



VIRTUAL AIR TRAFFIC SIMULATION NETWORK
NORTH AMERICA REGION – USA DIVISION
vZAU – CHICAGO ARTCC

**ZAU ORDER
01.100A**

Effective Date:
July 6, 2020

SUBJECT: Chicago Center (ZAU)

This policy prescribes general procedures and guidance for use by individuals providing ATC services on the VATSIM network within the Chicago ARTCC boundary, including any facility therein. Any controller providing ATC services- whether assigned to the Chicago ARTCC or with visiting status- must be familiar and comply with the provisions of this order that pertain to their operational responsibilities and use their best judgment when encountering situations not covered by it.

The procedures prescribed by this order are general, and are not specific to any facility within vZAU, but rather the entire area. They may be supplemented by facility-specific SOPs.

Please note, this order is intended for use on the VATSIM network and only applies in a virtual environment simulated on the VATSIM network. It is not applicable for live operations in the National Airspace System.

The procedures contained within this order prescribe how the ATC facilities/positions are to be operated and-- in conjunction with FAA Orders 7110.10, 7110.65, 7210.3 and various vZAU Orders-- will be the basis for performance evaluation, training, and certifications.

Dristin Rose
Air Traffic Manager
Chicago ARTCC

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Chapter 1. Introduction

1-1. Purpose of this Order

This order establishes standard operating procedures for the enroute sectors (CHI_CTR) of the VATSIM Chicago ARTCC—referenced as the ATC facility—and supplements FAA 7110.65, Air Traffic Control.

1-2. Audience

All VATSIM Chicago ARTCC personnel, as well as those with a visiting status. Anyone providing ATC services as a Chicago Center must be familiar and comply with the provisions of this order.

1-3. What This Order Cancels

The following Orders/Notices are cancelled and superseded; their content has been added to this Order:

- a. ZAU 01.100 Chicago Center, dated 07/06/2020

1-4. Explanation of Changes

- a. This is the third version of this order.

1-5. Mission

- a. It is the mission of the Chicago ARTCC to provide safe and efficient air traffic services to simulated air traffic on the VATSIM network.
- b. The Facility will strive to maintain a professional, friendly, supportive and educational environment for both network controllers and pilots.

1-6. Word Meanings

As used in this Order:

- a. *Must*, or an action verb in the imperative sense, means mandatory.
- b. *Should* means recommended
- c. *May* and *need not* mean optional
- d. *Will* indicates futurity

1-7. Abbreviations and References

This Order uses abbreviations and refers to words/phrases as defined in the following tables:

TBL 1-1-1
Abbreviations

ABBR / REFERENCE	DESCRIPTION
ATM	Air Traffic Manager
DATM	Deputy Air Traffic Manager
CIC	Controller In Charge
IAW	In accordance with
SOP	Standard Operating Procedures
LOA	Letter of Agreement
CTR	En-route Control/ Center (Chicago Center may be assumed unless otherwise indicated)
APP	Approach Control
DEP	Departure Control
GND	Ground Control
DEL	Clearance Delivery
RWY	Runway
TWY	Taxiway

TBL 1-1-2
Word/Phrase References

WORD/PHRASE	DESCRIPTION
The Facility	VATSIM Chicago ARTCC, as an organization
ATC Facility	Any air traffic control facility/position within the ZAU ARTCC, unless otherwise indicated
Controller(s)	Any individual(s) providing ATC services within the ZAU ARTCC, unless otherwise indicated
The Network	Any VATSIM server
Primary airport	The main airport hosting Class B or C airspace
Secondary airport	Any airport other than a primary, usually Class D airspace
Satellite airport	Any secondary airport within a TRACON/RAPCON
Final approach	The segment of flight where an aircraft is within 6 flying miles to the runway
The website	http://www.chicagoartcc.org and any/all associated features/programs

Chapter 2. General

2-1. Data Blocks

- a. Temporary Altitudes
 - 1. Aircraft climbing to an altitude lower than their cruise altitude shall be issued a temporary altitude.
 - 2. Aircraft issued a “crossing” restriction will be issued an applicable temporary altitude.
- b. Scratchpad Entries
 - 1. Assigned Mach Numbers will be displayed as “M” (e.g., M78, M80+ etc)
 - 2. Indicated speeds will be displayed as “S” (e.g., S210, 280+ etc)
 - 3. Heading assignments will be displayed as “H” (e.g. H270, H180 etc)
 - 4. Aircraft leaving Chicago Center Airspace shall be cleared of all scratch pad entries prior to reaching the receiving ARTCC/TRACON boundary.

2-2. Beacon Codes

- a. The VATUSA Division has adopted the beacon allocation plan as shown on table 2-1-1.
 - 1. Internal – Flights originating and ending within ZAU
 - 2. External – Flights originating and exiting ZAU
 - 3. Overflight – Flights passing through ZAU’s airspace

TBL 2-2-1

Beacon Allocation

Internal	External	Overflight
4300-4377 5300-5377 5500-5577	1301-1377 6500-6577 3101-3177 3201-3277 3501-3577 7201-7277	5601-5677 2201-2277

2-3. Voice ATIS

- a. The standard Voice ATIS to be maintained by Chicago Center when no other controllers are online is KORD.
- b. The secondary Voice ATIS to be maintained by Chicago Center is KMDW.
- c. The third Voice ATIS to be maintained by Chicago Center is KMKE.

