ORDER VATUSA ZAB 7110.149B

VATUSA ALBUQUERQUE ARTCC
STANDARD OPERATING PROCEDURES

FOREWARD

This order contains standard operating procedures and sector descriptions for VATUSA Albuquerque ARTCC (ZAB) operational positions. It is emphasized that information contained herein is designed and specifically for use in a virtual controlling environment. It is not applicable, nor should be referenced for live operations in the National Airspace System (NAS). These procedures supplement FAA Order 7110.65. Controllers staffing ZAB center sectors shall become familiar with the provisions of this document and exercise their best judgment when encountering situations this order does not cover.

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CHAPTER 1 - INTRODUCTION

SECTION 1 - GENERAL

1.1.1. PURPOSE
VATUSA ZAB Order 7110.149B establishes standard operating procedures for controllers staffing ZAB center sector positions. Controllers staffing ZAB center sectors shall become familiar with the provisions of this document and exercise their best judgment when encountering situations this order does not cover.

1.1.2. RESPONSIBILITY
The ATM, or his designee, is responsible for maintaining this order.

1.1.3. DISTRIBUTION
This order is distributed to all VATUSA ZAB controllers and staff as well as visiting controllers and other interested parties.

1.1.4. CANCELLATION
Reserved

1.1.5. EXPLANATION OF CHANGE
ZAB Order 7110.149B changes center default sector from 43 to 15, replaces sector 94 with sector 16, and revises center sector combination information.

1.1.6. INTERIM CHANGES Interim changes to this order will be made via VATUSA ZAB Notice posted in the public forum. These notices shall be applicable until incorporated in to a revised version of this document.

1.1.7. EFFECTIVE DATE
This order is effective Dec 1, 2009.

CHAPTER 2 - GENERAL CONTROL

SECTION 1 - OPERATION

2.1.1. SURVEILLANCE AREA
Controllers shall ensure range and visibility center settings are sufficient to provide total radar surveillance of their sector and allow all adjacent control facilities to be visible. Recommended visibility centers and ranges are found in the specialty chapters.

2.1.2. SECTOR COMBINATIONS
See Appendix F

2.1.3. MINIMUM IFR ALTITUDE (MIA) CHARTS
Reserved

2.1.4. INTERIM ALTITUDE USAGE
Reserved

CHAPTER 3 - NORTH SPECIALTY

SECTION 1 - GENERAL

3.1.1. COORDINATION PROCEDURES

a. SOUTHEAST

1. ALM/HMN/ROW/SRR Arrivals

Sector 16 releases control for descent to Sector 63 upon completion of radar hand-off and communication transfer.

2. IAH/HOU Arrivals

North Specialty shall not reroute aircraft landing IAH/HOU farther east than LLO or MQP.

b. SOUTHWEST

Note: The Phoenix Terminal Area includes Phoenix Sky Harbor (PHX), Scottsdale (SDL), Phoenix Deer Valley (DVT), Falcon Field (FFZ), Goodyear (GYR), Glendale (GEU), Carefree (18AZ), Phoenix Williams-Gateway (IWA), Chandler Municipal (CHD), Stellar Park (P19), and Casa Grande Municipal (CGZ).

Note: The TUS Terminal Area includes Tucson International (TUS), Marana Northwest Regional (AVQ), Davis-Monthan AFB (DMA), Marana/Pinal Airpark (MZJ), Nogales International (OLS), and Ryan Field (RYN).

1. PHX and TUS Terminal Area Arrivals

PHX and TUS terminal area arrivals entering the Southwest specialty shall be routed via SSO.

2. SAN Terminal Area Arrivals

Aircraft filed the southern tier landing the SAN terminal area shall be routed no farther west than GBN.

c. NORTHWEST

1. En Route Westbound Traffic

North Specialty shall:

(a) Route aircraft destined LAX, LGB, SNA, ONT, or SBD via TNP.

(b) Route aircraft destined BUR, VNY, or BFL via EED.

4. PHX Arrivals

Sector 17 shall:

(a) Establish the proper sequence of aircraft within all strata.

(b) Establish PHX turboprop, C25A/B and C500-C551 series arrival aircraft on the JESSE STAR prior to entering Sector 38.

(c) Establish all other PHX turbojet arrivals on the BUNTR or EAGUL STAR prior to entering Sector 38.

(d) Provide the Northwest Specialty ten (10) miles in trail spacing, constant or increasing over SLIDR.

(e) Provide the Northwest Specialty ten (10) miles in trail spacing, constant or increasing, between turbojets over NEPTN.

(f) Ensure aircraft routed via the JESSE, BUNTR, or EAGUL STARS enter Sector 38 at or below FL310.
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(g) Turbojet aircraft on the BUNTR or EAGUL STAR are Sector 38's control for turns at SLIDR intersection.

