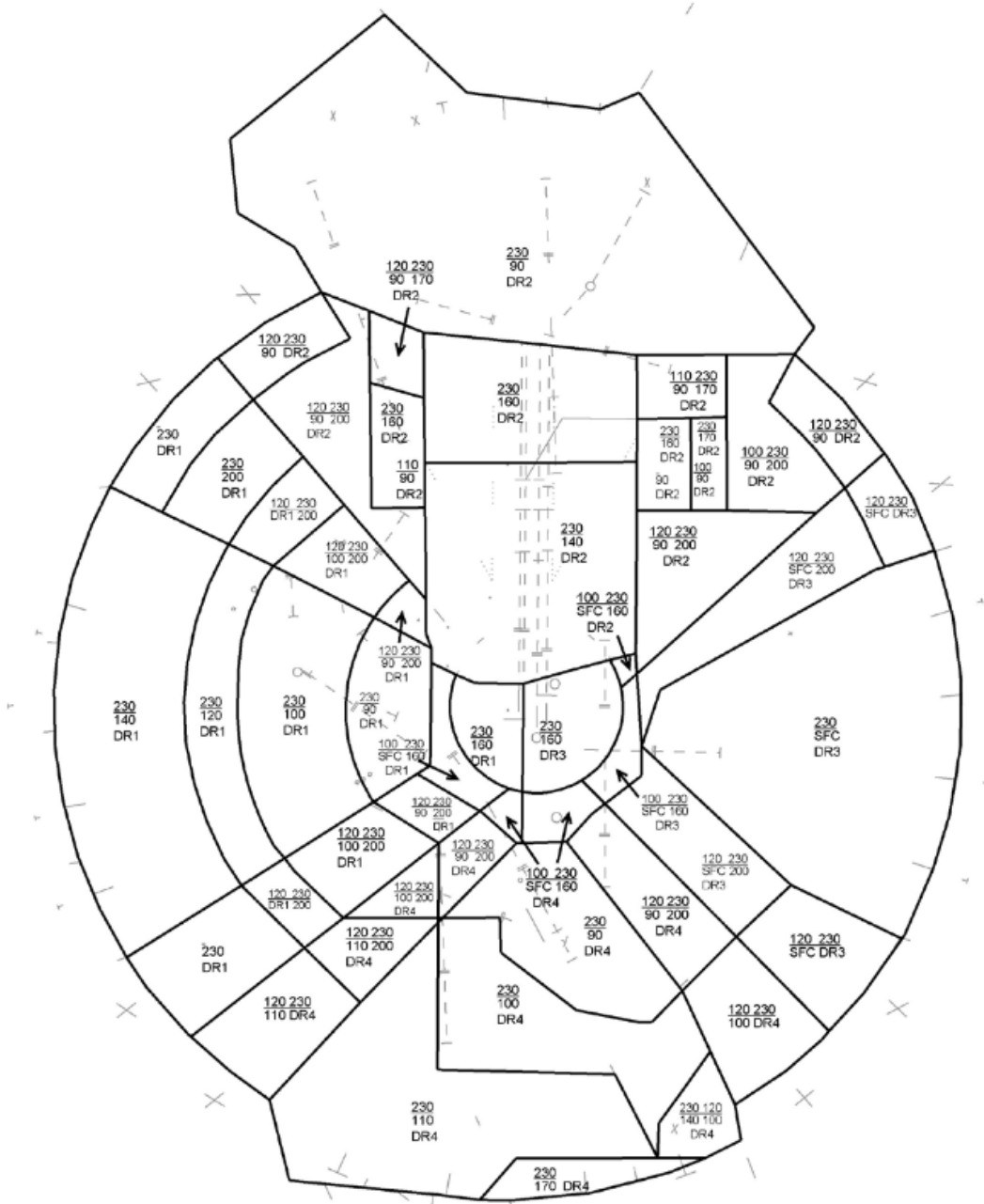


## Appendix 1J: AR Airspace Land East and West

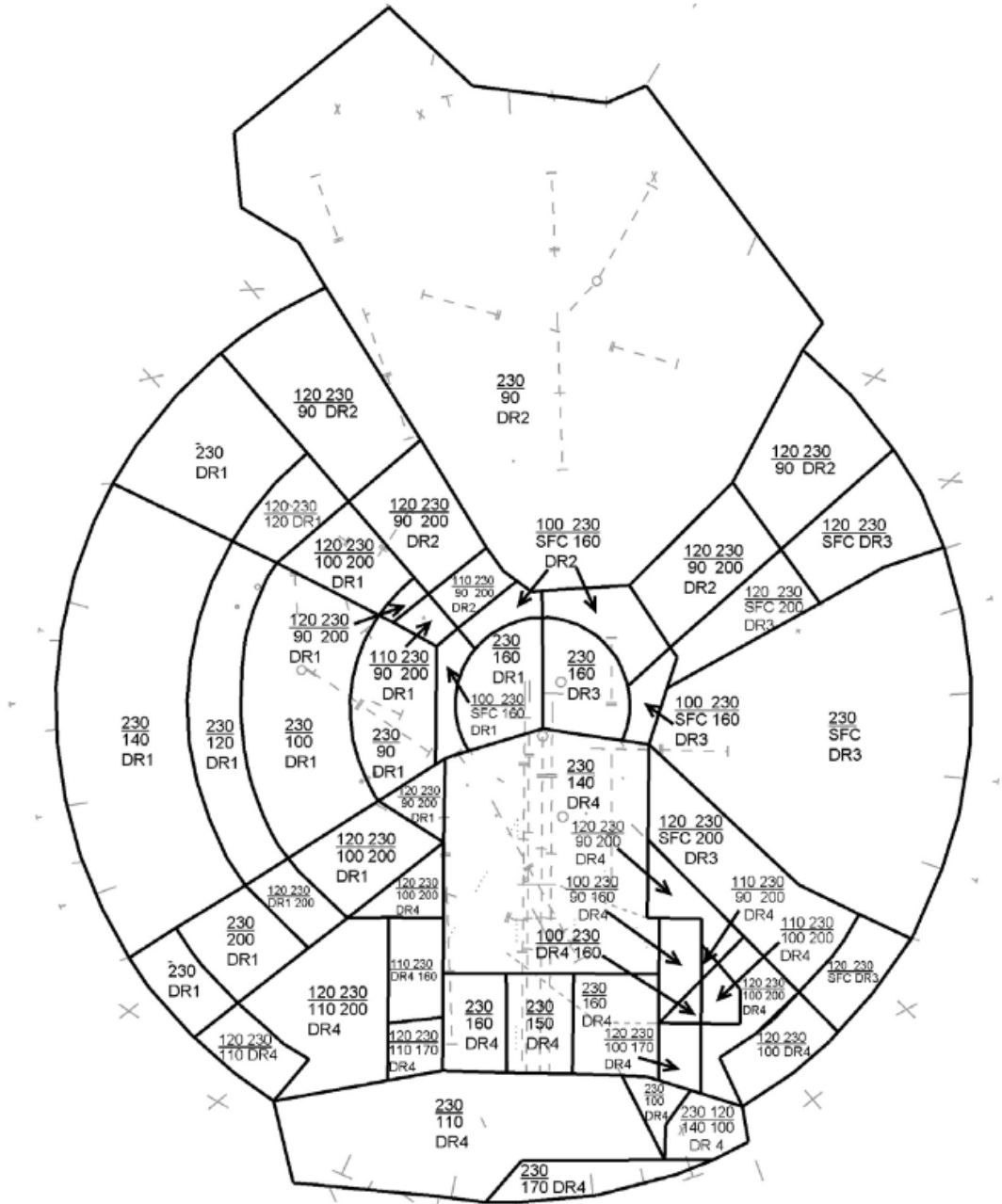


# Appendix 2: DR Airspace

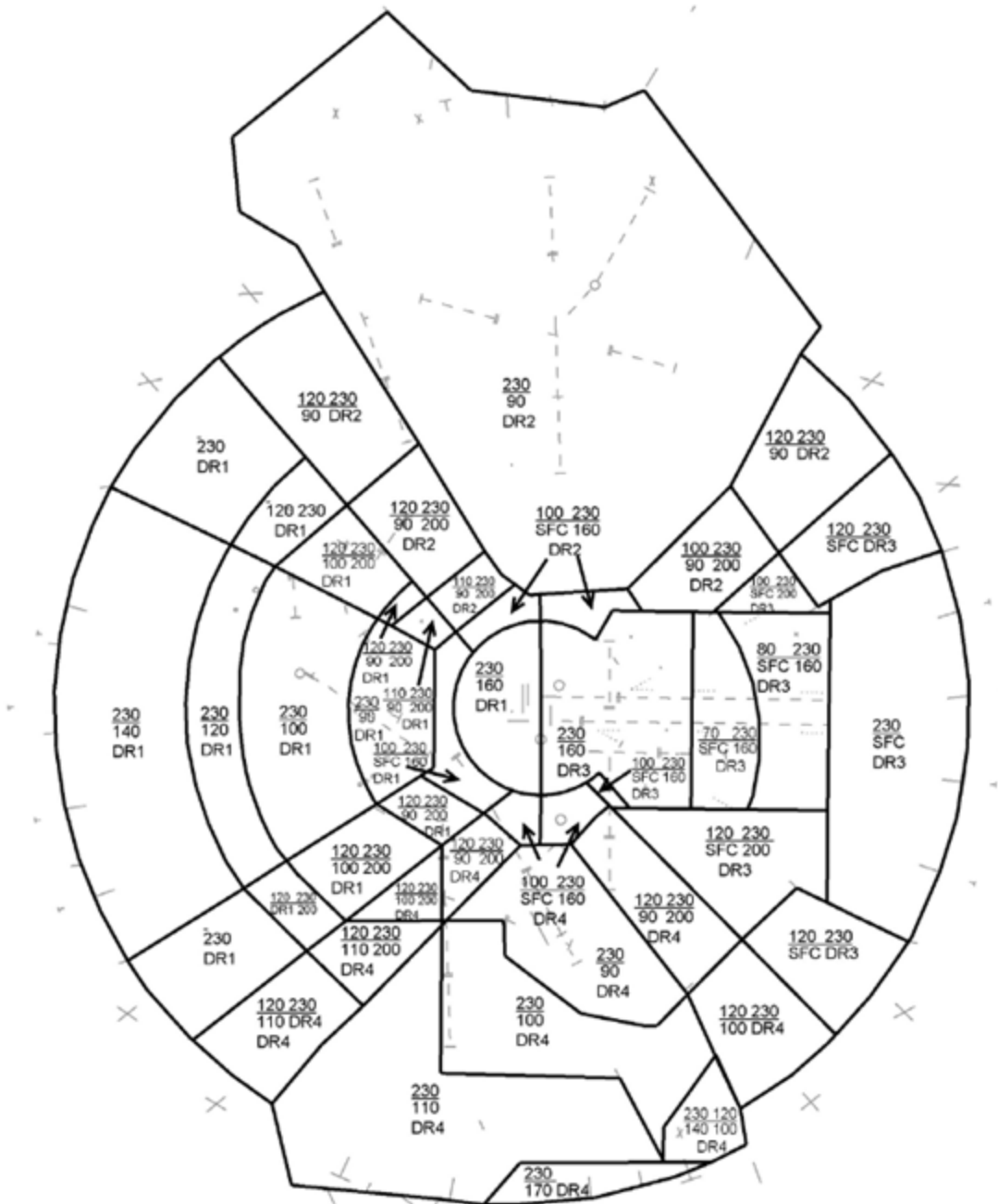
## Appendix 2A: DR Airspace Land South



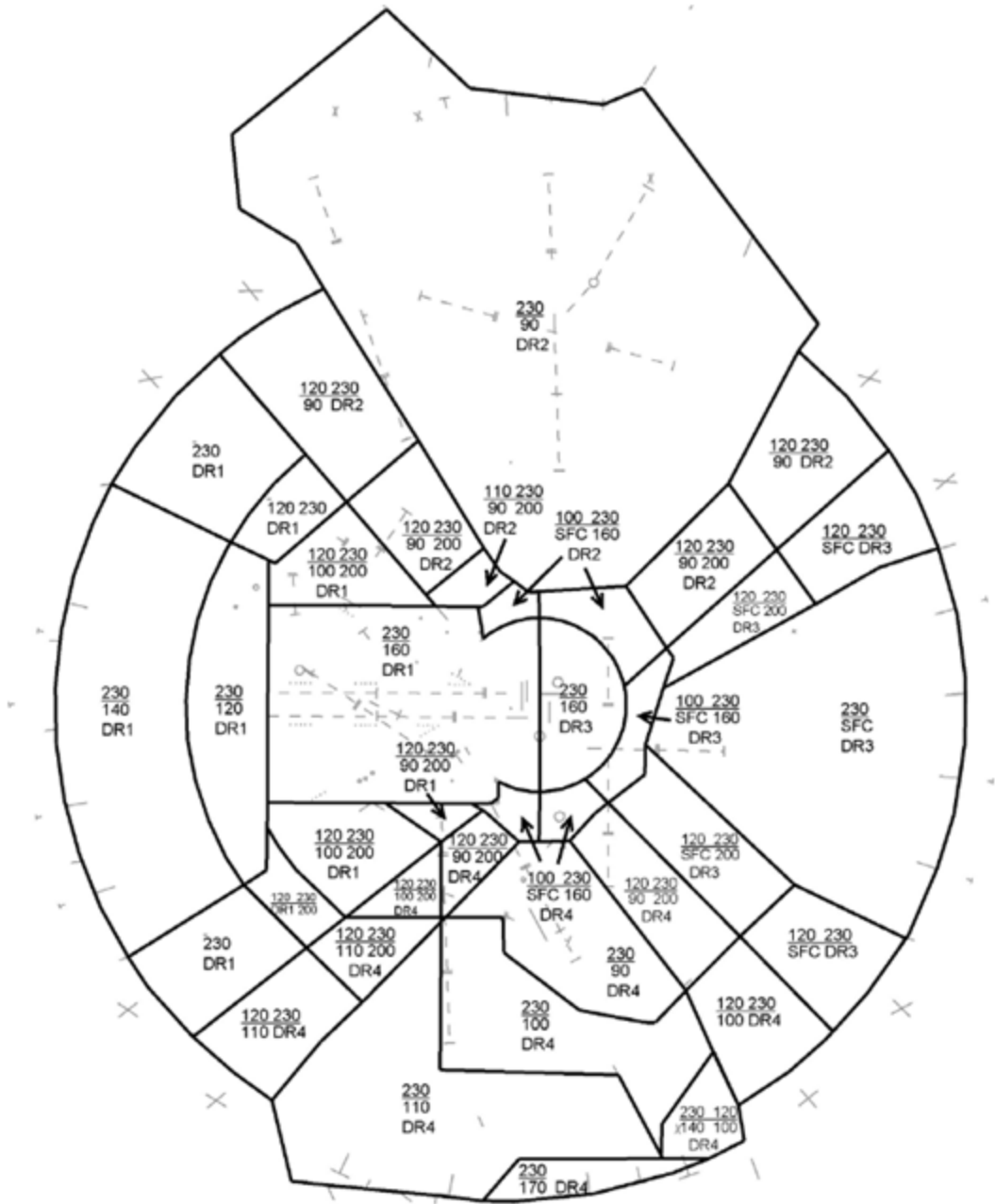