- d. If KORD, KMDW, and KMKE have controllers online to maintain a Voice ATIS, it shall be up to the Chicago Center controller on duty to maintain a Voice ATIS at another facility within the confines of the ARTCC boundary.

Chapter 3. Designated Airspace

3-1. Combined Airspace

- a. Chicago Center shall be combined on CHI_35_CTR, BEARZ LOW, 134.870.

3-2. Terminal Airspace

- a. Low sectors absorb underlying closed terminal airspace within their lateral boundaries and release terminal airspace to appropriate controllers when opened.
- b. Control of terminal airspace reverts to the Low sector whose airspace overlies the airport proper, or the primary airport proper of a TRACON/RAPCON with the following exception:
 - 1. BEARZ, LOW shall always control C90 even when Center sectors are split in multiple ways.

3-3. High / Low Divide

- a. HIGH SECTORS own the airspace from FL240 to FL600 within ZAU airspace.
- b. LOW SECTORS own the airspace from the surface to FL230 within ZAU airspace, **excluding any open (staffed) terminal airspace.**

3-4. Hierarchy of Positions

The following is the order in which positions shall be opened or split in the event more than one controller wishes to control center or traffic levels dictate additional sector staffing.

- a. At least one Low Center sector shall be opened before a High Center sector may open.

TBL 3-4-1

Low Sector Hierarchy

<i>Callsign</i>	<i>Position Name</i>	<i>Frequency</i>	<i>Airspace Delegation</i>
CHI_35_CTR	BEARZ LOW	134.870	All ZAU LOW
CH_51_CTR	PLANO LOW	135.150	Low E/W Split
CHI_74_CTR	FARMM LOW	133.350	Low N/S Split
CHI_26_CTR	KUBBS LOW	133.200	NE Area/Four Way Split

TBL 3-4-2

High Sector Hierarchy

<i>Callsign</i>	<i>Position Name</i>	<i>Frequency</i>	<i>Airspace Delegation</i>
CHI_46_CTR	BOILER HIGH	121.270	All ZAU HIGH
CHI_94_CTR	IOWA CITY HIGH	125.570	High E/W Split
CHI_60_CTR	BADGER HIGH	126.870	High N/S Split
CHI_88_CTR	KEELER HIGH	127.620	NE Area/Four Way Split

TBL 3-4-3

Multiple Center Sector Staffing

Two Centers	35 (East) 51 (West)
Three Centers	35 (All low) 94 (West High) 46 (East High)
Four Centers	35 (East Low) 51 (West Low) 46 (East High) 94 (West High)
Five Centers	35 (East Low) 51 (West Low) 46 (South East High) 94 (South West High) 60 (North High)
Six Centers	35 (South East Low) 51 (South West Low) 74 (North Low) 46 (South East High) 94 (South West High) 60 (North High)
Seven Centers	35 (South East Low) 51 (South West Low) 74 (North Low) 46 (South East High) 94 (South West High) 60 (North West High) 88 (North East High)
Eight Centers	35 (South East Low) 51 (South West Low) 74 (North West Low) 26 (North East Low) 46 (South East High) 94 (South West High) 60 (North West High) 88 (North East High)

***NOTE**—During large events, a TMU position may be staffed to assist with coordination, spacing, and capacity rates. CHI_T_CTR shall be the assigned TMU position but will not be primed on any frequency.*

Chapter 4. Standard Procedures

4-1. C90 TRACON Arrival Procedures

a. Northeast Arrivals (KUBBS Feeder)

1. The ORD arrival routes include the ERNNY and WYNDE STARs. Aircraft may be granted direct to “short cuts” no further than the arrival gate unless coordinated. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

b. SOUTHEAST Arrivals (OKK Feeder)

1. The ORD arrival routes include the WATSN, ESSPO, VEECK, and OXI STARs. When ORD is utilizing west flow, RNAV aircraft shall be routed via the WATSN STAR and non-RNAV via the OXI STAR. The WATSN arrival shall only be used during West Flow. When ORD is utilizing east flow, RNAV aircraft shall be routed via the ESSPO or VEECK STARs which run parallel to each other and non-RNAV be vectored HALIE Direct. The MDW arrival routes include the FISSK, PANGG, and GSH STARs. Aircraft may be granted direct to “short cuts” no further than the arrival gate unless coordinated. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

- i. The southeast arrival corridor involves ORD and MDW arrivals overlapping therefore “Descend Via” will not be issued. During periods of high traffic volume scratch pads shall be used to indicate crossing fixes.