(h) Turbojet aircraft on the BUNTR or EAGUL STAR are Sector 38's control for descent within the DOJOE corridor. The DOJOE corridor is depicted in Appendix A.

(i) Sector 17 shall not be required to simultaneously hold more than four (4) turbojet aircraft destined for the Phoenix Sky Harbor Airport.

5. Phoenix Satellite Arrivals.

Note: Phoenix Satellite Airports are defined as: Scottsdale (SDL), Phoenix Deer Valley (DVT), Falcon Field (FFZ), Goodyear (GYR), Glendale (GEU), Carefree (18AZ), Phoenix Williams-Gateway (IWA), Chandler Municipal (CHD), Stellar Park (P19), and Casa Grande Municipal (CGZ).

(a) ZAB internal turbojet departures shall be routed via either ONM TCS SSO SUNSS STAR or via FLG JCOBS STAR.

(b) ZAB internal non-turbojet departures entering the NW Specialty shall be routed via INW JCOBS STAR or via SJN V190 PXR.

(c) North Specialty shall ensure JCOBS arrivals enter Sector 43 at or below FL280.

3.1.2. SECTOR FREQUENCIES AND VOICE SERVER/CHANNEL

Sector	Freq	*Voice Room URL*
16	132.8	*rw.liveatc.net/ZAB_16*
17	124.32	*rw.liveatc.net/ZAB_17*

3.1.3. OPTIMUM SECTOR CENTER POINT AND VISIBILITY RANGE

Sector	Center	Vis Range
16/17 (Combined)	ABQ	220
16	TAFOY	160
17	DRYHT	150

3.1.4. SECTOR DESCRIPTIONS

See Appendix A.

CHAPTER 4 - EAST SPECIALTY

SECTION 1 - GENERAL

4.1.1. COORDINATION PROCEDURES

a. EAST

1. Las Vegas Landing Traffic

Ensure LAS landing traffic is routed via PGS.

2**. SAN Terminal Area Landing Traffic**

Ensure aircraft filed via the southern tier (Southeast or Southwest specialties) are routed no farther west than GBN.

c. NORTH

1. Albuquerque Terminal Arrivals (ABQ, AEG, and IKR)

East Specialty shall ensure:

(a) Aircraft are routed via:

(1) FRIHO STAR if over or north of FTI

(1) MIERA STAR if south of FTI

Aircraft may be cleared direct FLYBY/MIERA direct ABQ, or be given radar vectors to intercept the ABQ006R (north of FLYBY) or the ABQ085R (east of MIERA).

(b) Aircraft enter Sector 16 at or below FL320, pilot's discretion descent to FL290.

2. Phoenix Satellite Arrivals

Note: Phoenix Satellite Airports are defined as: Scottsdale (SDL), Phoenix Deer Valley (DVT), Falcon Field (FFZ), Goodyear (GYR), Glendale (GEU), Carefree (18AZ), Phoenix Williams-Gateway (IWA), Chandler Municipal (CHD), Stellar Park (P19), and Casa Grande Municipal (CGZ).

During designated events, PHX satellite arrivals at and above FL290 shall be routed via ONM SSO SUNSS STAR direct destination.

3. PHX (Southern Tier) and TUS Terminal Area Landing Traffic

NOTE: The TUS Terminal Area includes Tucson International (TUS), Marana Northwest Regional (AVQ), Davis-Monthan AFB (DMA), Marana/Pinal Airpark (MZJ), Nogales International (OLS), and Ryan Field (RYN).

East Specialty shall not route aircraft farther west than SSO.

d. SOUTHEAST

1. Cannon AFB (CVS) Terminal Area Arrivals From Sector 15

Note: The Cannon AFB Terminal Area includes Cannon AFB (CVS), Clovis (CVN), and Portales (PRZ).

For aircraft above FL180, Sector 15 shall descend aircraft to FL180 (FL190 if the altimeter is lower than 29.92) and initiate a hand-off to Sector 63 (if open). If Sector 63 is not open, initiate hand-off to CVS.

4.1.2. SECTOR FREQUENCIES AND VOICE SERVER/CHANNEL

Sector	Freq	*Voice Room URL*
15	127.85	*rw.liveatc.net/ZAB_15*
97	134.75	*rw.liveatc.net/ZAB_97*

4.1.3. OPTIMUM SECTOR CENTER POINT AND VISIBILITY RANGE

Sector	Center	Vis Range
15/97 (Combined)	DHT	200
15	DHT	175
97	DHT	200

4.1.4. SECTOR DESCRIPTIONS

See Appendix B.

