

**VATSIM CLEVELAND ARTCC AND INDIANAPOLIS ARTCC  
LETTER OF AGREEMENT**

**EFFECTIVE: FEBRUARY 6, 2022**

**SUBJECT: INTERFACILITY PROCEDURES AND DELEGATION OF AIRSPACE**

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**1. PURPOSE**

This agreement establishes procedures between Cleveland Air Route Traffic Control Center (ZOB) and Indianapolis Air Route Traffic Control Center (ZID) supplementary to Air Traffic Control Handbooks and delegates airspace as depicted in attachments 1 & 2.

**2. DISCLAIMER**

Information contained herein is designed and specifically for use in a virtual air traffic control environment. It is not applicable, nor should it be referenced for live operations.

**3. CANCELLATION**

VATUSA Cleveland ARTCC and VATUSA Indianapolis ARTCC Letter of Agreement dated December 26, 2020 is hereby cancelled.

**4. PROCEDURES**

- a. Ensure that all aircraft are at a 1X simulation rate prior to initiating handoff.
- b. Ensure that all scratchpad entries are cleared unless required to convey operational information (e.g. "M80" for assigned Mach number, "H####" for assigned heading) not coordinated by other means (e.g. private message, verbally, etc.).
- c. Ensure the data block is formatted as follows:
  - i. For aircraft climbing to an altitude lower than the flight planned altitude:
    1. If the altitude is consistent with an LOA procedure, no entry.
    2. If the altitude is non-standard or not contained within this LOA, a temporary altitude reflecting the cleared altitude.
  - ii. For aircraft descending to an assigned altitude, no temporary altitude is used, and the filed/planned altitude is amended to the new cleared/assigned altitude.
  - iii. No scratchpad, except if specific control instructions that differ from LOA procedures have been issued. In these cases, the alternate instruction shall be verbally or textually included as well as included in the scratchpad. Scratchpad entries may include:
    1. Indicated speed restrictions (e.g., "210", "270+")
    2. "M" for Mach speed restrictions (e.g., "M81", "M78+")
    3. "H" for heading assignments (e.g., "H230")
    4. "H" and direction for deviations (e.g., "H15L" for 15 degrees left of track)
- d. Near Boundary Departures. Verbal coordination is required with the receiving Center for an aircraft departing a point less than 15 NM from the ZOB/ZID boundary (boundary).
- e. Transfer of Control.

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- i. All references to transfer of control are subsequent to handoff completion and communications transfer.
- ii. Aircraft must be established on required routing, per Attachment 5, prior to crossing the common Center Boundary. Deviations from this requirement must be coordinated on an individual basis.
- iii. Either Center has control to change a beacon code.
- iv. Specific areas where control has been transferred are depicted on the charts in Attachments 3 & 4.
- v. Limitations to the transfer of control are listed in Attachments 3 & 5.
- vi. Control for climb or descent is negated whenever the transferring controller does not meet the altitude restrictions specified in this LOA.
- vii. The following sectors release control for turns left or right of course, up to fifteen degrees (15°), and within 15 nautical miles (nm) of the boundary

<b>ZOB Sectors</b>	<b>Transfer of Control for vectors (15) between the sectors listed</b>	<b>ZID Sectors</b>
Bellaire, Keystone, & Clarksburg sectors	-and-	Lockbourne, Appleton, & University sectors
Geauga, Lorain, & Ravenna sectors	-and-	Appleton & Lockbourne sectors

- f. Altitude Coordination.
  - i. The receiving controller approves the assigned altitude, including IAFDOF and aircraft established in a block altitude, by accepting the handoff. When unable to approve the altitude indicated in the data block, the receiving controller must verbally coordinate with the transferring controller, prior to accepting the handoff.
  - ii. Handoffs must be directed to the sector having jurisdiction of the assigned altitude.
  - iii. Aircraft descending below the LOA restriction altitude must cross the boundary at or below the LOA specified altitude, and may be descending to the lower assigned altitude. The data block in this case will reflect the assigned altitude as a hard altitude (adjust Cruise altitude).
  - iv. Interim Altitude (ITAL) Procedures: When an interim altitude is used, the altitude entered in the flight plan (“hard altitude”) must reflect the requested altitude or, for arrivals, the altitude to which the aircraft must descend per the LOA.
- g. Restrictions.
  - i. Where specific routes and altitudes exist for aircraft transitioning the ZOB/ZID boundary, they must be assigned as stated in Attachment 5: Routing,



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Restrictions and Control Table, except as specified in paragraph 4.i.iv above (ITAL).

- ii. The Mansfield & Marion sectors must not tunnel Cleveland Airport Traffic Control Tower (CLE ATCT) area departures under Ravenna sector and then climb above FL230 without coordination with Ravenna, Appleton, or Dayton sectors, as appropriate.
- iii. BWI, IAD, DCA arrivals from ZOB sectors Ravenna, Lorain, or Geauga may be routed direct through ZID airspace with a pointout to the appropriate sector, but must remain north and east of BLISS intersection. These aircraft are exempt from mile-in-trail restrictions issued by ZOB to ZID.
- iv. Detroit terminal airport departures (see attachment 4):
  - 1. All "SID assigned" speeds must be deleted or amended via ATC clearance prior to entering ZID airspace.
  - 2. All speed restrictions coordinated via the 4th line of the data block must be "ATC assigned."