ORD Arrivals

B = BOONE

D = DAI FE

E = ESSPO

H = HULLS

HL = HALIE

HP = HAUPO

K = OXI

M = MKITA

N = NYLEN

P = PRISE

V = VEECK

W = WATSN

MDW Arrivals

B = BAGEL

F = FISSK

G = GSH

HL = HALIE

P = PANGG

V = VEECK

Z = MEGGZ

c. SOUTHWEST Arrivals (PLANO Feeder)

1. The ORD arrival routes include the BENKY, TRTLL, SHAIN and BDF STARs. When ORD is utilizing east flow, RNAV aircraft shall be routed via the SHAIN STAR and non-RNAV aircraft via the BDF STAR. The SHAIN star shall only be used during east flow. When ORD is utilizing west flow, RNAV aircraft shall be routed via the BENKY and/or TRTLL STARs which run parallel to each. The MDW arrival routes include the ENDEE and MOTIF STARs. Aircraft may be granted direct to “short cuts” no further than the arrival gate unless coordinated. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

d. NORTHWEST Arrivals (FARMM Feeder)

1. The ORD arrival routes include the FYTTE, MADII and JVL STARs. Aircraft may be granted direct to “short cuts” no further than the arrival gate unless coordinated. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

4-2. C90 TRACON Departure Procedures

C90 TRACON shall complete handoffs to Chicago Center prior to aircraft leaving the vertical boundary of 15,000ft and/or the lateral airspace governed by the TRACON where not governed by a neighboring TRACON.

- a. Upon initial contact aircraft will be instructed to “Resume normal speed” as departing aircraft will still be restricted by the ORD SID speed restrictions.
- b. Aircraft navigating to an initial waypoint outside of C90 will have been assigned a 360, 090, 180, or 270 heading upon handoff respective to the appropriate Center controller and direction of flight unless otherwise coordinated.

4-3. MKE TRACON Arrival Procedures

a. NORTHEAST Arrivals

1. The MKE arrival route includes SUDDS, there is no STAR. The Satellite airport arrival route is the same. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

b. SOUTHEAST Arrivals

1. The MKE arrival routes include BRAVE, there is no STAR. The Satellite airport arrival routes are the same. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

c. SOUTHWEST Arrivals

1. The MKE arrival routes include the GOPAC STAR. The Satellite airport arrival routes for airports are the same. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

d. NORTH and NORTHWEST Arrivals

1. The MKE arrival route includes BAE or may be routed via the GOPAC STAR. The satellite airport arrival route is the same. Chicago Center releases control for descent and turns upon completion of radar and communications handoff.

4-4. MKE TRACON Departure Procedures

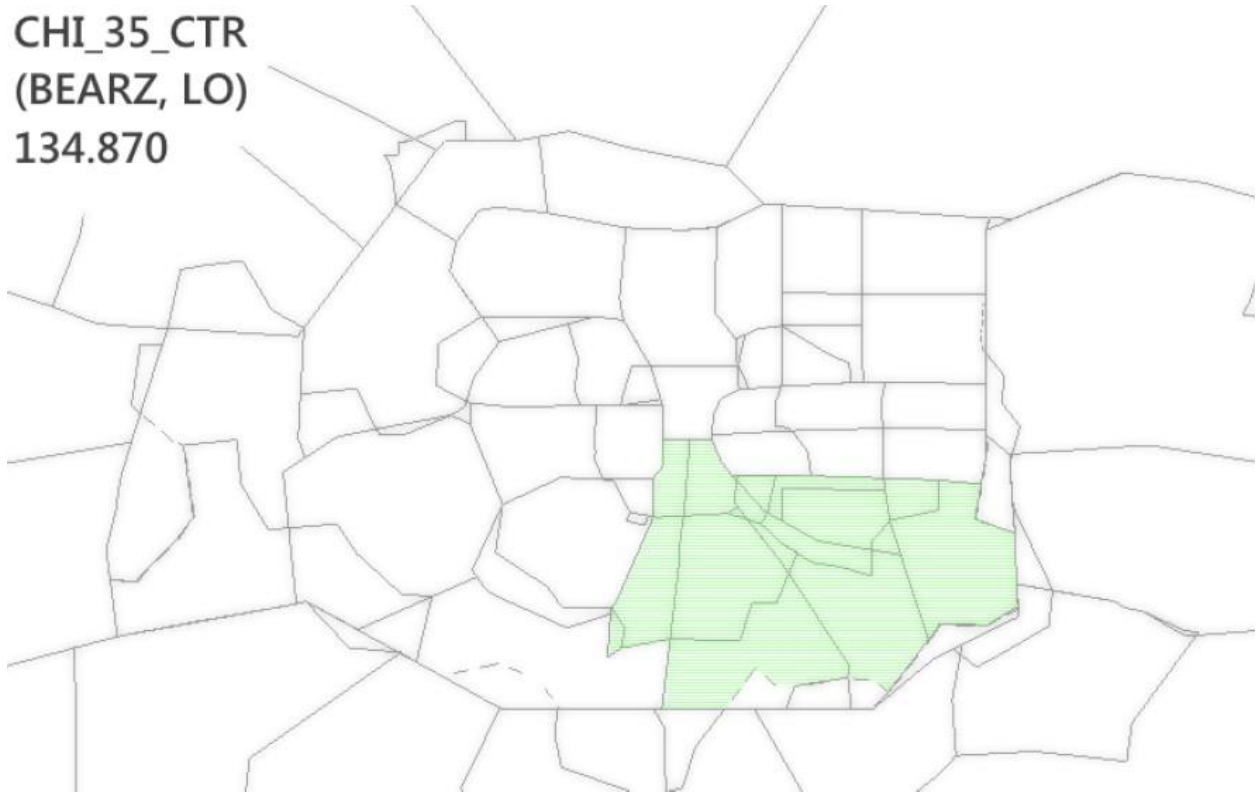
MKE TRACON will complete handoffs to Chicago Center prior to aircraft leaving the vertical boundary of 13,000ft and/or the lateral airspace governed by the TRACON where not governed by a neighboring TRACON.