CHAPTER 5 - SOUTHEAST SPECIALTY

SECTION 1 - GENERAL

5.1.1. COORDINATION PROCEDURES

a. SOUTHEAST

1. Las Vegas (LAS) Landing Traffic

Southeast Specialty shall ensure aircraft destined LAS are routed via:

(a) PGS if over or north of ONM / CNX

(b) DRK if south of ONM

b. EAST

1. Sector 15 arrivals from Southeast Specialty

(a) Sector 63 shall ensure arrivals enter Sector 15 at or below FL270.

(b) Sector 63 releases control for descent to Sector 15 upon completion of radar hand-off and communication transfer.

c. SOUTHWEST

1. Phoenix Satellite Arrivals

Note: Phoenix Satellite Airports are defined as: Scottsdale (SDL), Deer Valley (DVT), Falcon Field (FFZ), Goodyear (GYR), Glendale (GEU), Carefree (18AZ), Williams-Gateway (IWA), Chandler Municipal (CHD), Stellar Park (P19) and Casa Grande Municipal (CGZ).

Phoenix satellite arrivals at and above FL290 shall be routed via SSO SUNSS STAR destination.

5.1.2. SECTOR FREQUENCIES AND VOICE SERVER/CHANNEL

Sector	Freq	*Voice Room URL*
63	120.97	*rw.liveatc.net/ZAB_63*
19	128.2	*rw.liveatc.net/ZAB_19*

5.1.3. OPTIMUM SECTOR CENTER POINT AND VISIBILITY RANGE

Sector	Center	Vis Range
63/19 (Combined)	PIO	275
63	PIO	275
19	CAGEV	125

5.1.4. SECTOR DESCRIPTIONS

See Appendix C.

CHAPTER 6 - SOUTHWEST SPECIALTY

SECTION 1 - GENERAL

6.1.1. COORDINATION PROCEDURES

a. SOUTHWEST

1. Phoenix Terminal Area Arrivals

Note: The Phoenix Terminal Area includes Phoenix Sky Harbor (PHX), Scottsdale (SDL), Phoenix Deer Valley (DVT), Falcon Field (FFZ), Goodyear (GYR), Glendale (GEU), Carefree (18AZ), Phoenix Williams-Gateway (IWA), Chandler Municipal (CHD), Stellar Park (P19), and Casa Grande Municipal (CGZ).

Sector 46 shall:

(a) Sequence arrivals and ensure the SUNSS STAR is issued, with a restriction to cross ITEMM at FL240 (SSO Transition).

(b) Optionally route PHX terminal area satellite arrivals via direct IWA PXR destination airport, with a restriction to cross 75 miles east of IWA at FL220.

(b) Clear turbojets and turboprops departing FHU/Libby AAF via TUS SUNSS STAR.

2. Tucson Terminal Area Departures to LAS

Turbojet and turboprop aircraft shall be assigned an altitude no higher than FL280.

3. En Route Aircraft landing LAS

Southwest Specialty shall ensure aircraft destined LAS are routed via:

(a) J86 PGS or

(b) Direct DRK

6.1.2. SECTOR FREQUENCIES AND VOICE SERVER/CHANNEL

Sector	Freq	*Voice Room URL*
42	126.45	*rw.liveatc.net/ZAB_42*
46	125.4	*rw.liveatc.net/ZAB_46*

6.1.3. OPTIMUM SECTOR CENTER POINT AND VISIBILITY RANGE

Sector	Center	Vis Range
42/46 (Combined)	CROME	225
42	GBN	125
46	ITUCO	175

6.1.4. SECTOR DESCRIPTIONS

See Appendix D.

CHAPTER 7 - NORTHWEST SPECIALTY

SECTION 1 - GENERAL

7.1.1. COORDINATION PROCEDURES

a. NORTHWEST

1. IAH/HOU LANDING TRAFFIC

The Northwest Specialty shall route aircraft landing IAH/HOU no farther east than LLO or MQP.

b. NORTH

1. PHX Terminal Area Departures

Note: Phoenix Terminal Area Airports are defined as: Phoenix Sky Harbor (PHX), Scottsdale (SDL), Phoenix Deer Valley (DVT), Falcon Field (FFZ), Goodyear (GYR), Glendale (GEU), Carefree (18AZ), Phoenix Williams-Gateway (IWA), Chandler Municipal (CHD), Stellar Park (P19), and Casa Grande (CGZ).

(a) Aircraft filed over GCK shall not be rerouted beyond FTI.

(b) Aircraft filed over LBL shall not be rerouted beyond ACH.

2. ABQ Terminal Area Arrivals

Note: Albuquerque Terminal Area Airports are defined as: Albuquerque International Sunport (ABQ), Double Eagle II (AEG), and Kirtland AFB (IKR).

Northwest Specialty shall ensure:

(a) Aircraft at or above FL290 from Sector 43 are routed via GUP.