## Appendix 2B: DR Airspace Land North



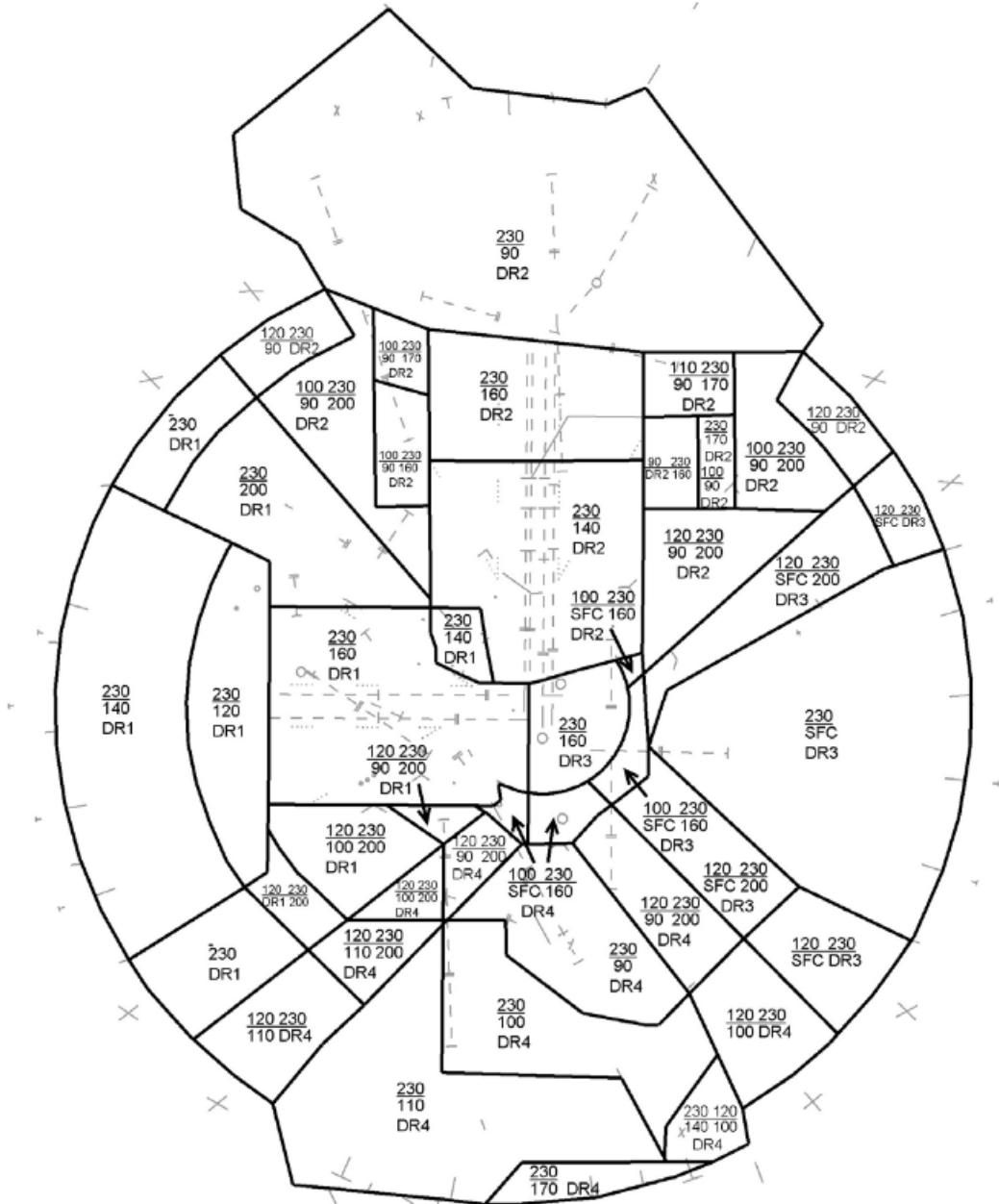
## Appendix 2C: DR Airspace Land West



## Appendix 2D: DR Airspace Land East

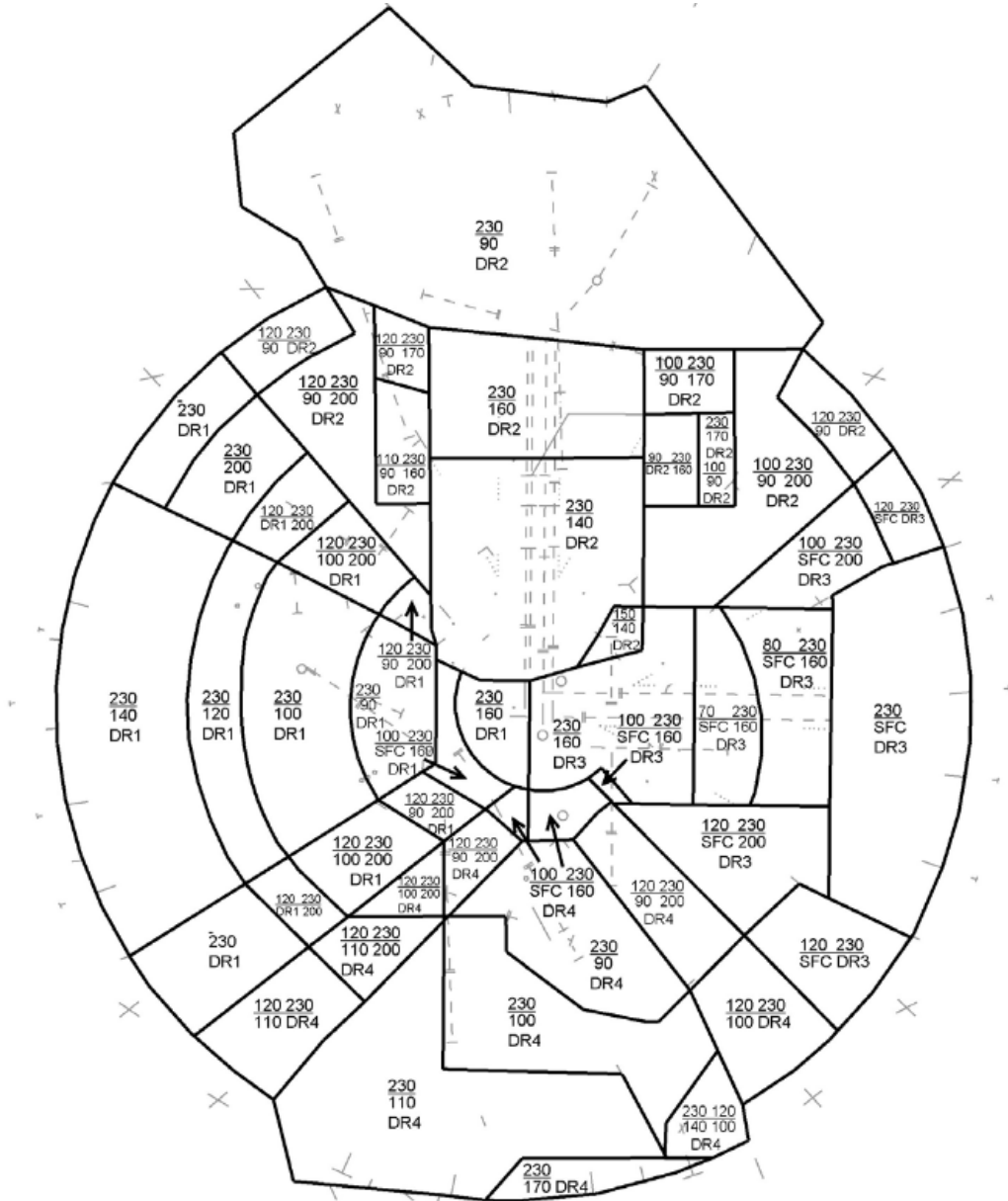


## Appendix 2E: DR Airspace Land South and East

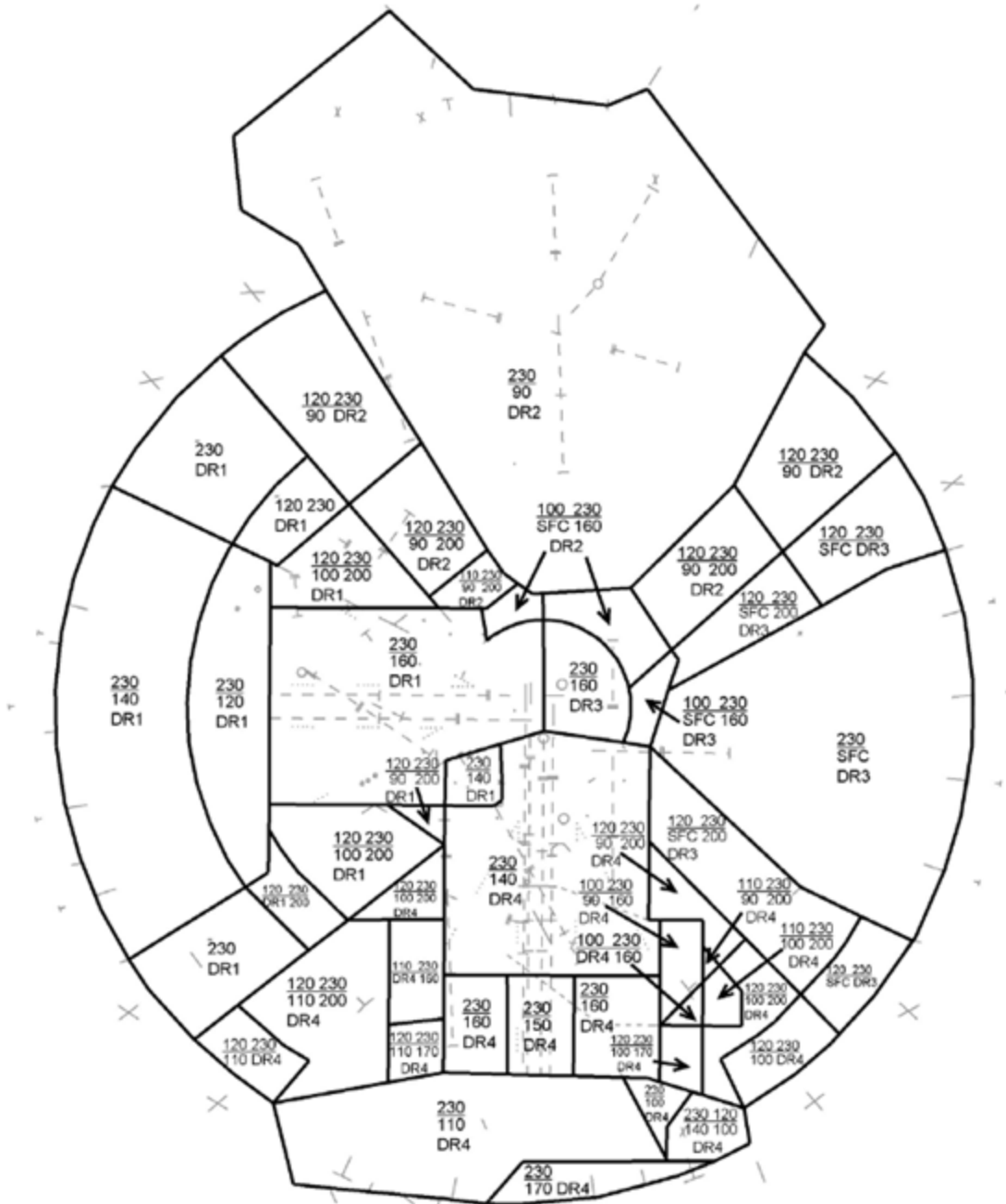