- a. Upon initial contact aircraft will be instructed to “Resume normal speed” as departing aircraft will still be restricted by the UECKR/ACCRA SID speed restrictions.
- b. Aircraft navigating to an initial waypoint outside of MKE TRACON will have been assigned a 360, 090, 180, or 270 heading upon handoff respective to the appropriate Center controller and direction of flight unless otherwise coordinated.

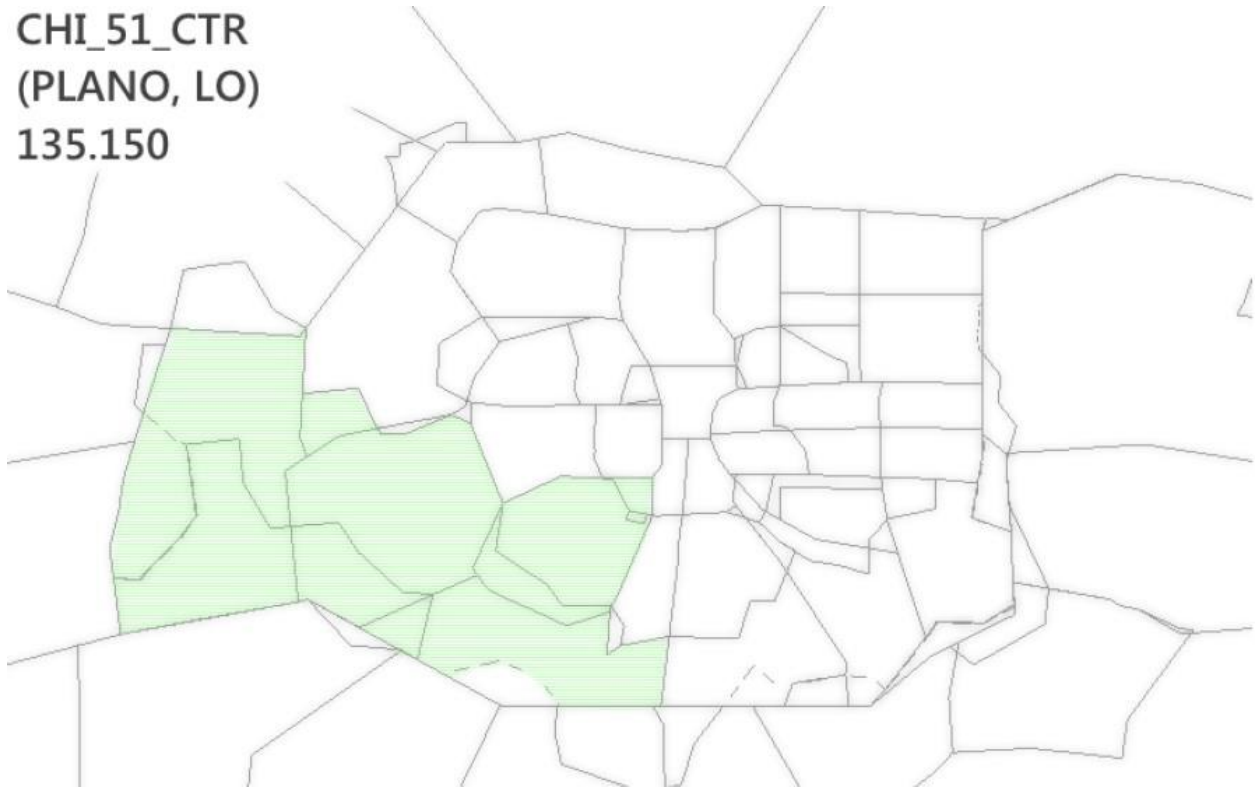
Sector Maps

Low Sectors (SFC-FL230)