(b) Turbojet arrivals departing the Phoenix Terminal Area are routed via the LAVAN STAR.

(c) Aircraft enter Sector 17 at or below FL350.

c. SOUTHWEST

1. TUS Terminal Area Arrivals

Note: Tucson Terminal Area includes, Marana Northwest Regional (AVQ), Davis-Monthan AFB (DMA), Marana/Pinal Airpark (MZJ), Nogales, Arizona, (OLS), Ryan Field Airport (RYN), and Tucson International (TUS).

The Northwest Specialty shall ensure aircraft over the Phoenix Terminal Area are routed via TFD and enter the Southwest Specialty at or below FL290.

7.1.2. SECTOR FREQUENCIES AND VOICE SERVER/CHANNEL

Sector	Freq	*Voice Room URL*
43	128.45	*rw.liveatc.net/ZAB_43*
38	132.9	*rw.liveatc.net/ZAB_38*

7.1.3. OPTIMUM SECTOR CENTER POINT AND VISIBILITY RANGE

Sector	Center	Vis Range
43/38 (Combined)	SILOW	175
43	SILOW	175
38	SALTS	125

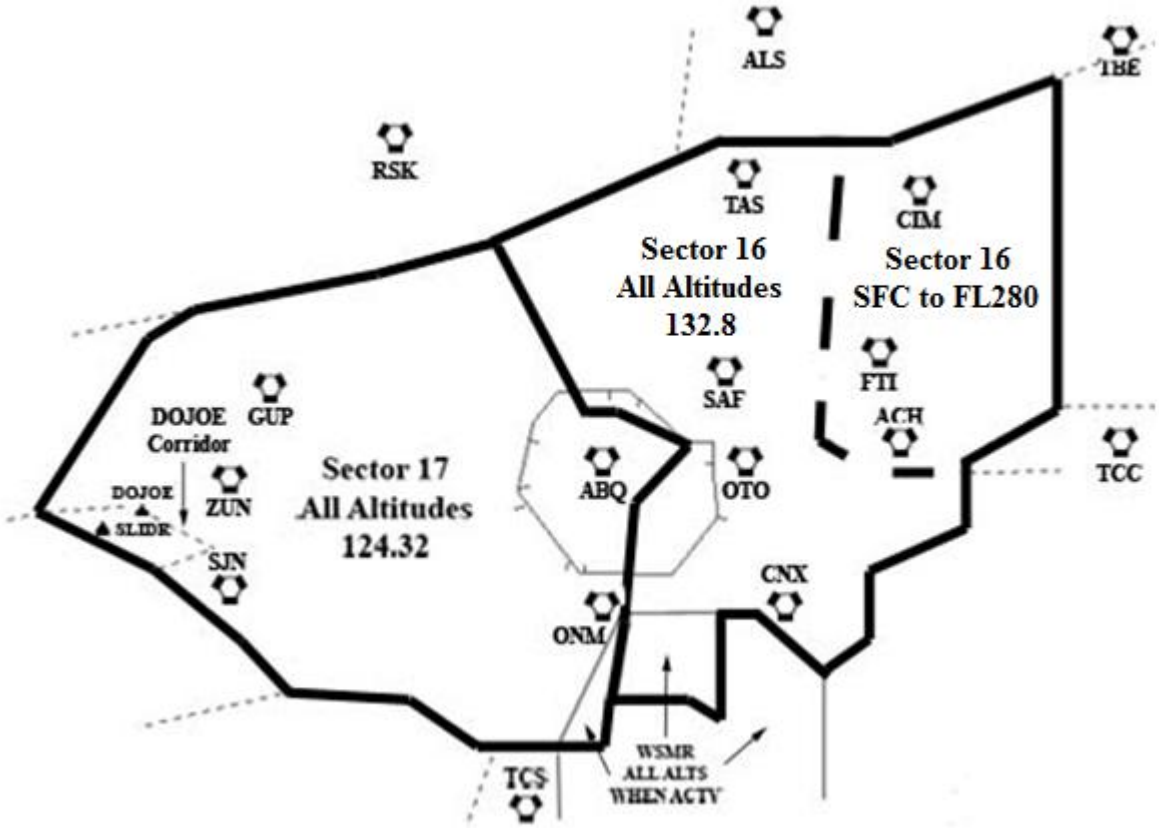
7.1.4. SECTOR DESCRIPTIONS

See Appendix E.