**4. ATTACHMENTS**

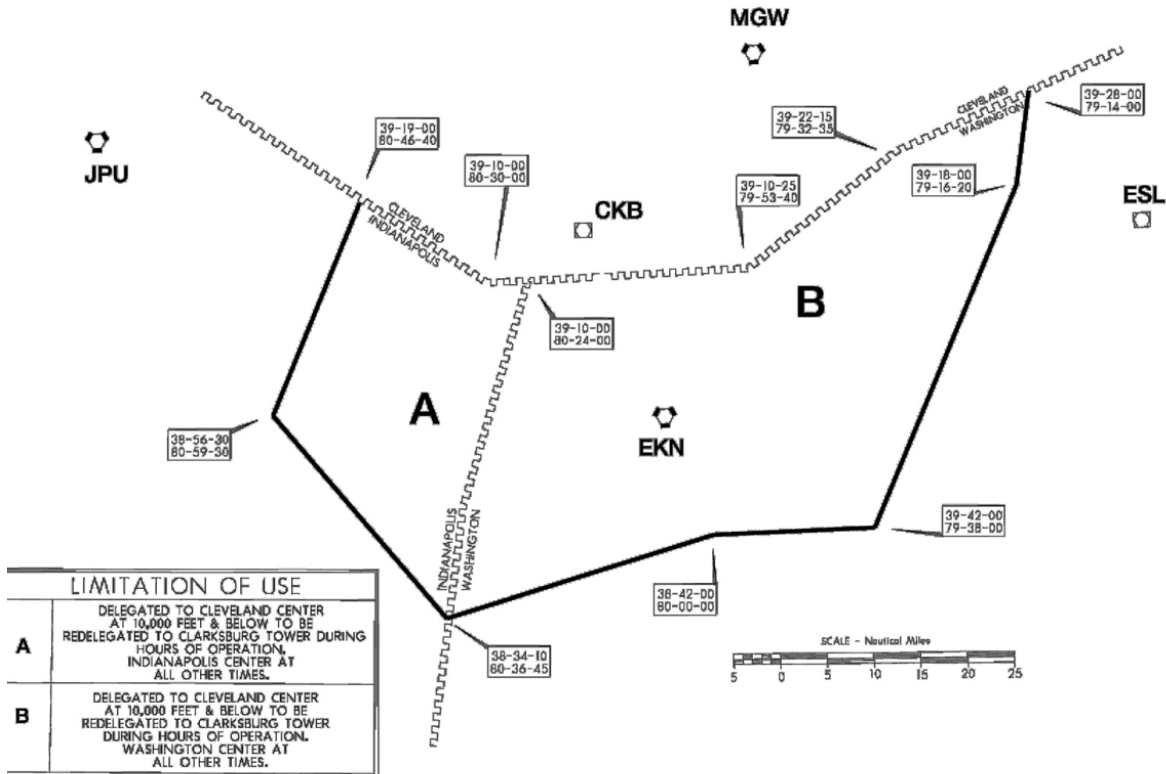
- a. ATTACHMENT 1 - AIRSPACE DELEGATED TO ZOB
- b. ATTACHMENT 2 - AIRSPACE DELEGATED TO ZID
- c. ATTACHMENT 3 - TRANSFER OF CONTROL AREAS
- d. ATTACHMENT 4 - TERMINAL AREA AIRPORTS
- e. ATTACHMENT 5 - RESTRICTION TABLE
- f. ATTACHMENT 6- STANDBY ROUTES AND ALTITUDE RESTRICTIONS
- g. ATTACHMENT 7 - ZOB AIRSPACE
- h. ATTACHMENT 8 - ZID AIRSPACE
- i. ATTACHMENT 9 - CMH AIRSPACE

	
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ATTACHMENT 1 - AIRSPACE DELEGATED TO ZOB