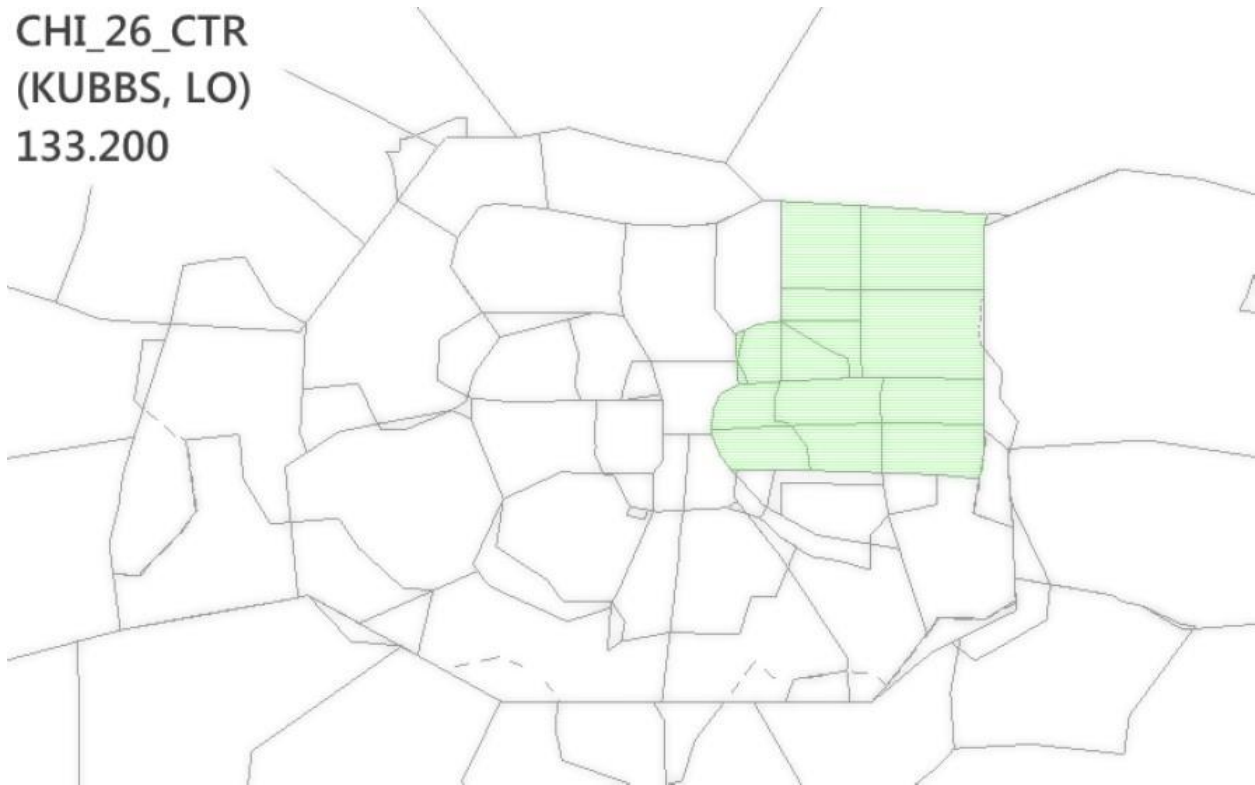
CHI_35_CTR
(BEARZ, LO)
134.870



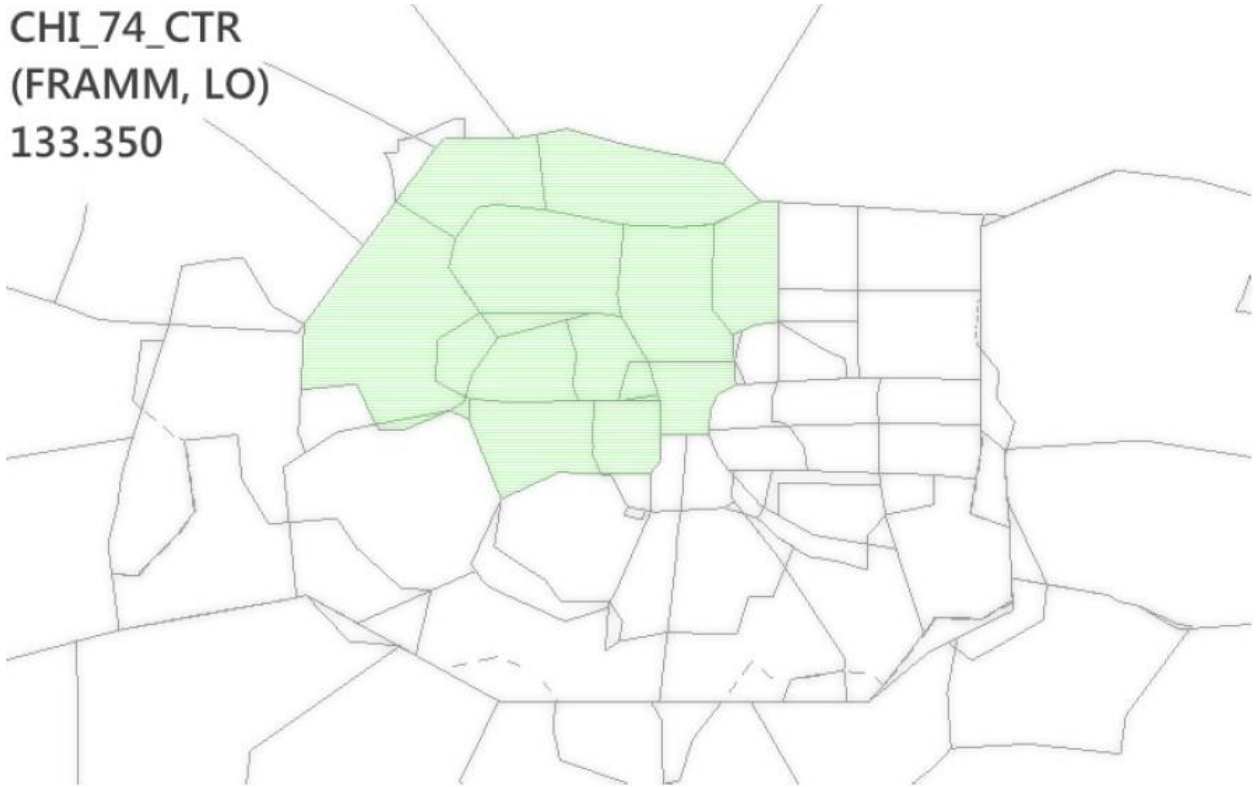
CHI_51_CTR
(PLANO, LO)
135.150



CHI_26_CTR