## Appendix 2F: DR Airspace Land South and West

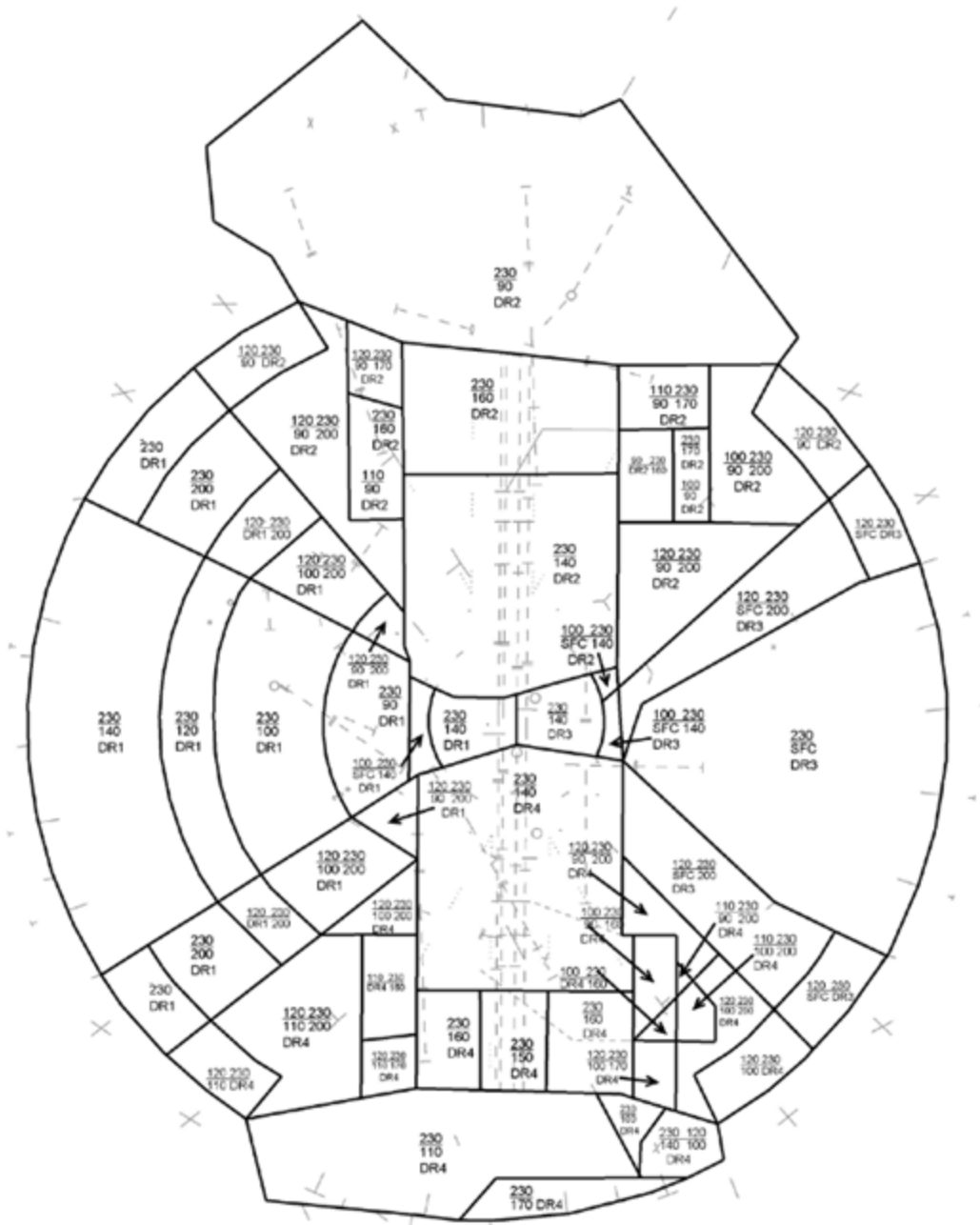


## Appendix 2G: DR Airspace Land North and East

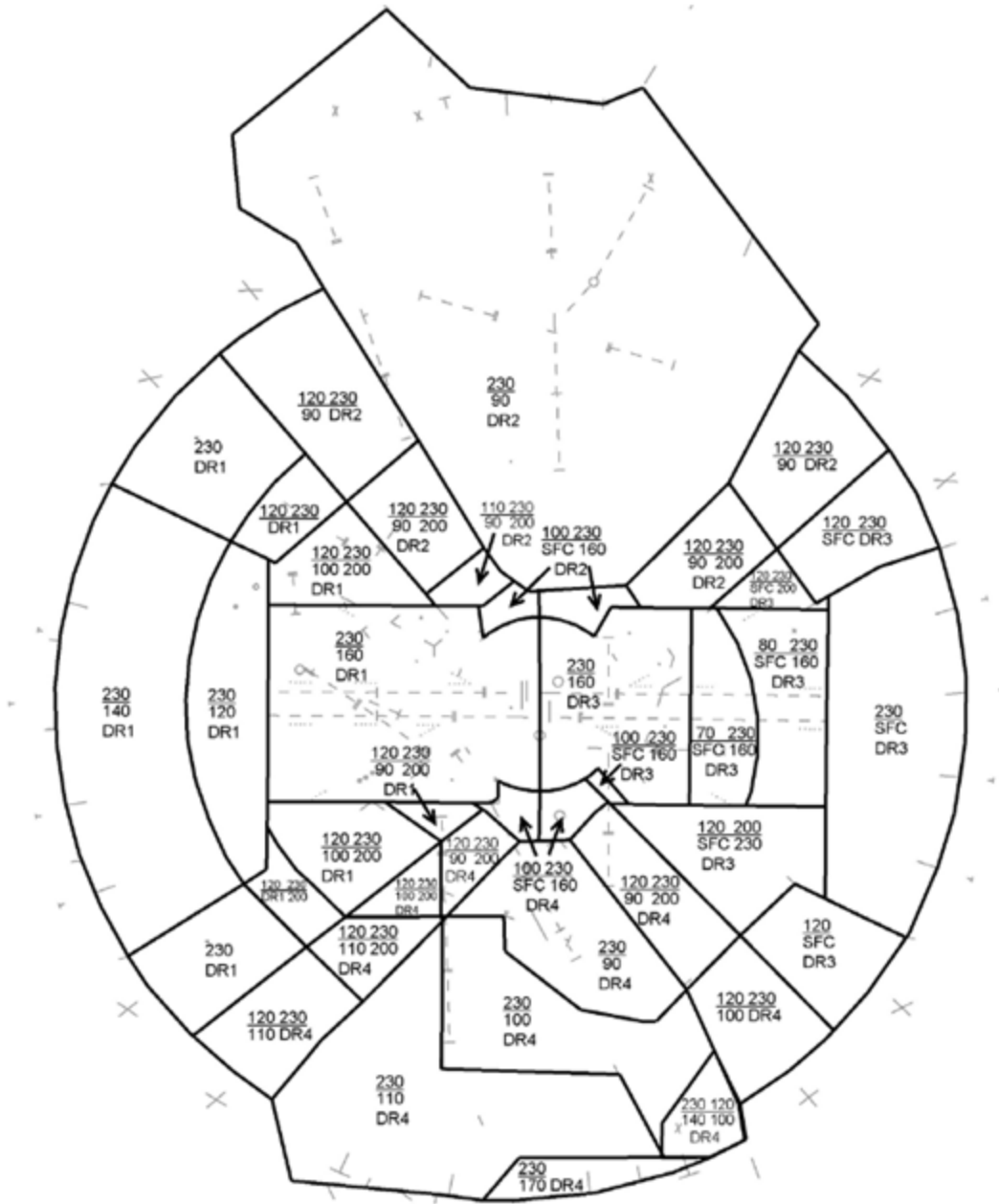




## Appendix 2I: DR Airspace Land North and South

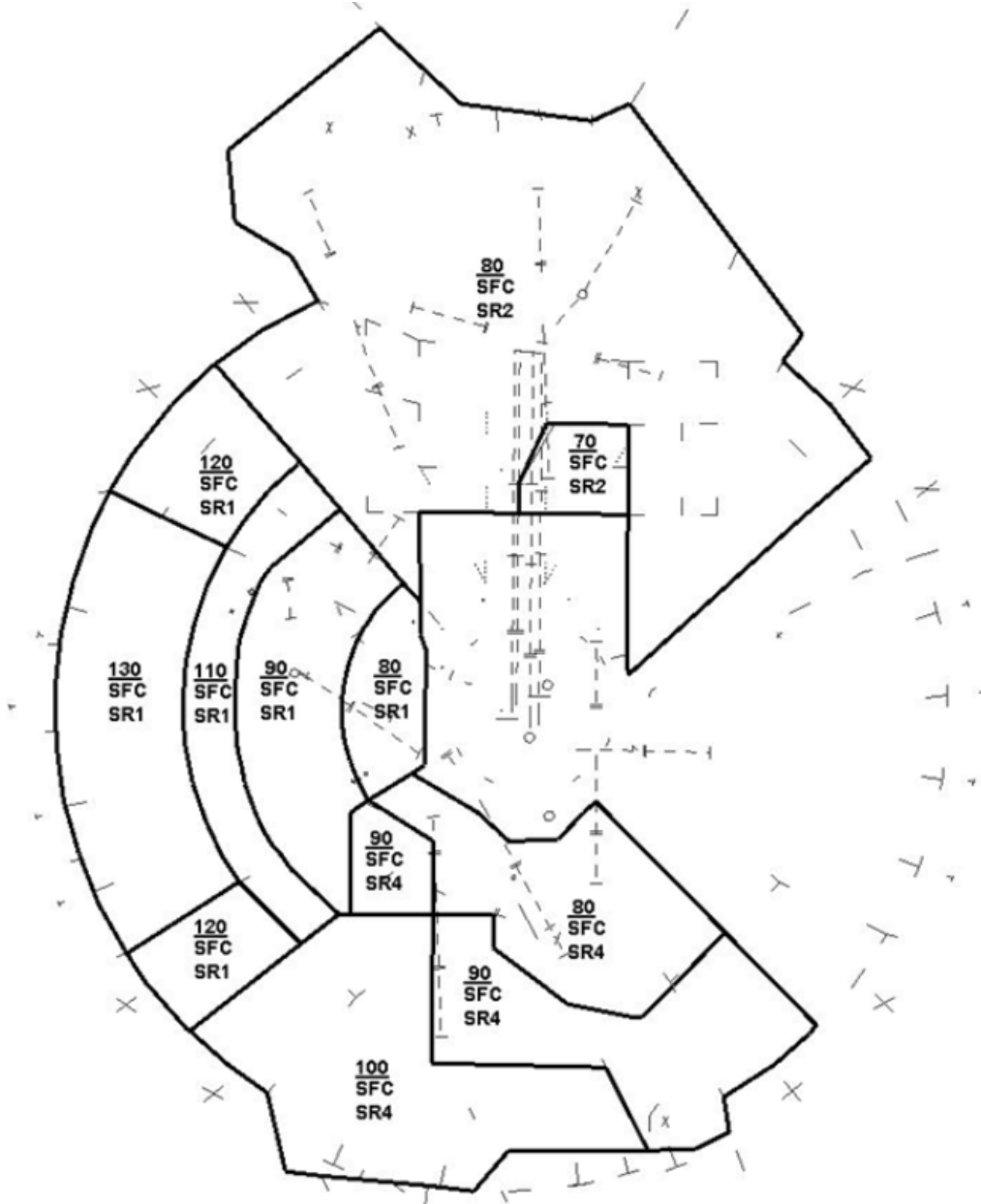