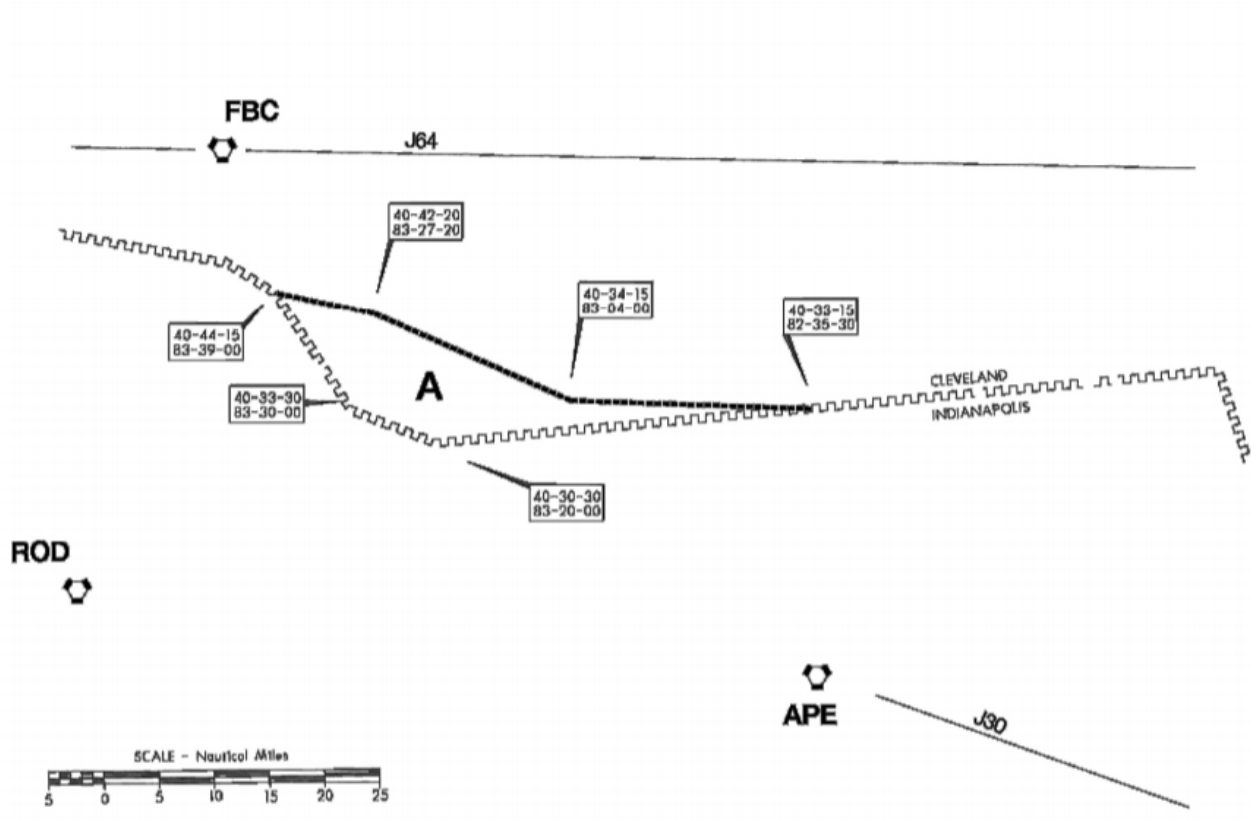
ZID Delegates to ZOB for Re-delegation to CKB ATCT



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ATTACHMENT 2 - AIRSPACE DELEGATED TO ZID

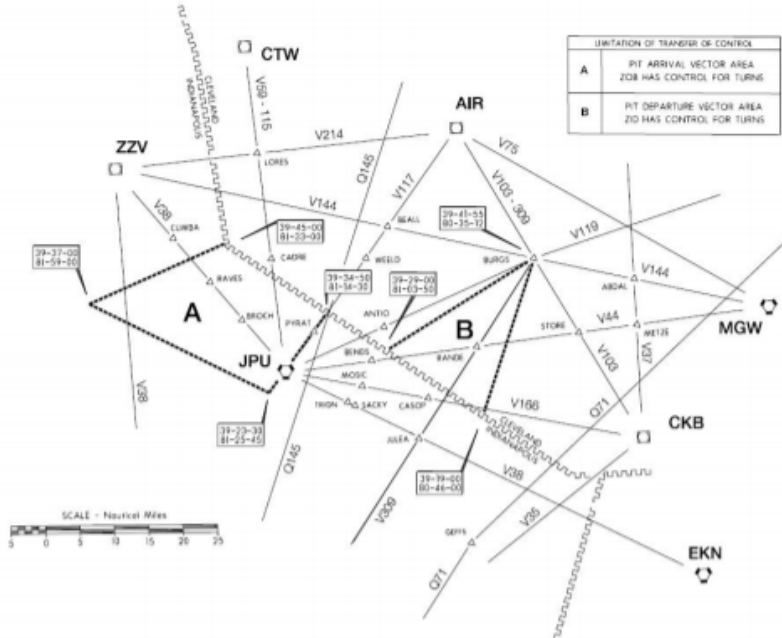
LIMITATION OF USE	
A	DELEGATED TO INDIANAPOLIS CENTER AT AND ABOVE FL240.



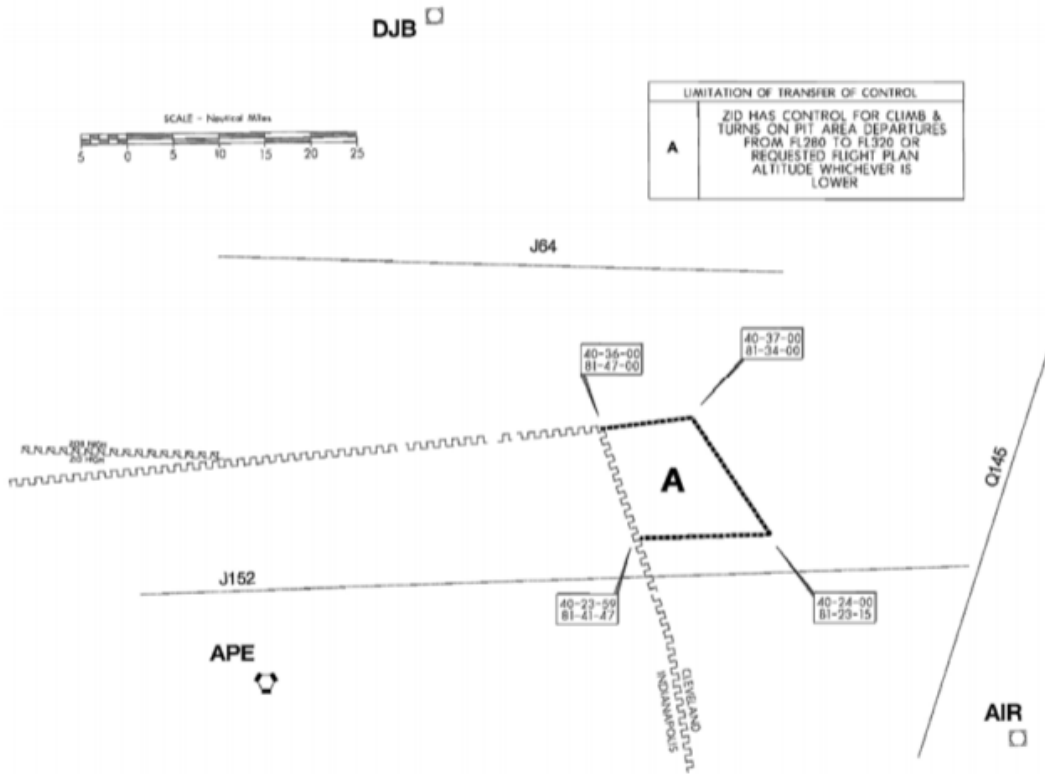
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ATTACHMENT 3- TRANSFER OF CONTROL AREAS