(KUBBS, LO)
133.200

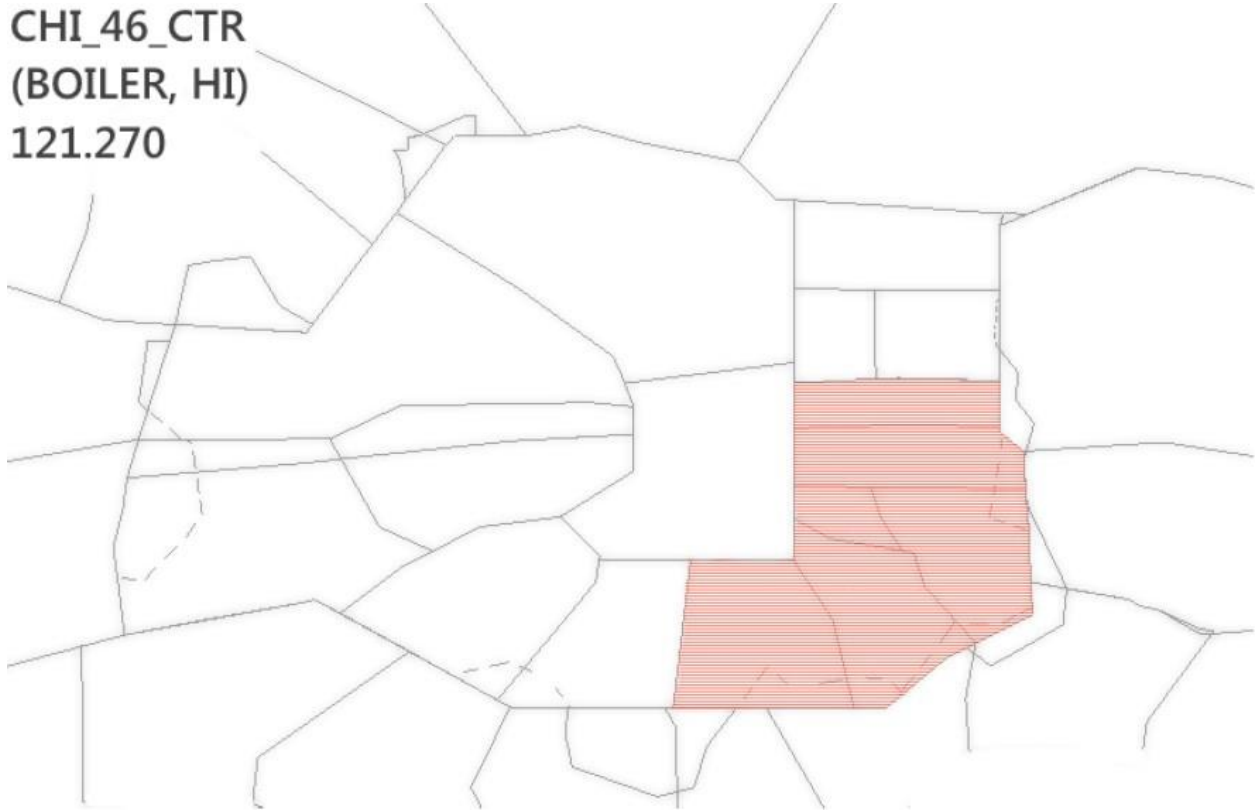


CHI_74_CTR
(FRAMM, LO)
133.350

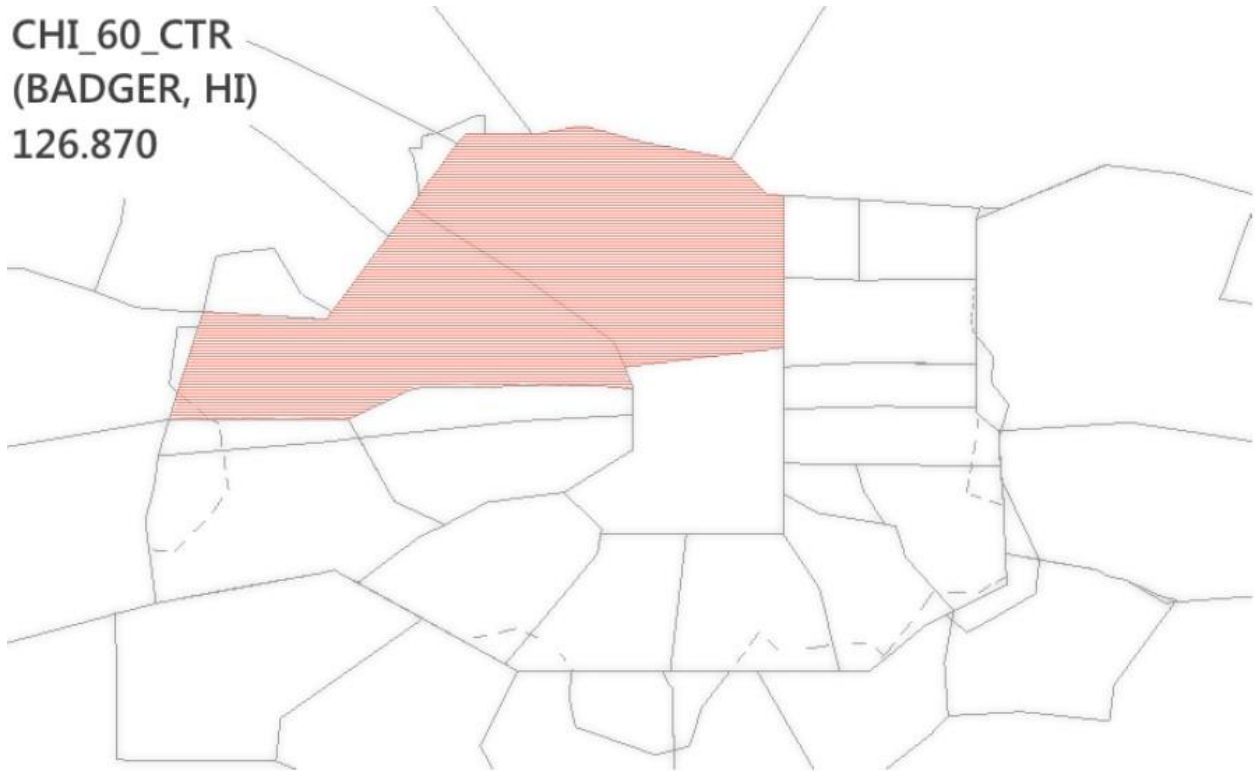


High Sectors (FL240 – FL600)