APPENDIX A - NORTH SPECIALTY

SECTION 1 - Sector 16 (SAN) & Sector 17 (LAVAN)

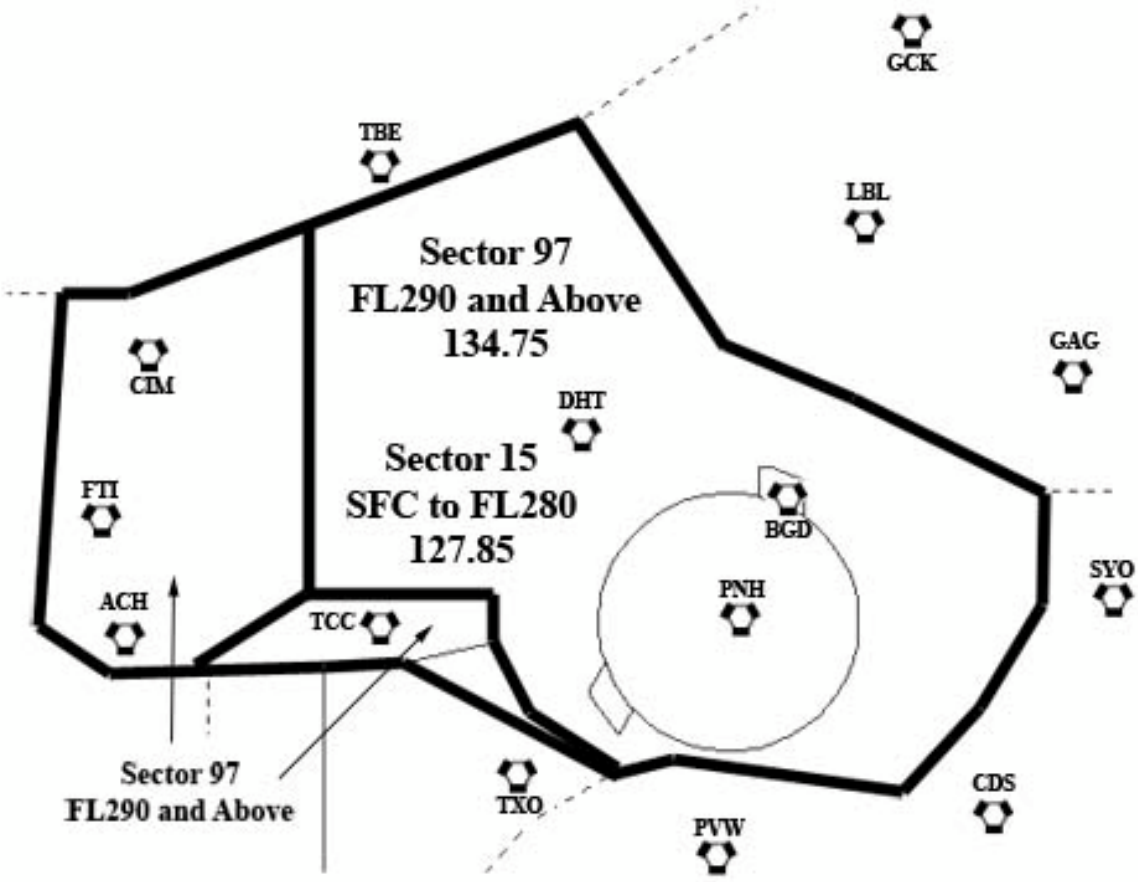
Primary responsibilities include sequencing of Phoenix arrival traffic from the northeast, and working both arrivals and departures to and from the Albuquerque area. These sectors may also initiate sequencing to DFW, LAX, and other major airports requiring in-trail spacing. Approach control services are provided for numerous smaller airports in Northern New Mexico including Santa Fe, Las Vegas, Taos, and Gallup.



APPENDIX B - EAST SPECIALTY

SECTION 1 - Sector 15 (BGDLO) & Sector 97 (AMAHI)