**PIT Arrival / Departure Vector Areas**



**Transfer of Control Area**



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**ATTACHMENT 4- TERMINAL AREA AIRPORTS**

Cleveland Area (CLE)	BKL, CGF, LNN, LPR
Detroit Area (D21)	ARB, DET, MTC, OZW, PTK, YIP, CYQG
Pittsburgh Area (PIT)	AGC, BVI, BTP
Cincinnati Area (CVG)	HAO, LUK, I69
Columbus Area (CMH)	LCK, OSU, DAY, FFO, MGY
Indianapolis Area (IND)	EYE, MQJ, TYQ

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**ATTACHMENT 5- RESTRICTION TABLES**

ZOB Provides for ZID							
Qualifiers/Definitions					Requirements/Restrictions		
#	Arrival Airport	Departure Airport	If Via	Aircraft Type	Route Required	Altitude <small>Unless otherwise coordinated, altitude restriction is at the boundary.</small>	Special
1	ALL unless otherwise specified	CLE Terminal Area	APE			AOB FL270	ZID has control for turns up to 15° left of course.
			PUUDL			AOB FL220	
			SNNOH or SINKR				ZID has control for turns up to 20° left of course AOA FL240, south of J64.
		D21 Terminal Area	RINTE or SINKR				ZID has control for turns up to 20° left of course AOA FL240, south of J64.
		PIT Terminal Area	BSV Sector		DILNE TVTRN	AOB FL280	ZID has control for climb & turns as depicted in Attachment 3 up to FL320 or requested altitude, whichever is lower.
			MGW Sector		BURGS HVQ or BURGS HNN		ZID has control for turns in PIT Departure Vector Area B as depicted in Attachment 3.
		KCAK	PKB Sector		JPU		
2	KATL	D21 Terminal Area	CLNTN or SINKR				Aircraft may not enter the lateral confines of the APE/LCK Sectors.



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3	KCMH KLCK KOSU		MGW Sector	RNAV	CLPPR STAR	AOB FL230 descending to 16,000 ft.	ZID has control to issue the "Descend Via" clearance.
				Non-RNAV	AIR AIR263 BREMN APE	AOB FL230 descending to 16,000 ft.	ZID has control for descents.
			BSV Sector		TVTRN	AOB 14,000 ft.	PIT Terminal Area Departures only.
			MNN/MFD Sectors	RNAV	DUBLN STAR or CBUSS STAR	AOB 10,000 ft.	Via CMH TRACON. CMH has control for descents.
Non-RNAV	GUNNE or APE	AOB 10,000 ft.					
4	KCVG	CLE Terminal Area				AOB FL220	
			CTW		CINCE STAR or TIGRR STAR	AOB FL340	
		D21 Terminal Area			TORRR DEBAR ARBAS RID MEEKR	AOB FL200	ZOB may clear aircraft direct DEBAR
		KFNT KLAN KMBS			FWA DEBAR ARBAS RID MEEKR		
		TOL Terminal Area			TORRR DEBAR ARBAS RID MEEKR	AOB FL200	ZOB may clear aircraft direct DEBAR
		CYYZ or Overseas	LOR, RAV Sectors		APE CINCE STAR or APE TIGRR STAR	AOB FL320	
5	KCVG Satellites		AIR, CKB, KEY Sectors		CINCE STAR	AOB FL320	
			LOR, RAV Sectors		APE CINCE STAR	AOB FL320	
			MBL, BFT, SKY, PAN, MNN Sectors		HEDEE STAR	AOB FL230	

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6	KDAY KFFO KMGY		AIR, RAV Sectors			AOB FL280	
			MNN/PAN Sectors			AOB 14,000 ft.	
7	KILN		AIR/RAV Sectors			AOB FL280	
			MNN/PAN Sectors			AOB FL200	
8	KIND	CLE Terminal Area			SINKR MIE CLANG STAR or SINKR SNKPT SNKPT STAR	AOB FL220	Aircraft may be cleared direct MIE or SNKPT
		D21 Terminal Area			TORRR MIE CLANG STAR or TORRR SNKPT SNKPT STAR	AOB FL220	
					CLANG STAR or SNKPT STAR		
9	KSDF	CLE Terminal Area and D21 Terminal Area			DLAMP STAR or RDSTN STAR	AOB FL280	KSDF arrivals must not be cleared further direct than MALDN, UKATS, ROD, or APE
					DLAMP STAR or RDSTN STAR		
10	KLEX	CLE Terminal Area and D21 Terminal Area			SINKR CVG CLEGG STAR	AOB FL280	
11	KPKB		MGW Sector			Descending to 6,000 ft.	PKB sector has control for turns up to 30° and descent.