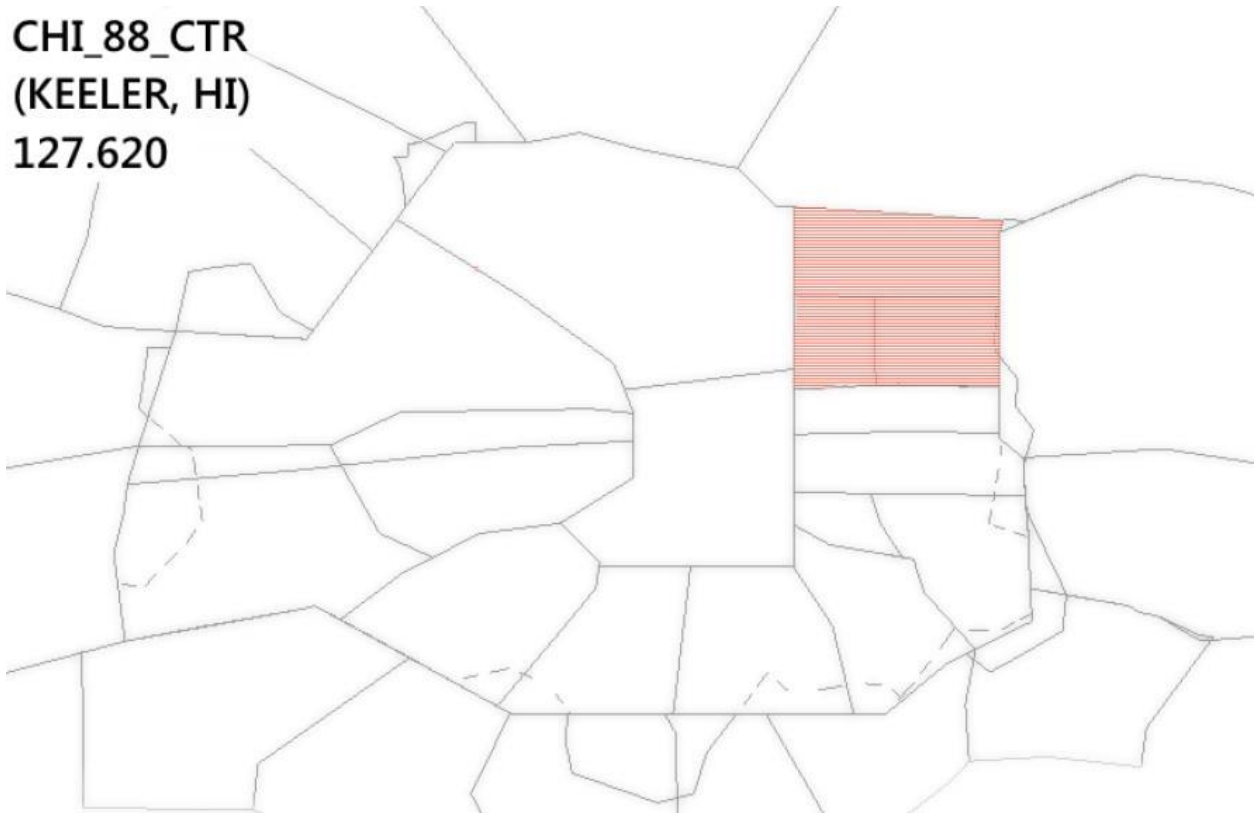
**CHI_46_CTR
(BOILER, HI)
121.270**



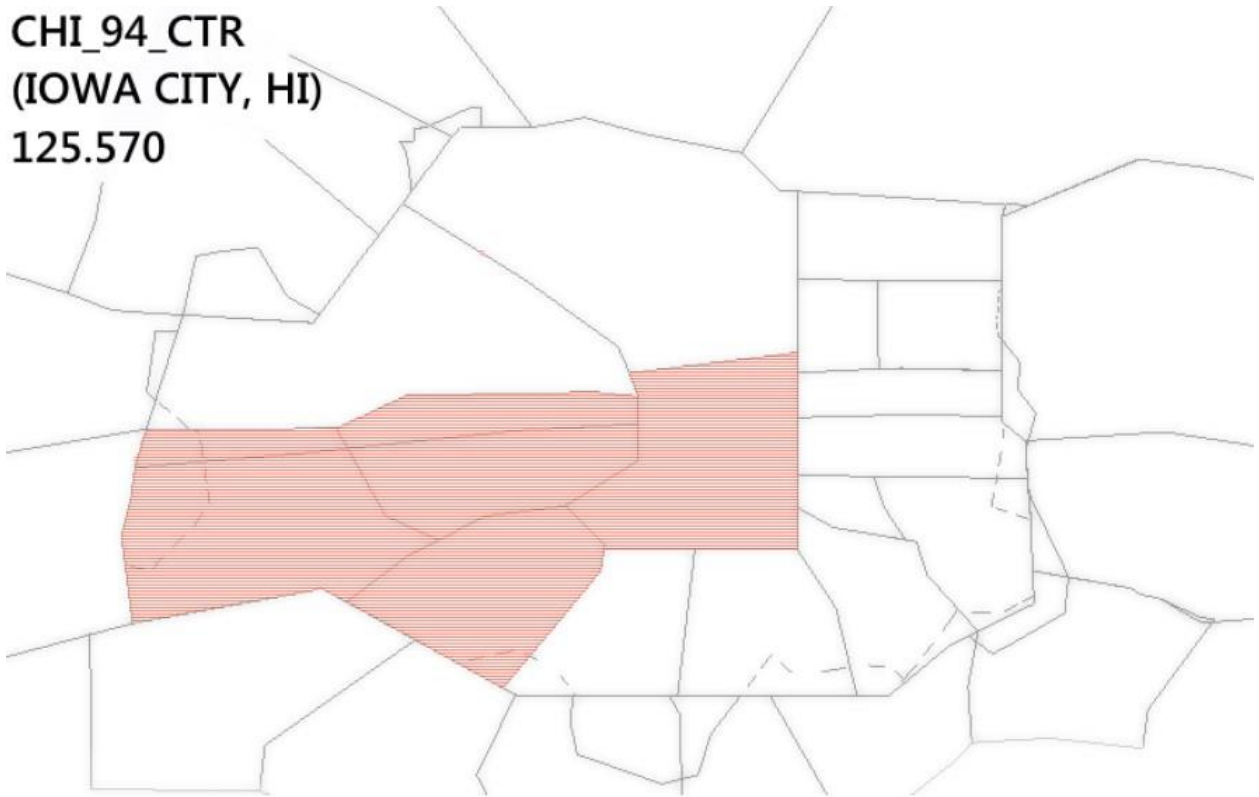