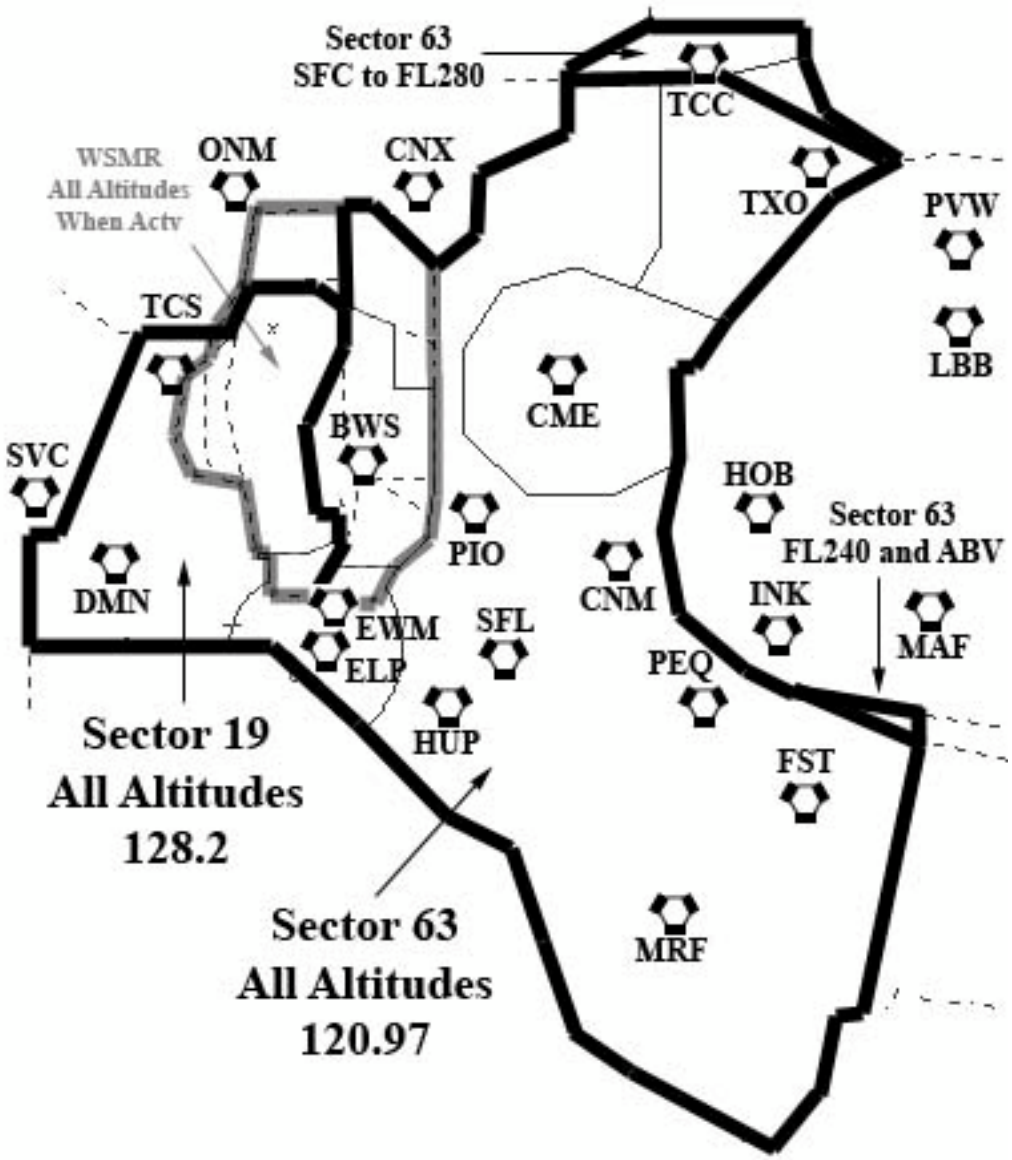
Primary responsibilities include sequencing arrivals and departures to and from Amarillo and Albuquerque, and serving as final sequencing authority for Dallas/Fort Worth Terminal Area arrivals from the northwest, issuing the BOWIE, GREGS, or MOTZA arrivals as appropriate. These sectors also assist in sequencing aircraft landing Phoenix. Approach control services are provided for numerous small airports in the Texas panhandle.



APPENDIX C - SOUTHEAST SPECIALTY

SECTION 1 - Sector 63 (ELP) & Sector 19 (DMN)