## Appendix 2J: DR Airspace Land East and West

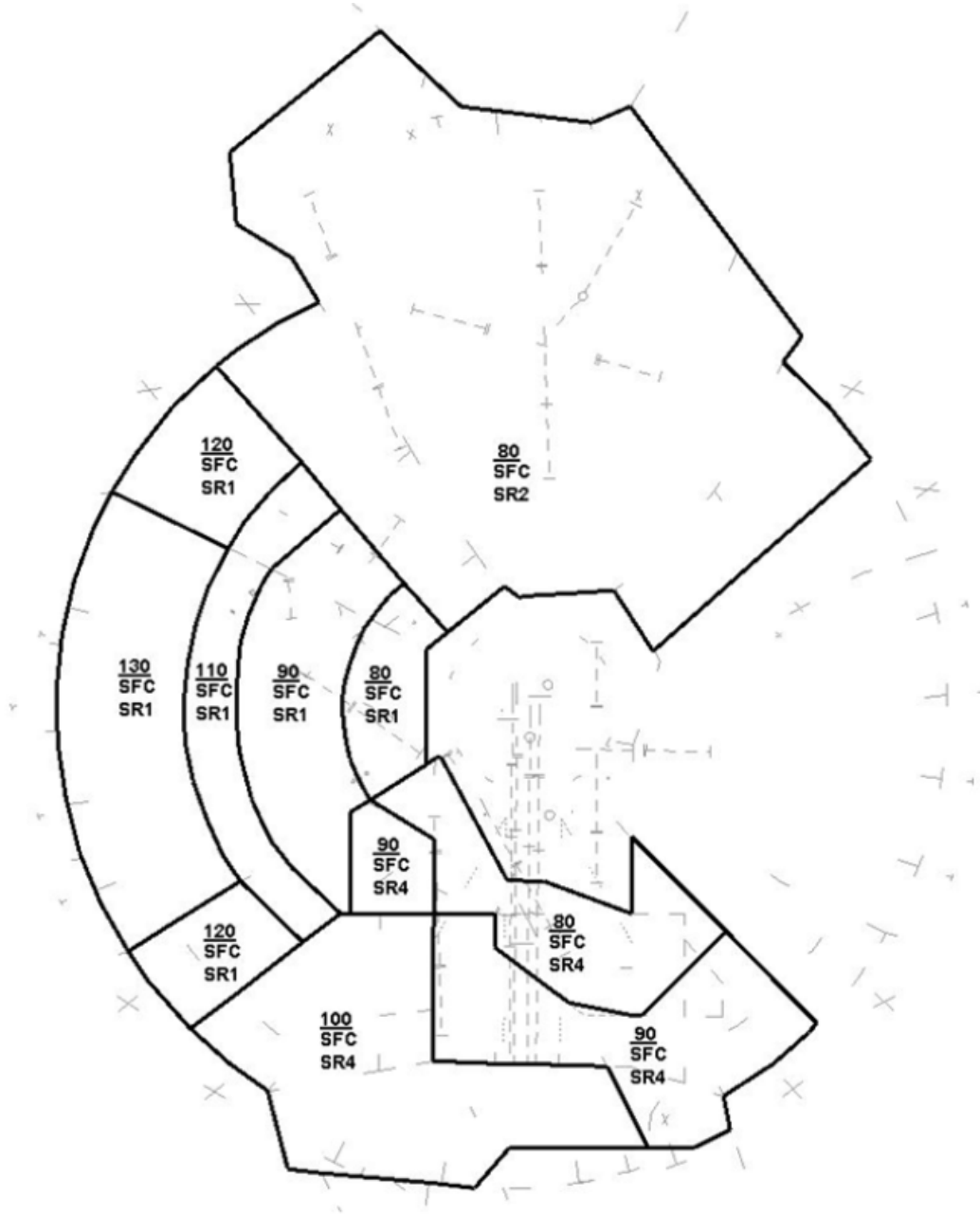


## Appendix 3: SR Airspace

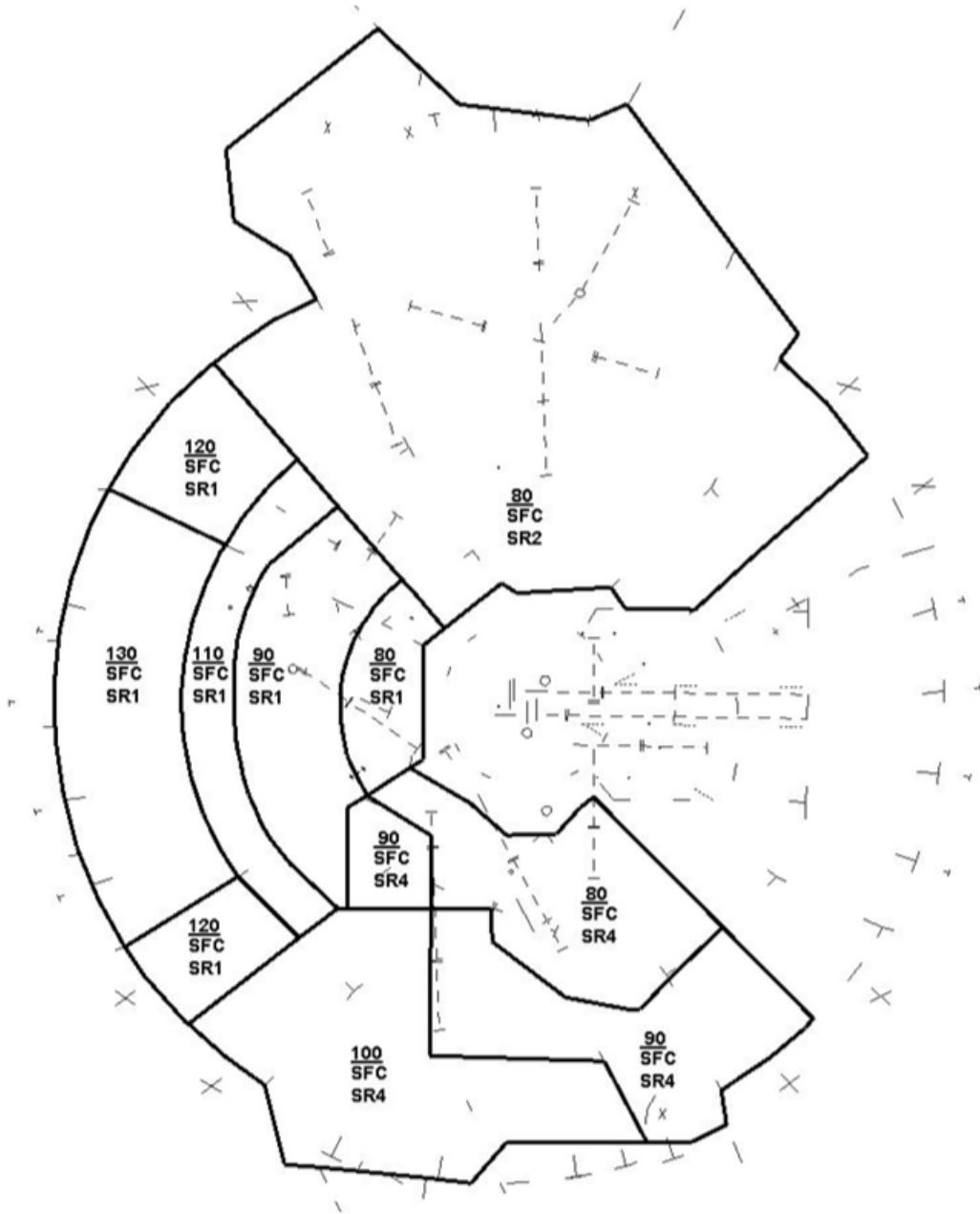
### Appendix 3A: SR Airspace Land South



## Appendix 3B: SR Airspace Land North

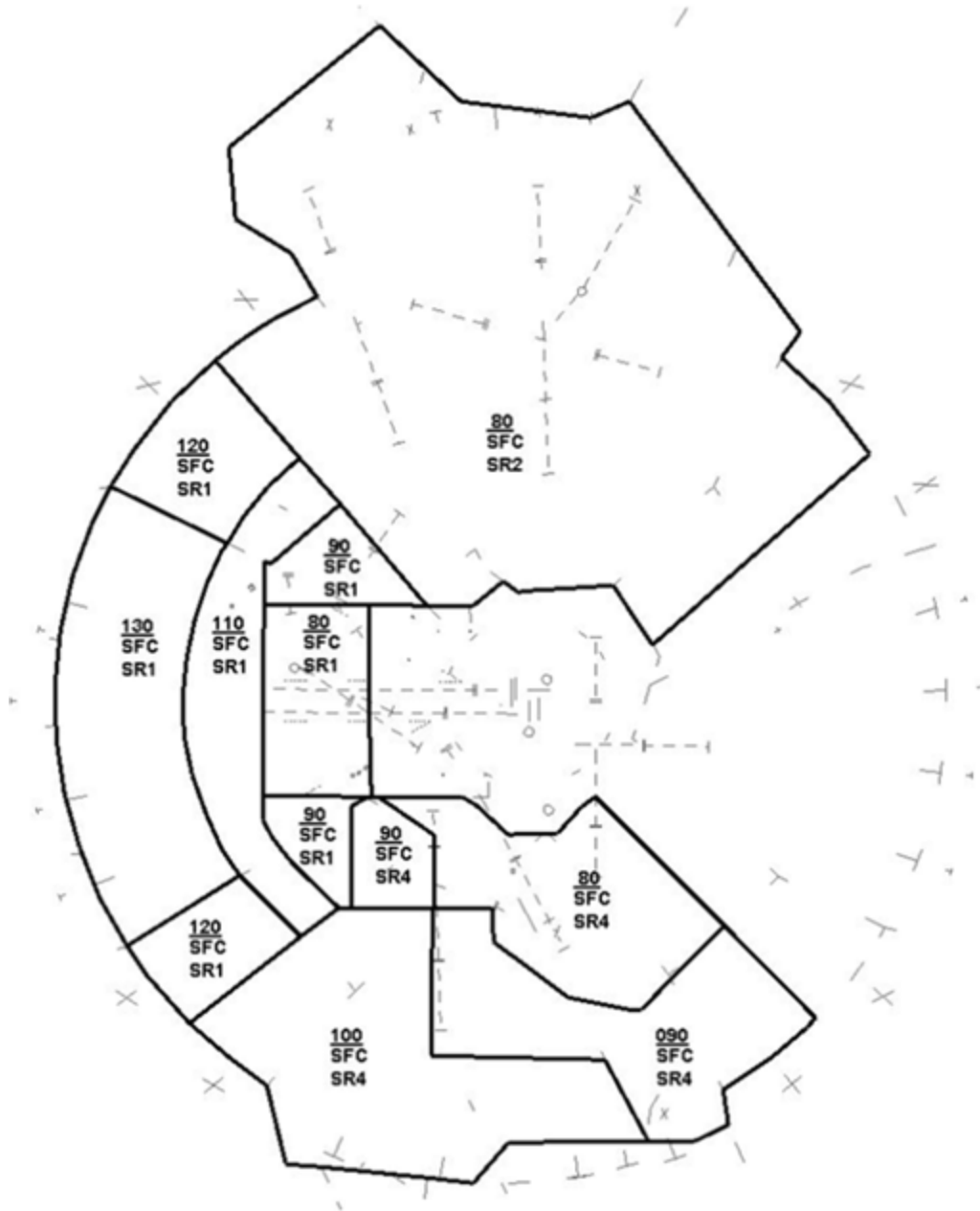


## Appendix 3C: SR Airspace Land West

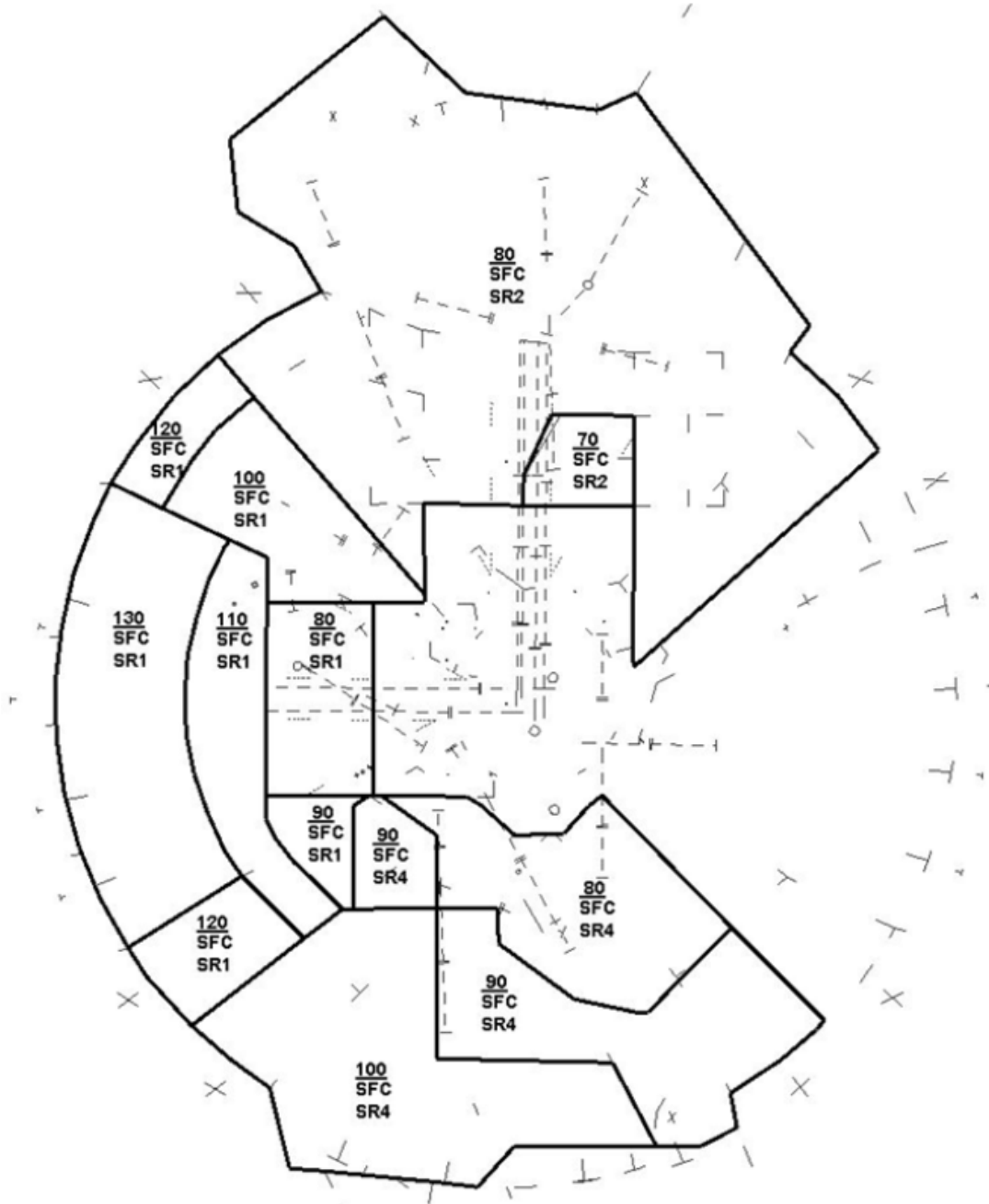