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ZID Provides for ZOB							
Qualifiers/Definitions					Requirements/Restrictions		
#	Arrival Airport	Departure Airport	If Via	Aircraft Type	Route Required	Altitude <small>Unless otherwise coordinated, altitude restriction is at the boundary.</small>	Special
12	KABE				ROD CXR J146 ETG or JST HAR		
13	KBUF KROC	KCVG and IND Terminal Area				AOB FL350	
14	KBWI KMTN	KCMH KLCK KOSU			NUSMM <i>ANTHM STAR</i> or <i>AIR EMI STAR</i>		
					KEMAN <i>ANTHM STAR</i> or <i>KEMAN EMI STAR</i>	Must cross the boundary at least 15NM north of JPU.	
15	KCAK KAKR 1G3		CMH Sector	Jets	<i>HUUVR STAR</i>	Cross HUUVR @ 9,000 ft.	ZOB has control for turns up to 30°.
			PKB Sector		<i>ZZIPS STAR</i>	AOB FL230 descending to 15,000 ft.	
16	KCKB KMGW					10,000 ft.	

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17	CLE Terminal Area		CMH Sector	RNAV Jet	<i>ROLLN STAR</i>	AOB FL230 descending to 17,000 ft.	ZOB has control to issue the OPD. To the maximum extent possible, ZID will transfer communication prior to GEDDY.
				RNAV Props	<i>ROLLN STAR</i>	AOB 15,000 ft. descending to 11,000 ft.	ZOB has control for descent.
				Non-RNAV	BOBCT KEATN	AOB 15,000 ft. descending to 11,000 ft.	
			LTL Sector	RNAV Jets	<i>ROKNN STAR</i>	AOB FL230 descending to FL190	ZOB has control to issue the OPD. To the maximum extent possible, ZID will transfer communication prior to HEADZ.
				RNAV Props	<i>ROKNN STAR</i>	AOB 15,000 ft.	ZOB has control for descent.
				Non-RNAV	MFD DJB	AOB 15,000 ft.	
18	KDCA KDAA KADW	KCMH KLCK KOSU	Jets	AIR BUCKO <i>FRDMM STAR</i> or AIR BUCKO NUMMY STAR			
			RNAV Props	MGW ESL <i>TIKEE STAR</i>			
			Jets	J30 BUCKO <i>FRDMM STAR</i> or AIR BUCKO NUMMY STAR		ZID may go direct BUCKO north of JPU.	
			RNAV Props	MGW ESL <i>TIKEE STAR</i>			

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19	KDTW	KCMH KLCK KOSU			<i>BONZZ STAR</i> or <i>KLYNK STAR</i>	AOB FL230	ZOB has control to issue the appropriate OPD
			APE Sector	RNAV	<i>CRAKN STAR</i> <i>HTROD STAR</i> <i>BONZZ STAR</i> <i>KLYNK STAR</i>	AOB FL300	ZOB has control to issue the appropriate STAR, and control for descent at/or north of BOBCT/COLTZ
				Non-RNAV	BOBCT DJB DXO or COLTZ DJB DXO	AOB FL300	ZOB has control for descent.
			DQN	RNAV	<i>HANBL STAR</i> or <i>LECTR STAR</i>	AOB FL210	ZOB has control to issue the appropriate OPD
				Non-RNAV	TORRR LFD DXO	AOB FL210	ZOB has control for descent.
20	KARB KDET KMTC KOZW KPTK KYIP CYQG		APE Sector	RNAV	<i>FOREY STAR</i>	AOB FL300	
				Non-RNAV	DJB LLEEO	AOB FL300	
			CMH Sector	RNAV	<i>FOREY STAR</i>	AOB FL230	
				Non-RNAV	DJB LLEEO	AOB FL230	
			ROD Sector	RNAV	<i>PETTE STAR</i>	AOB FL210	If there is competing DTW traffic, ZID will deliver the Satellite traffic below the Metro traffic.
				Non-RNAV	TORRR CRUXX SVM	AOB FL210	
21	KERI	KCVG and IND Terminal Area				AOB FL230	
22	KFNT		APE Sector		<i>FOREY STAR</i>	AOB FL300	ZID may clear aircraft no further direct than WWSHR
			DAY Sector		TORRR HAZIT VHICL CITYE	AOB FL280	ZOB has control for descent with the DAY sector.