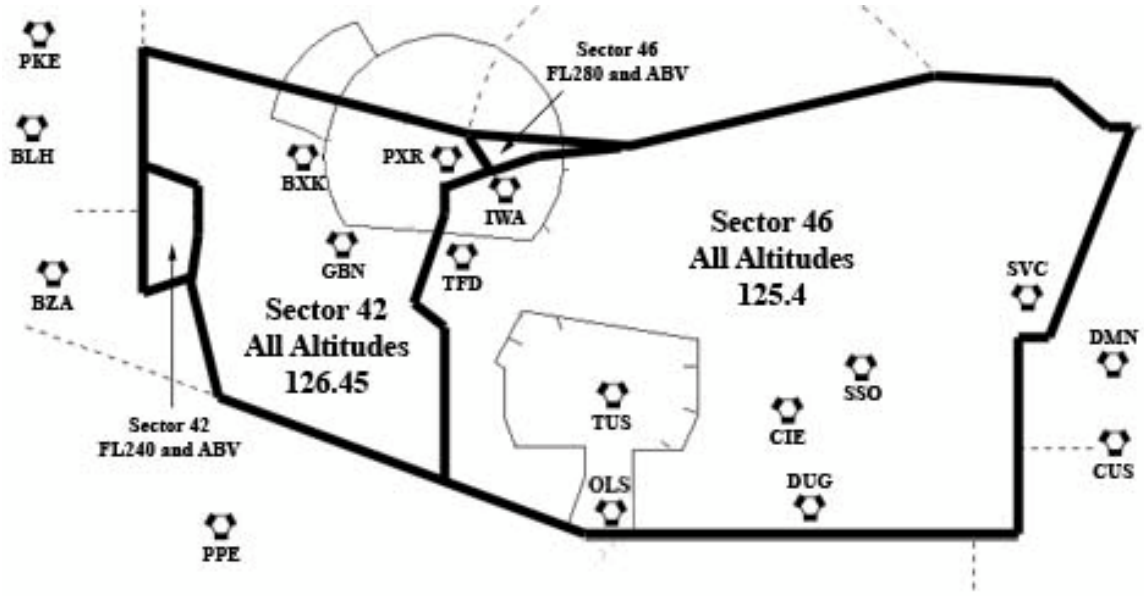
Primary responsibilities include sequencing arrivals and departures to and from El Paso and Roswell (and Holloman AFB and Cannon AFB when open). These sectors also initiate sequencing for Phoenix, Dallas/Fort Worth, and Houston Terminal Area landing traffic. Approach control services are provided for numerous small airports in Southern New Mexico and Western Texas including Las Cruces, Truth or Consequences, Sierra Blanca, Carlsbad, Fort Stockton, and Pecos.



APPENDIX D – SOUTHWEST SPECIALTY

SECTION 1 – Sector 42 (GBN) & Sector 46 (TUS)

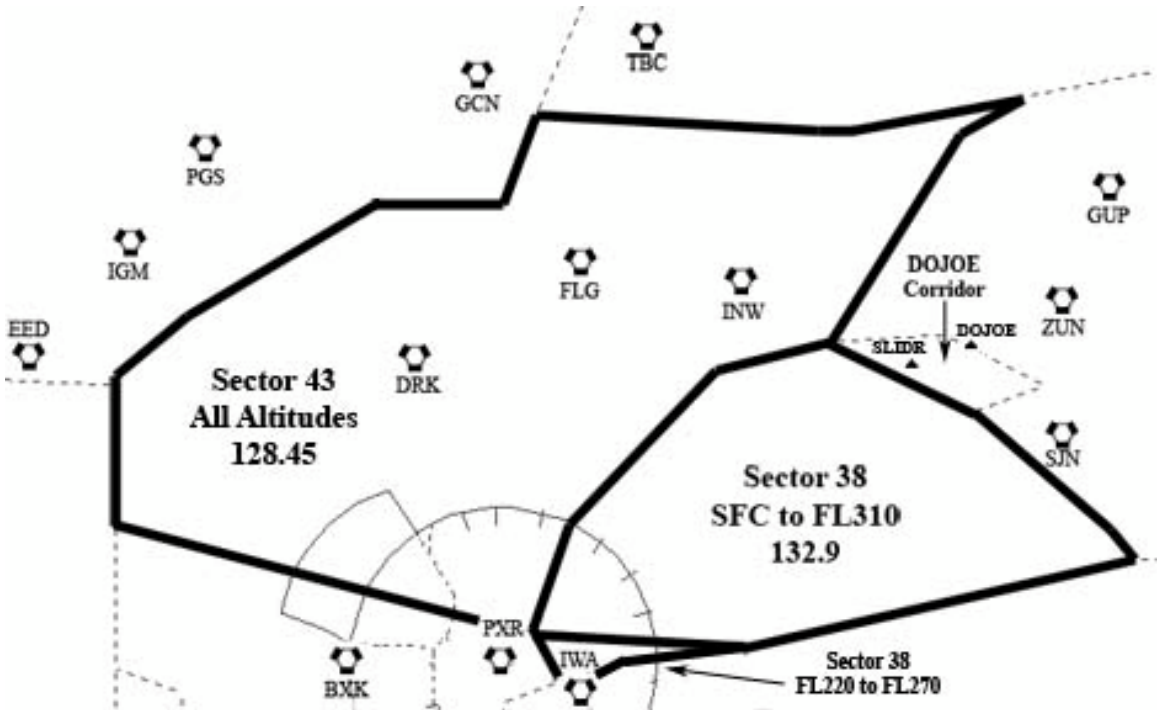
Primary responsibilities include sequencing of arrivals and departures to and from the Phoenix and Tucson Terminal Areas. These sectors may also initiate sequencing to DFW, IAH, and LAX. Approach control services are also provided to numerous small airports in Southern Arizona and New Mexico, including Douglas, Safford, and Silver City.