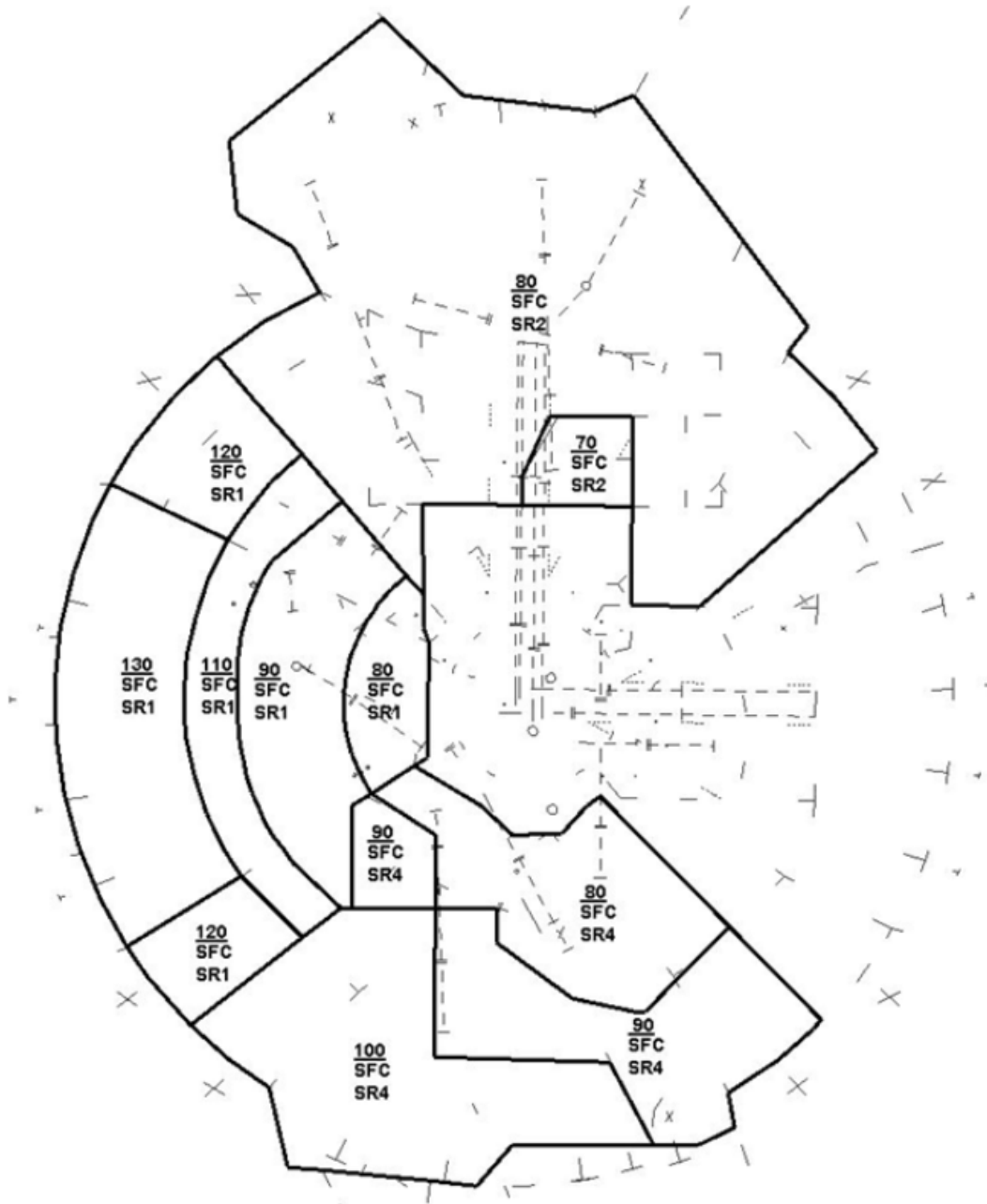
## Appendix 3D: SR Airspace Land East



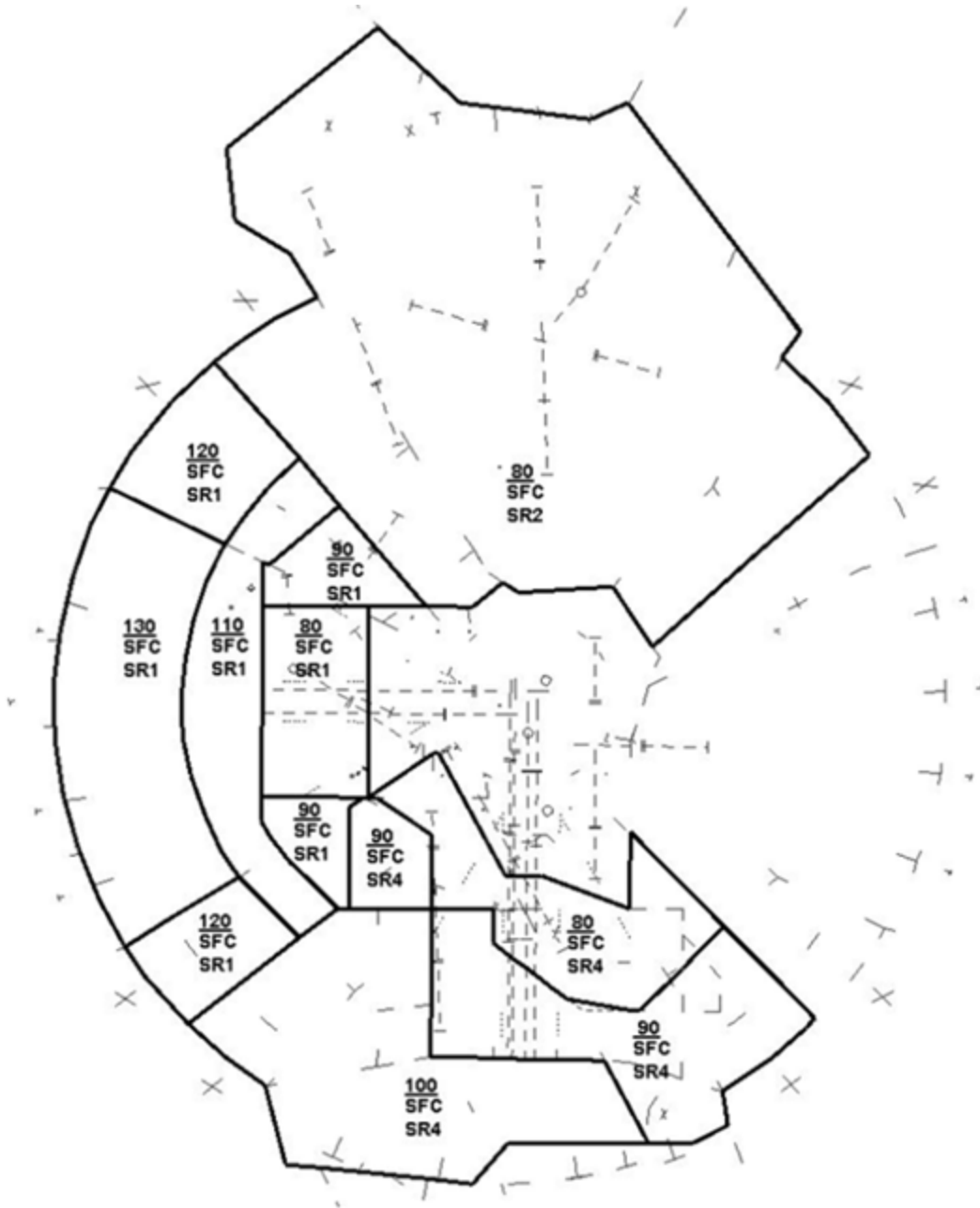
## Appendix 3E: SR Airspace Land South and East



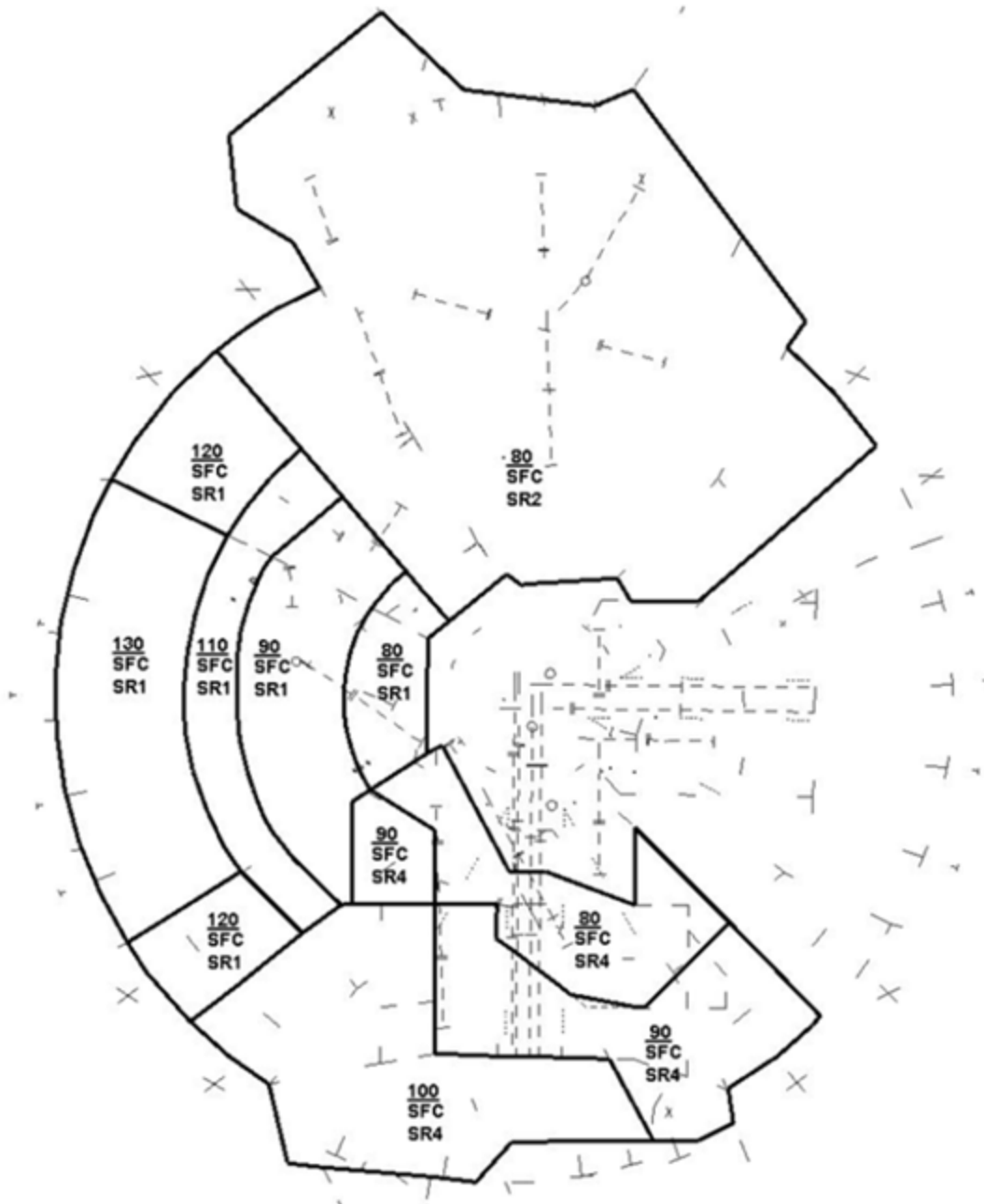
## Appendix 3F: SR Airspace Land South and West