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23	KHEF	KCMH KLCK KOSU		Jets	AIR MGW <i>GIBBZ STAR</i> or AIR MGW ESL <i>TIKEE STAR</i> or AIR MGW ESL FINKS CSN		
				RNAV Props	AIR MGW ESL <i>TIKEE STAR</i>		
				Jets	MGW <i>GIBBZ STAR</i> or MGW ESL <i>TIKEE STAR</i> or MGW ESL FINKS CSN		
				RNAV Props	MGW ESL <i>TIKEE STAR</i>		
24	KHLG				AIR HLG	AOB 13,000 ft.	
25	KIAD KJYO	KCMH KLCK KOSU		Jets	AIR MGW <i>GIBBZ STAR</i> or AIR MGW ESL FINKS DOCCS <i>DOCCS STAR</i>		May be cleared direct MGW provided the aircraft remains at least 15NM north of JPU.
				Jets	MGW <i>GIBBZ STAR</i> or MGW ESL FINKS DOCCS <i>DOCCS STAR</i>		
		Props	MGW MRB AML				
26	KLAN		DAY Sector			AOB FL280	
27	KMFD KMNN	CMH Terminal Area				AOB 8,000 ft.	CLE has control for turns and descents.
28	KPHL				JST <i>BOJID STAR</i> or JST <i>BUNTS STAR</i>		

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29	KPIT		CMH Sector	Jets	CTW <i>FEWGA STAR</i>	Cross CTW AOB FL190	
				Props	CTW <i>FEWGA STAR</i>	AOB 15,000 ft.	
			PKB Sector	Jets	<i>FEWGA STAR</i>	AOB FL210	1.ZOB has control to descend jets to 15,000 ft. within 10NM of boundary 2.ZOB has control for turns in PIT Arrival Vector Area as depicted in Attachment 3 3.ZID may clear direct AIR provided aircraft remain NW of Q145
				Props	<i>FEWGA STAR</i>	AOB 15,000 ft.	
30	KPIT Satellites		CMH Sector	Jets	WISKE AGC	AOB FL190	
				Props	WISKE AGC	AOB 15,000 ft.	
			PKB Sector	Jets	WISKE AGC	AOB FL210	
				Props	WISKE AGC	AOB 15,000 ft.	
31	KLBE		CMH Sector	Jets	WISKE	AOB FL230	
				Props	WISKE	AOB 15,000 ft.	
			PKB Sector			AOB FL230	
32	KTOL		ROD Sector			AOB 17,000 ft.	
			APE			AOB FL200	
33	KYNG		CMH Sector		ACO	AOB FL230	
			DAY Sector			AOB FL290	

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**ATTACHMENT 6- STANDBY ROUTES AND ALTITUDE RESTRICTIONS**

The restrictions below are required only when requested. They should normally only be requested for events or other periods of heavy traffic; however, controllers may request or voluntarily apply these restrictions at any time an operational advantage would be gained.

ZOB Provides for ZID							
Qualifiers/Definitions					Requirements/Restrictions		
#	Arrival Airport	Departure Airport	If Via	Aircraft Type	Route Required	Altitude <small>Unless otherwise coordinated, altitude restriction is at the boundary.</small>	Special
S1	KRDU		Entering ZID east of JPU			AOB FL290	
S2	KROA		Entering ZID east of JPU			AOB FL250	