APPENDIX E – NORTHWEST SPECIALTY

SECTION 1 – Sector 43 (DRK) & Sector 38 (MIAMI)

Primary responsibilities include sequencing arrivals and departures to and from the Phoenix Terminal Area. Sector 43 will also initiate sequencing for Las Vegas Terminal Area traffic and aircraft destined for Southern California. Approach control services are provided for airports in Northern Arizona, including Flagstaff, Prescott, Sedona, and Winslow.



APPENDIX F – SECTOR COMBINATIONS

SECTION 1 – GENERAL

F.1.1. PURPOSE

The flow charts on the next page graphically illustrate the preferred sector combinations for ZAB. They are recommended, standardized methods of staffing ZAB with multiple center controllers.

F.1.2. DEFAULT SECTOR FREQUENCY AND VOICE SERVER/CHANNEL

Sector	Freq	*Voice Room URL*
15	127.85	*rw.liveatc.net/ZAB_15*

F.1.3. RECOMMENDED DEFAULT CENTER POINT AND RANGE

Sector	Center	Vis Range
15	TCS	450

F.1.4. GENERAL USE

Staff Sector 15 first, and follow the selected flow chart away from Sector 15 to determine the next center sector to staff. Select either the primary or secondary sector combination flow chart depending on traffic flows and number of controllers available. Solid boxes indicate coverage of an entire specialty. Dashed boxes indicate staffing and splitting a secondary sector within a specialty. The flow chart also indicates which airspace a given controller owns.

EXAMPLE: Staffing Sectors 15, 42, and 63 in the primary flow chart, Sector 15 would own all of the Northwest, North, and East Specialties, Sector 42 all of the Southwest Specialty, and Sector 63 would own the Southeast Specialty.

F.1.5. PRIMARY SECTOR COMBINATION DESCRIPTION

This configuration initially splits ZAB airspace between North and South tiers. The first split should be Sector 42.

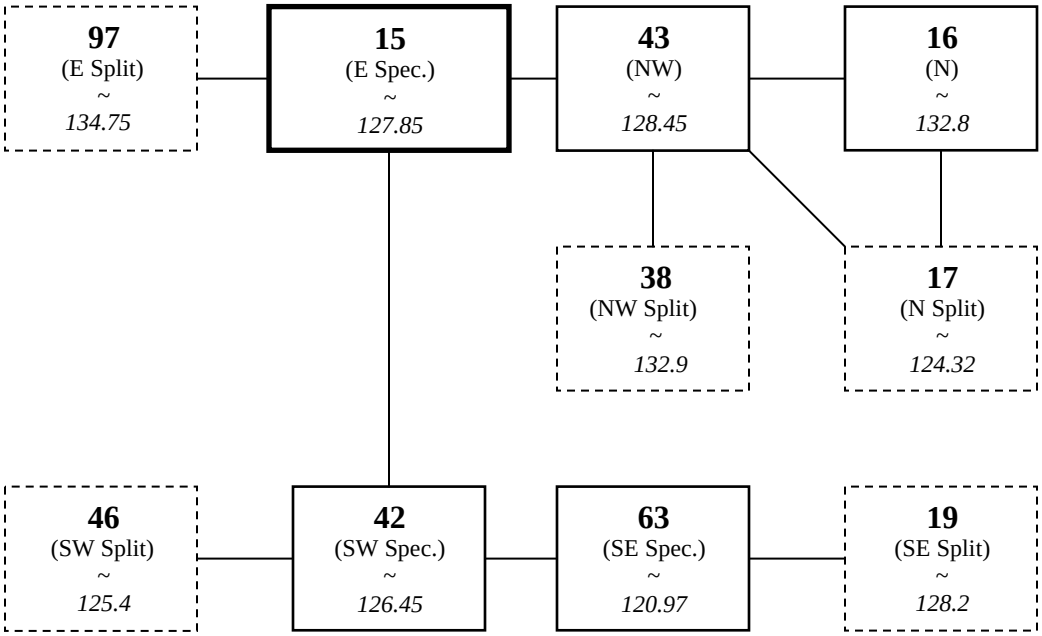
For heavy traffic periods involving the Phoenix Terminal Area, this is the best selection as it immediately splits the four primary arrival corridors between at least two controllers. Both controllers have extensive airspace to the east with which to sequence arrivals, and the Class C airports are split between the tiers. A third center controller could choose among a variety of positions depending on traffic flow.

F.1.6. SECONDARY SECTOR COMBINATION DESCRIPTION

This configuration initially splits ZAB airspace between East and West tiers. The first split should be Sector 43.

For events focusing on other than the Phoenix Terminal Area, or during times of extensive over flight traffic, this is the best selection. A third center controller could staff an additional position near a featured airport to ease frequency congestion and spread traffic load, particularly near Albuquerque and El Paso.

Primary Sector Combination Flow Chart



Secondary Sector Combination Flow Chart