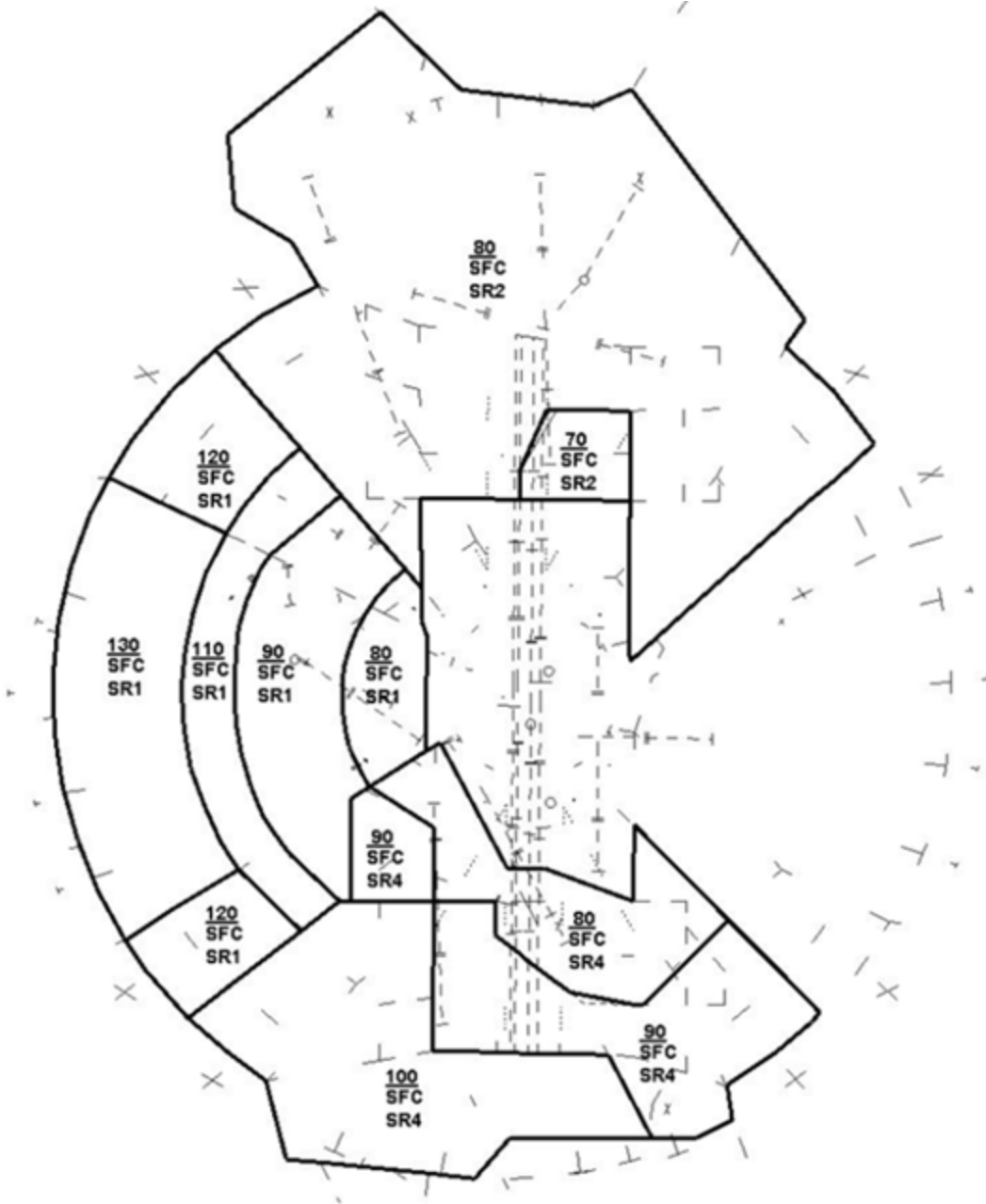
## Appendix 3G: SR Airspace Land North and East



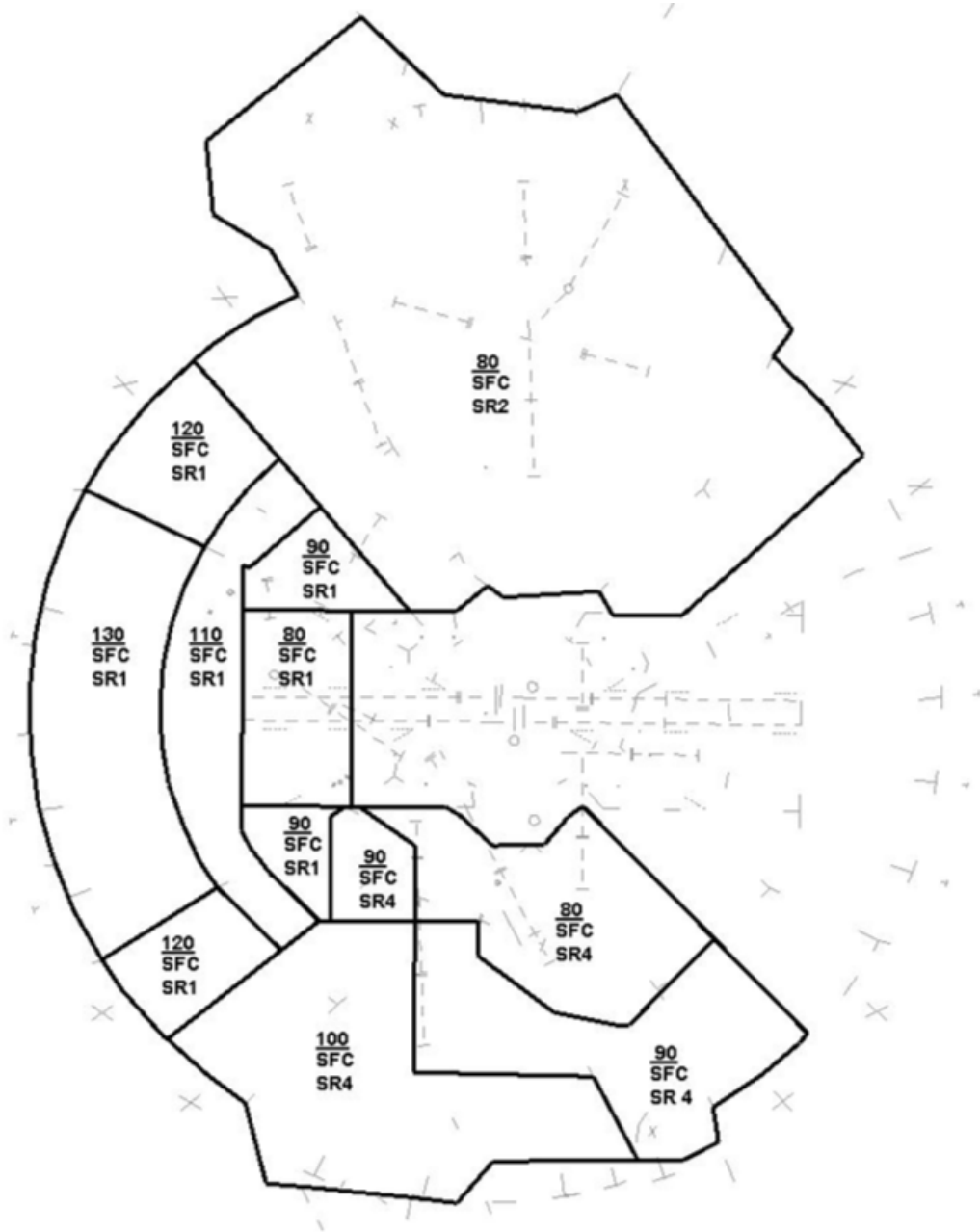
## Appendix 3H: SR Airspace Land North and West



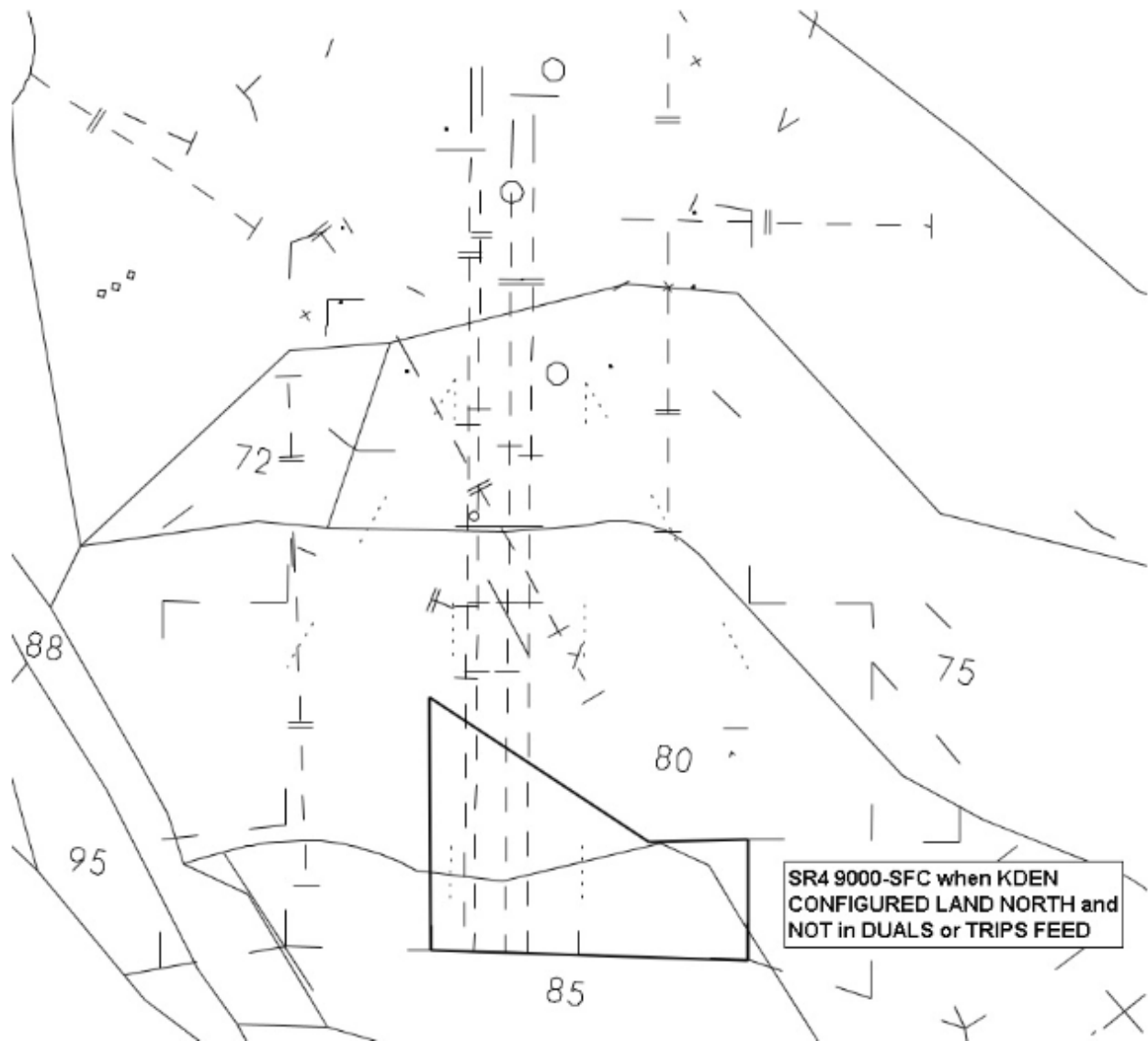
## Appendix 3I: SR Airspace Land North and South