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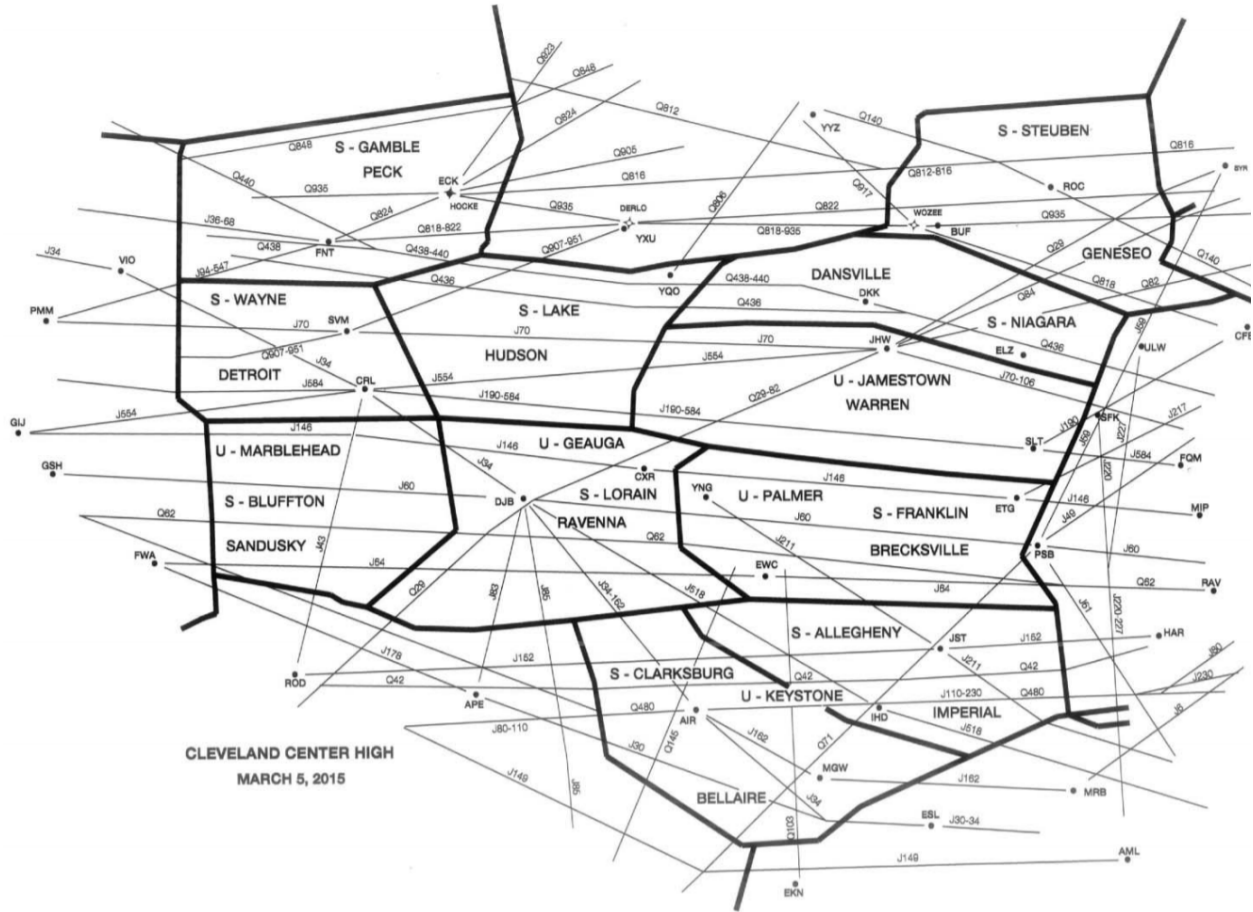
ZID Provides for ZOB							
Qualifiers/Definitions					Requirements/Restrictions		
#	Arrival Airport	Departure Airport	If Via	Aircraft Type	Route Required	Altitude Unless otherwise coordinated, altitude restriction is at the boundary.	Special
S3	KACY				ROD J152 HAR LRP DQO ENO SIE		
S4	KBDL				DJB JHW Q82 MEMMS WILET STELA STAR		
		KCVG			AHITY PSB J49 HNK STELA STAR		
S5	KBOS	KCMH KLCK KOSU			HLG SLT J190 RKA PONCT JFUND STAR		
		KCVG			AHITY PSB PONCT JFUND STAR		
					WWSHR Q29 JHW Q82 PONCT JFUND STAR		
S6	KEWR			Jets	WWSHR Q29 DORET J584 SLT FQM STAR		
S7	KHPN			Jets & Turbo Props	JHW ITH DNY VALRE STAR		
S8	KJFK			Jets & Turbo Props	DJB JHW J70 LVZ LENDY STAR		
S9	KLGA			Jets & Turbo Props	WWSHR TEESY J146 ETG MIP STAR or WWSHR CXR ETG MIP STAR		
S10	KTEB			Jets & Turbo Props	WWSHR JHW LVZ STAR or DJH JHW LVZ STAR		

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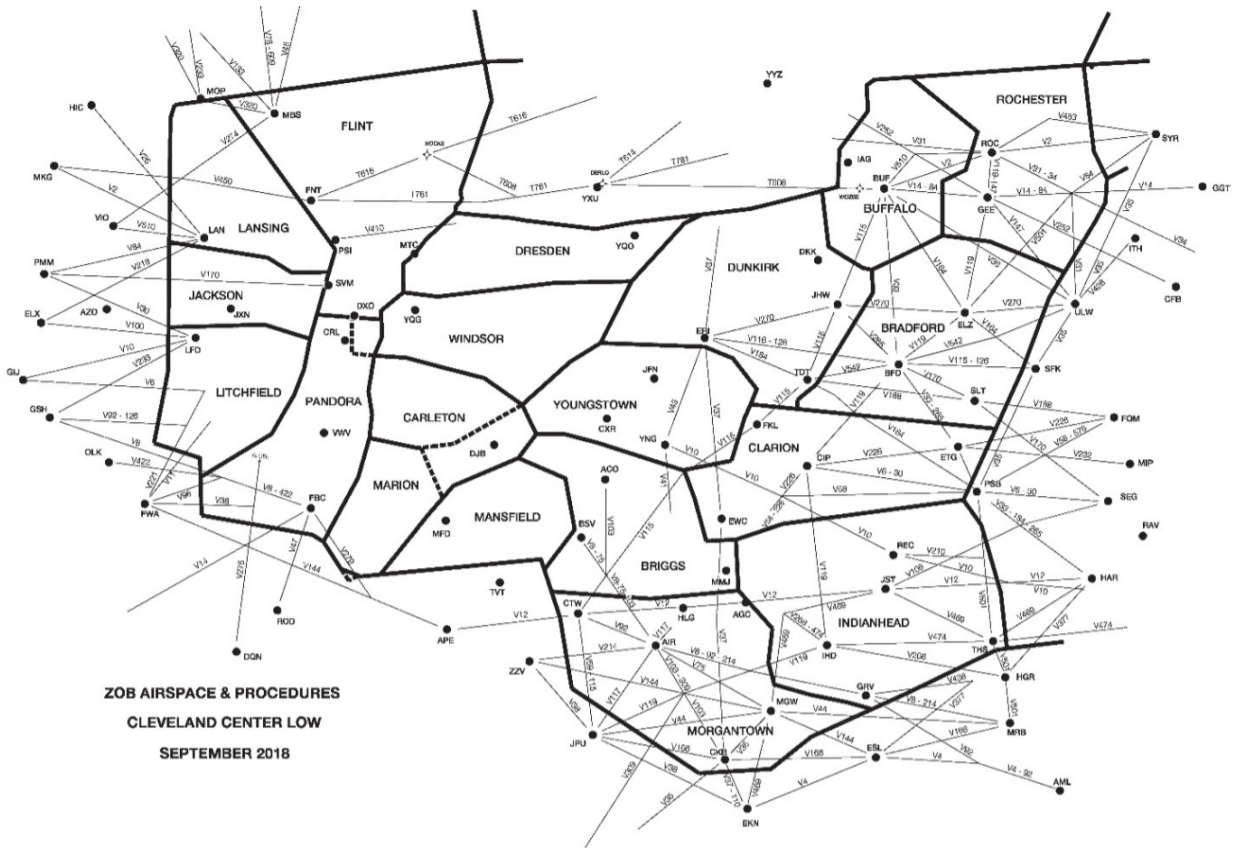
<b>S11</b>	<b>CYYZ</b>		LINNG		<i>OXMAN LINNG STAR</i>		ZOB has control for turns to QWERI north of J30
			QWERI		<i>PSKUR QWERI NUBER STAR</i>	AOB FL300	
					<i>QWERI NUBER STAR</i>	AOA FL310	