## Appendix 3J: SR Airspace Land East and West



## Appendix 3K: SR4 Shelf Airspace



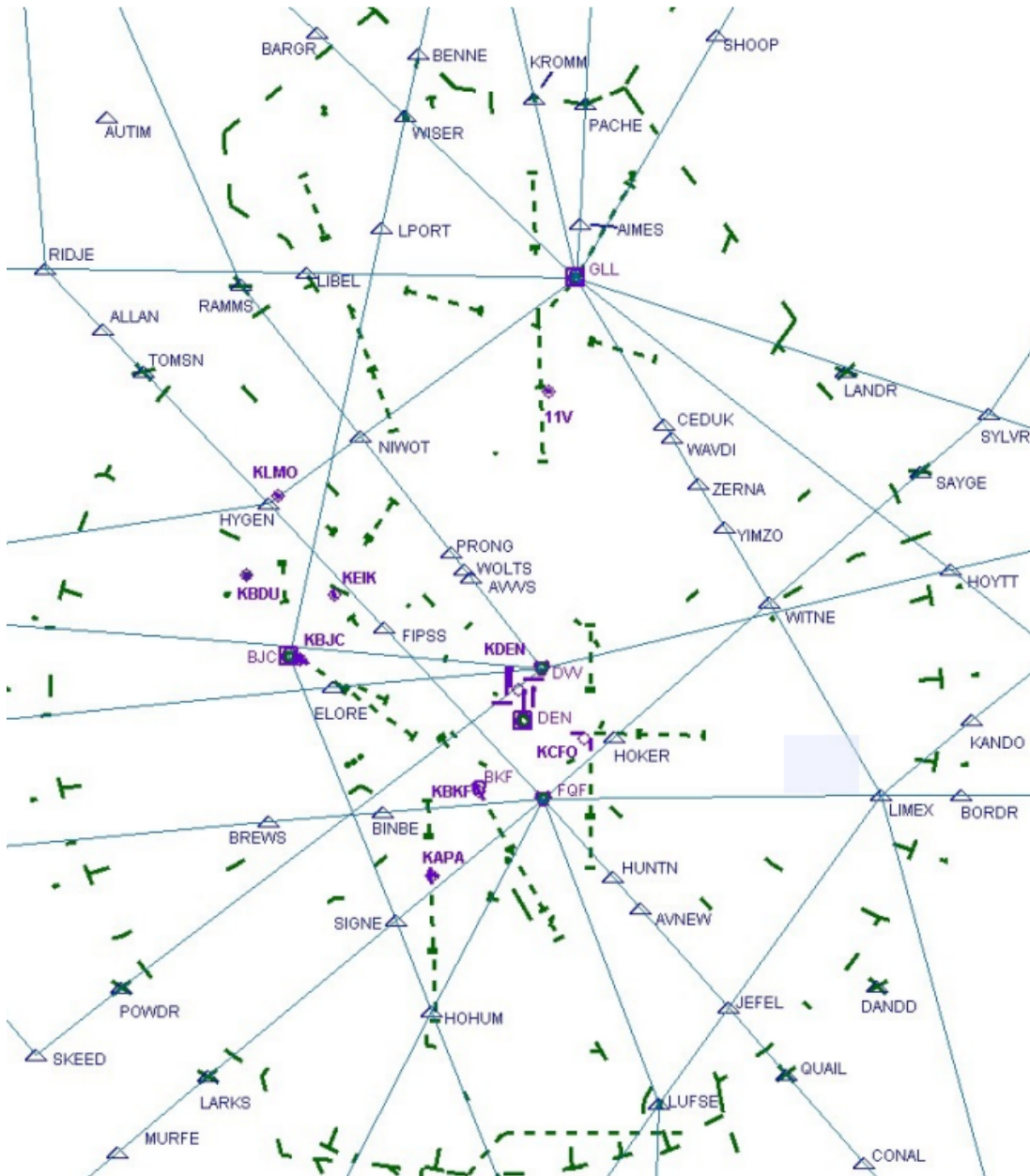


## Appendix 4: Opening/Closing Checklist

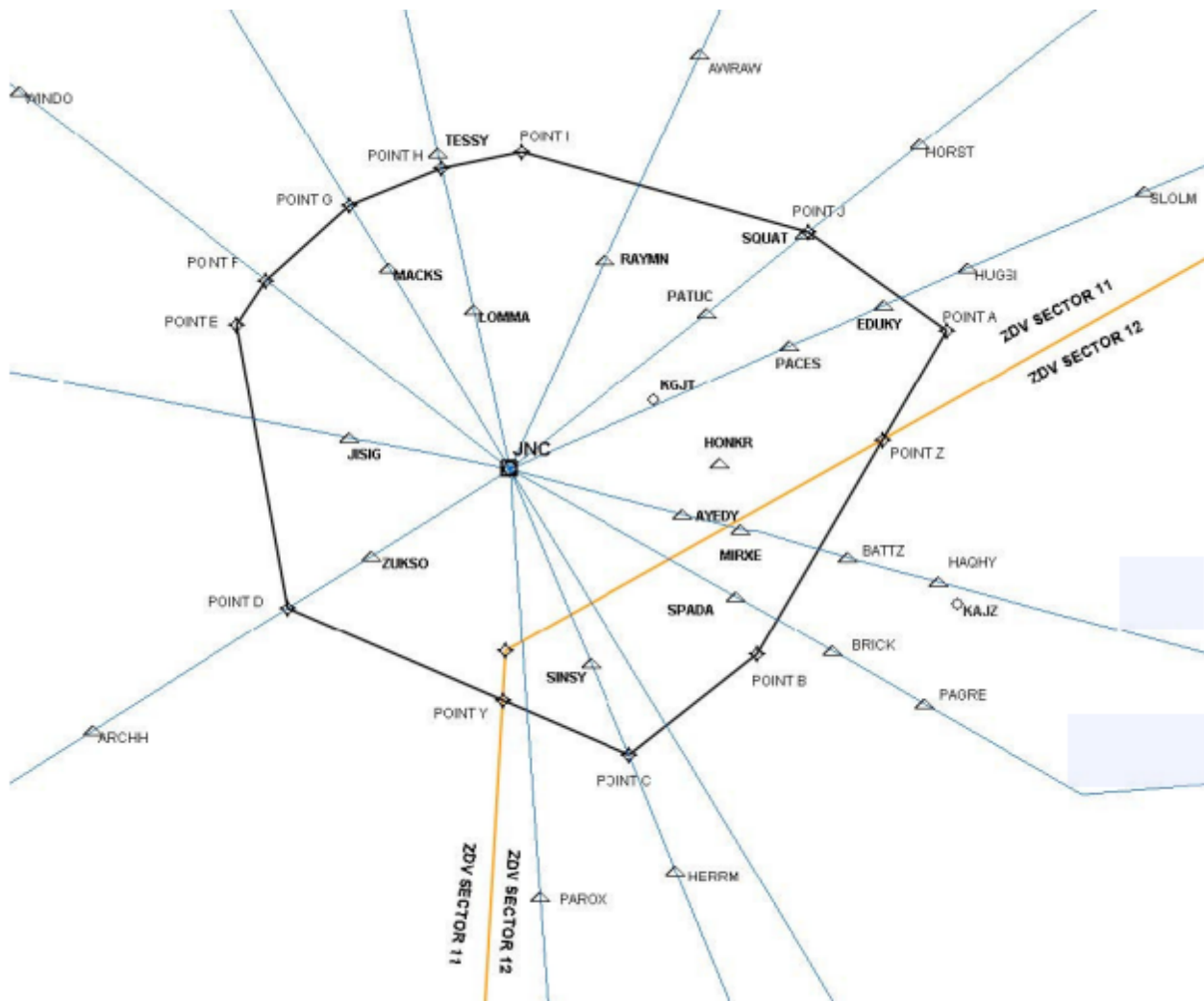
1. NOTAMS/SPECIAL ACTIVITIES
2. CONFIGURATION (ACTIVE RUNWAYS)
3. FLOW CONTROL/RESTRICTIONS
4. WEATHER INFO/SIGMETS/PIREPS
5. BRIEFING CHECKLIST
  - a. COORDINATION APPROVED
  - b. POINT OUT AIRCRAFT
  - c. AIRCRAFT HANDED OFF BUT STILL PERTINENT
  - d. AIRCRAFT RELEASED BUT NOT YET AIRBORNE
  - e. RUNWAY STATUS
  - f. CURRENT TRAFFIC
  - g. OTHER

# Appendix 5: Specialized Airspace Areas

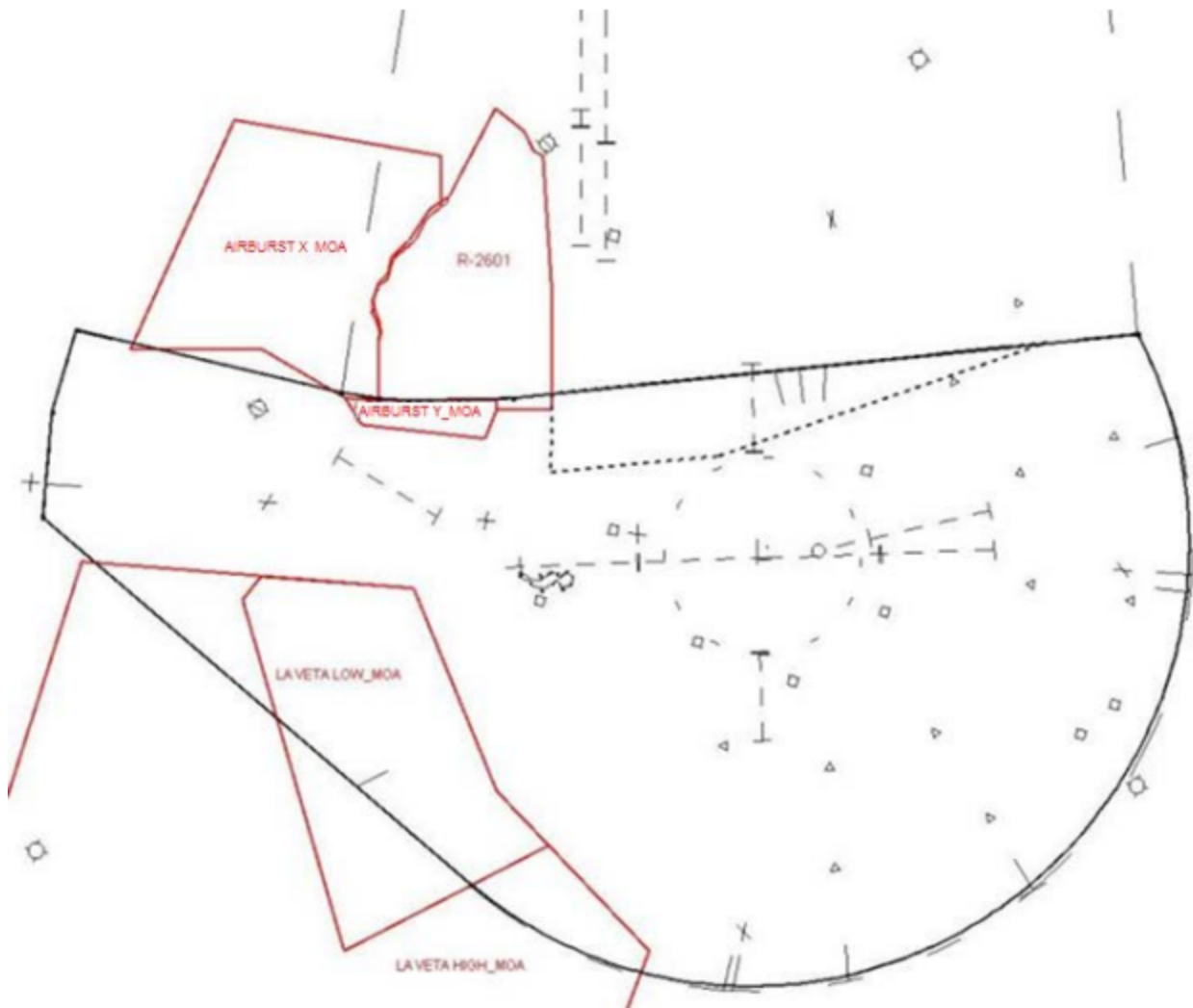
## Appendix 5A: Denver Terminal Area



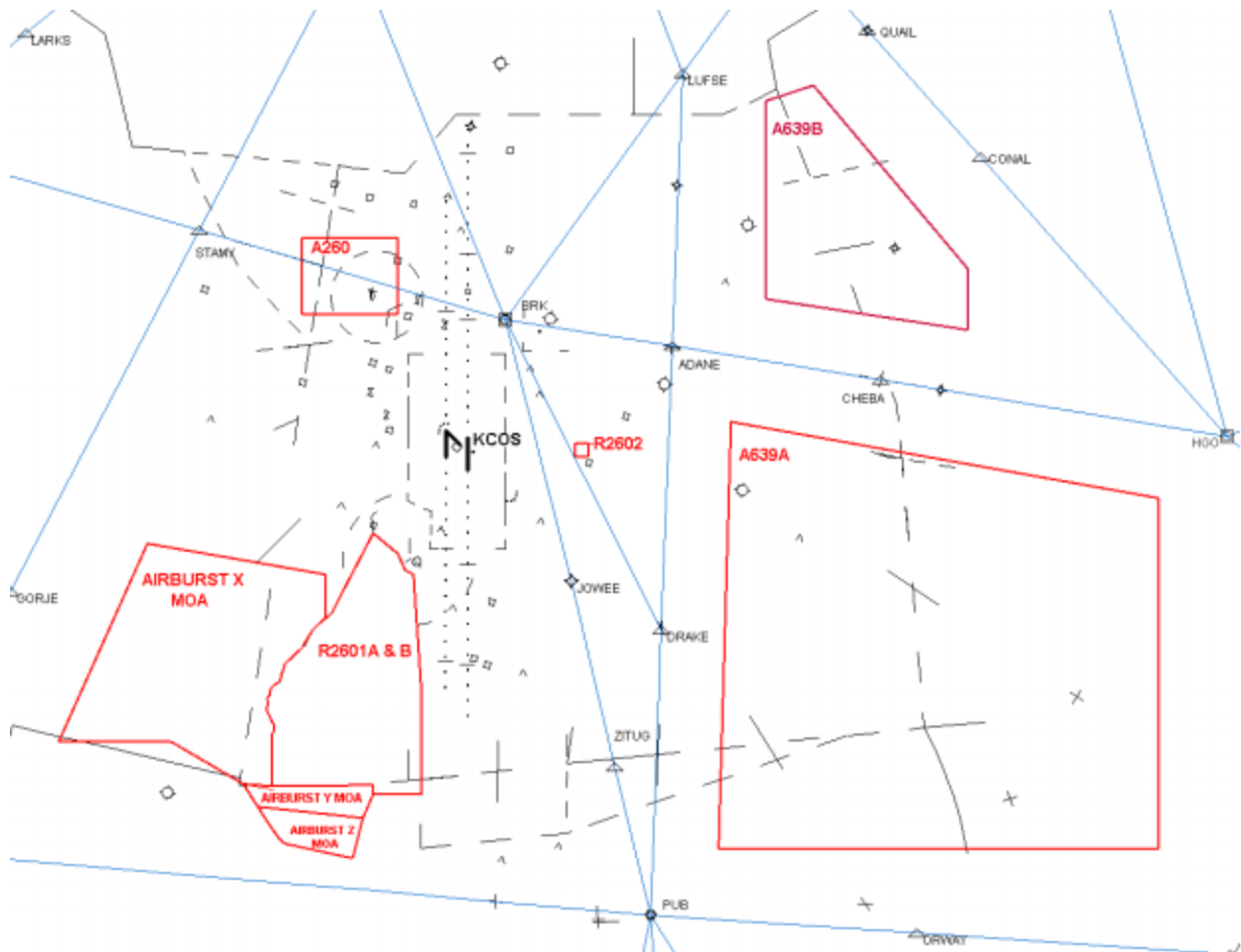
## Appendix 5B: Grand Junction Terminal Area



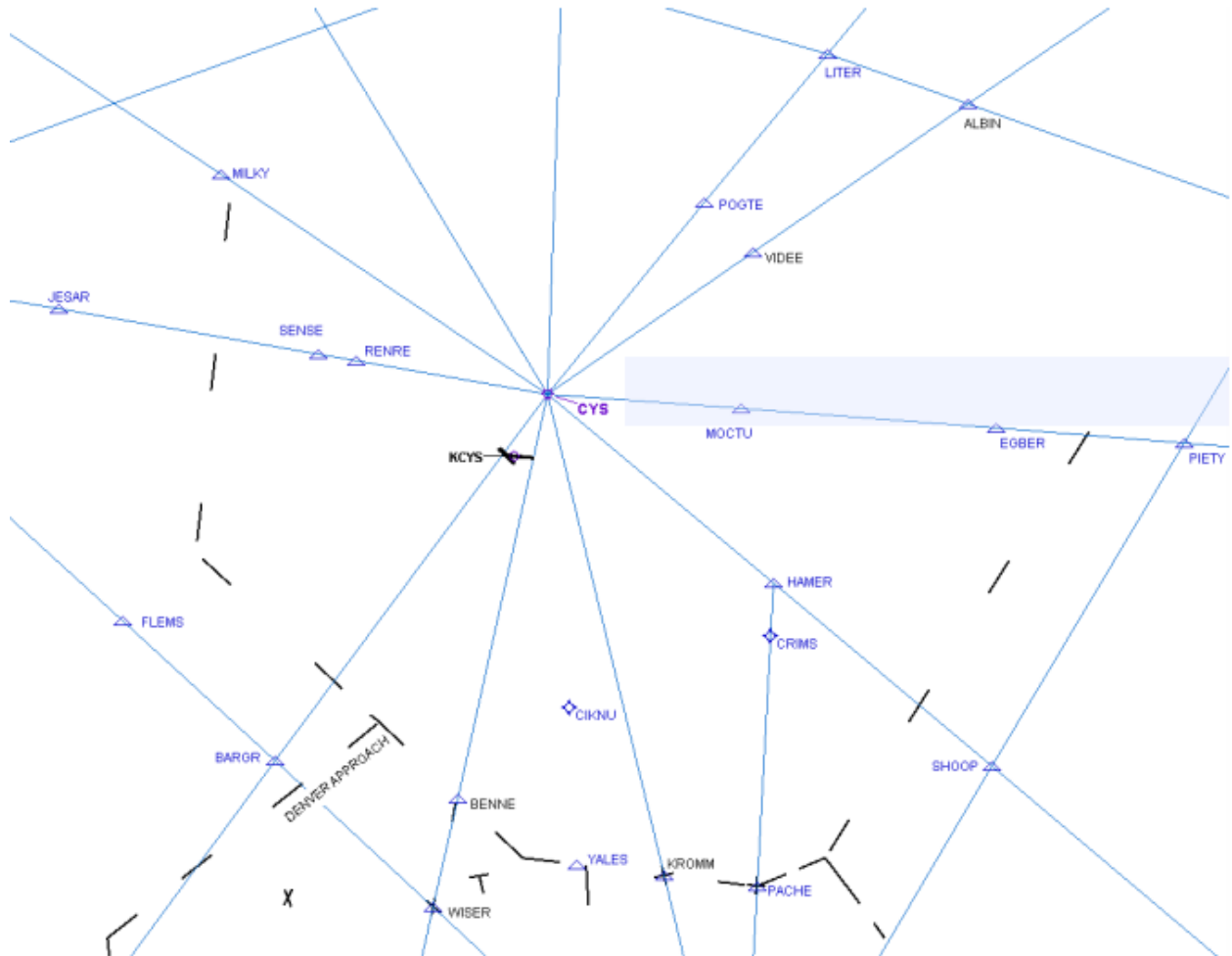
## Appendix 5C: Pueblo Terminal Area



## Appendix 5D: Colorado Springs Terminal Area



## Appendix 5E: Cheyenne Terminal Area



## Appendix 5F: MVA FUS3 Video Map



## Appendix 5G: Denver Class Bravo Airspace

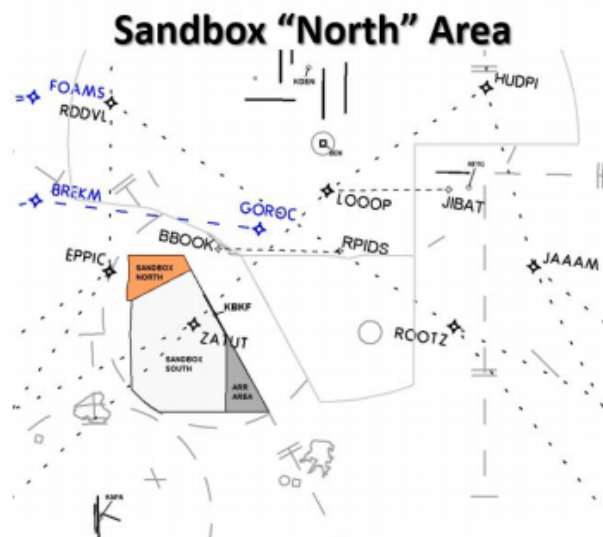




## Appendix 5H: BKF Sandbox



Sandbox "Arrival Area" (ARR) is not Separated from:  
• Final for 34L and 34R at KDEN



Sandbox "North" Is not Separated from these KDEN procedures:

- TBARR / SSKII STARs [LS, LE, LW]
- CLASH / NIIXX STARs [LE]
- BAYLR SID (DEP RWY 17L/17R)

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## Appendix 6: SR Uncontrolled Clearance Quick Reference

### Releases via Initial Heading

Assignable Headings	
FNL	Any within DVA
BJC	Any within DVA
GXY	Any
CFO	Any
BDU	020-145
LMO	020-160
EIK	350-170

DVA Headings		
BJC	30L & 30R	345 Clockwise 150
	12L & 12R	335 Clockwise 165
	3	340 Clockwise 170
	21	030 Clockwise 160
FNL	All	350 Clockwise 180
GXY	All	Any

- For FNL departures, specify a direction of turn within the DVA. Departures from Runway 33 must be assigned a right turn.
- For all airports except FNL, assign the heading to be flown when entering controlled airspace.

#### **Example-**

*“WHEN ENTERING CONTROLLED AIRSPACE, FLY HEADING (degrees) or TURN LEFT/RIGHT (degrees).*

*CLEARANCE VOID IF NOT OFF IN 10 MINUTES. IF NOT OFF IN 10 MINUTES, ADVISE DENVER APPROACH OF INTENTIONS WITHIN 10 MINUTES. RELEASED FOR DEPARTURE.”*

### Releases via ODPs

- If requested by the pilot, issue the ODP as part of the clearance.
- If the final fix of the ODP is not on the route of flight, clear aircraft from the final ODP fix direct to the first fix on their route of flight.
- Aircraft assigned the LMO ODP whose route requires an MEA above 8000 must have their clearance limit changed. See the SOP.

Airport	Final Fix
GXY	GLL
LMO	GLL
FNL	GLL
EIK	BJC
BJC	DEN
CFO	DEN
1V6	PUB

**Example-** “CLEARED TO (DESTINATION) VIA THE ERIE MUNI OBSTACLE DEPARTURE PROCEDURE, THEN AS FILED”

### Fremont County (1V6)

- Always clear the aircraft via the ODP, and issue the ODP on release unless otherwise instructed by PUB controller.

**Example-** “CLEARED TO (DESTINATION) VIA THE FREMONT COUNTY OBSTACLE DEPARTURE PROCEDURE, PUB, DIRECT RODDY, THEN AS FILED.”

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## Appendix 7: STARS Flight Data Information Approved Scratch Pad Entries

1. DENVER INTERNATIONAL AIRPORT APPROACH FIXES AN AIRCRAFT IS DIRECT TO:

<b>RWY34L</b>	<b>RWY34R</b>	<b>RWY35L</b>	<b>RWY35R</b>
COG = COGGG	BOO = BOOBU	CRU = CRUUP	DOR = DORRY
KAL = KALHR	BEN = BENGL	CHO = CHOLA	DEA = DEANE
	HIM = HIMOM		DOG = DOGGG
<b>RWY16R</b>	<b>RWY16L</b>	<b>RWY17R</b>	<b>RWY17L</b>
SAK = SAKIC	JOB = JOBOB	HOO = HOOPE	GOL = GOLFN
CLF = CLFFF		QWI = QWIKE	
<b>RWY07</b>	<b>RWY25</b>	<b>RWY08</b>	<b>RWY26</b>
SAR = SARAH	ETH = ETHAL	LIP = LIPPS	FUZ = FUZZZ

2. CENTENNIAL AIRPORT APPROACH FIXES AN AIRCRAFT IS DIRECT TO:

<b>RWY35R</b>	<b>RWY17L</b>	<b>RWY28</b>
FIR = FIRPI	LOW = LOWRE	EZB = EZBEL
JID = JIDOG	CEN = CENTN	DIL = DILVE
XPA = XPATH		DOC = DOCKY
XBE = XBEEE		NID = NIDLY

3. ROCKY MOUNTAIN METROPOLITAN AIRPORT FIXES AN AIRCRAFT IS DIRECT TO:

RWY12L/R	RWY30L/R
DRR = DRRDP	ALI = ALIKE
JID = JIDOG	NSP = NSPYR
PYY = PYYPP	ROK = ROKXX
HAL = HALFF	BIZ = BIZEN
	BAA = BAAWL
	BLI = BLIPS

4. NORTHERN COLORADO REGIONAL AIRPORT:

RWY33	RWY15
COL = COLLN	BAR = BARGR
CED = CEDUK	WIS = WIER
HYG = HYGEN	NAX = NAXOS
IMO = IMOMY	LAS = LASXE

5. GREELEY-WELD COUNTY AIRPORT FIXES AN AIRCRAFT IS DIRECT TO:

RWY35	RWY10	RWY17	RWY28/10	VOR-A
WEL = WELDS	LPO = LPORT	GOH = GOHLD	CAA = KAASH	NOV = NOVAA
WAV = WAVDI	IBI = IBIXY	KRO = KROMM	KWI = KWIKK	SHO = SHOOP
ZER = ZERNA		PAC = PACHE	NOC = NOCOL	
BUF = BUFFS		SHO = SHOOP	UNC = UNCEE	
		BLE = BLEEU		

6. COLORADO AIR AND SPACE PORT AIRPORT FIXES AN AIRCRAFT IS DIRECT TO:

RWY17	RWY35	RWY26
FYZ = FYZER	ARR = ARRES	SKI = SKIPI
TAC = TACUD	HRM = HRMER	VOB = VOBCU

7. BUCKLEY AIR FORCE BASE FIXES AN AIRCRAFT IS DIRECT TO:

<b>RWY14</b>	<b>RWY32</b>
MAN = MANND	ANN = ANNNE
ROM = ROMBE	CHE = CHRES
	MRK = MRKUS
	DER = DERYL
	ALL = ALLYX
	WOL = WOLFM
	BEK = BEKEE

8. VANCE BRAND MUNICIPAL (LONGMONT) AIRPORT FIXES AN AIRCRAFT IS DIRECT TO:

<b>RWY29</b>	<b>VOR/DME</b>
FIP = FIPSS	NEF = NEFFS
WOL = WOLTS	
MEL = MELVN	
FIM = FIMUR	

9. ERIE MUNICIPAL AIRPORT FIXES AN AIRCRAFT IS DIRECT TO:

<b>EIK</b>
SHA = SHATZ
NEF = NEFFS