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ATTACHMENT 7 - ZOB AIRSPACE

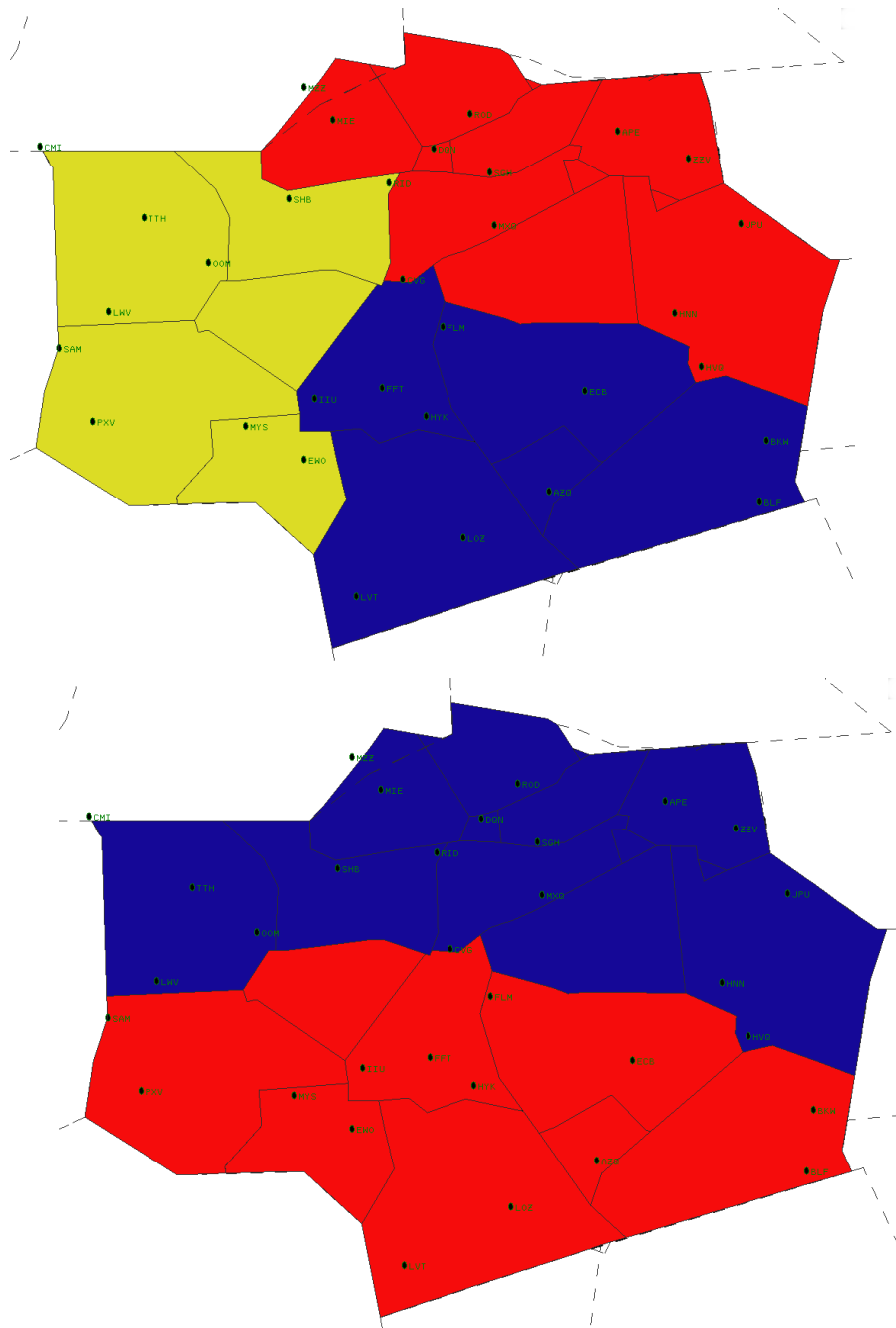


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## ATTACHMENT 8 - ZID AIRSPACE





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ATTACHMENT 9 - CMH AIRSPACE