CHI_60_CTR
(BADGER, HI)
126.870



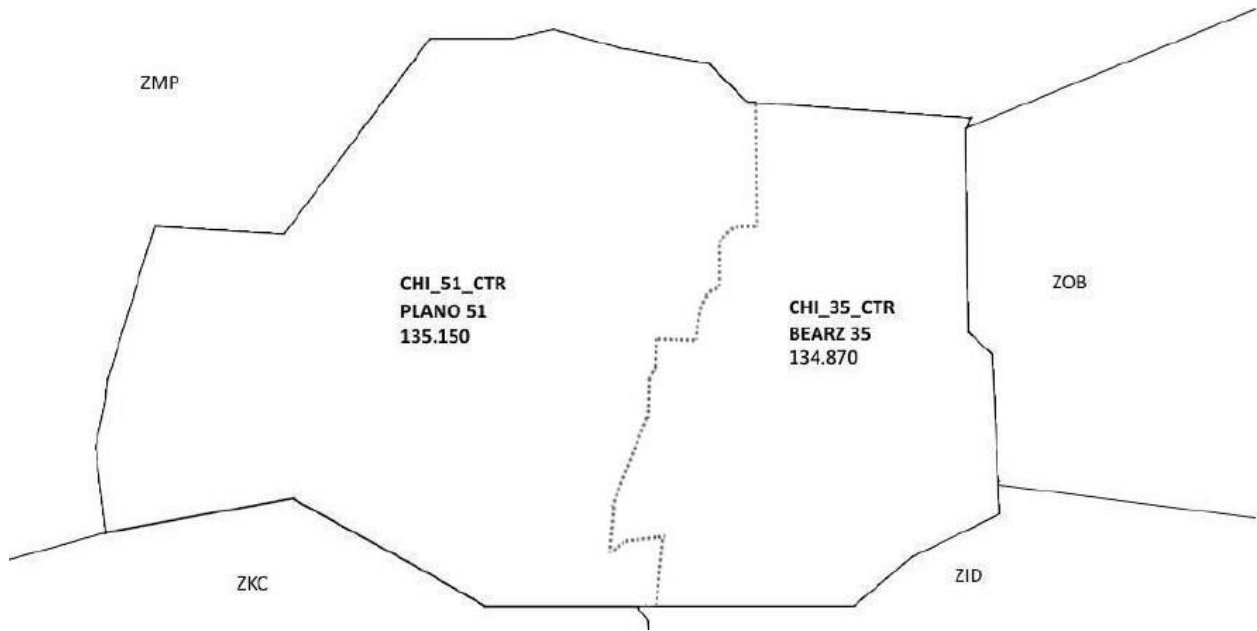
CHI_88_CTR
(KEELER, HI)
127.620



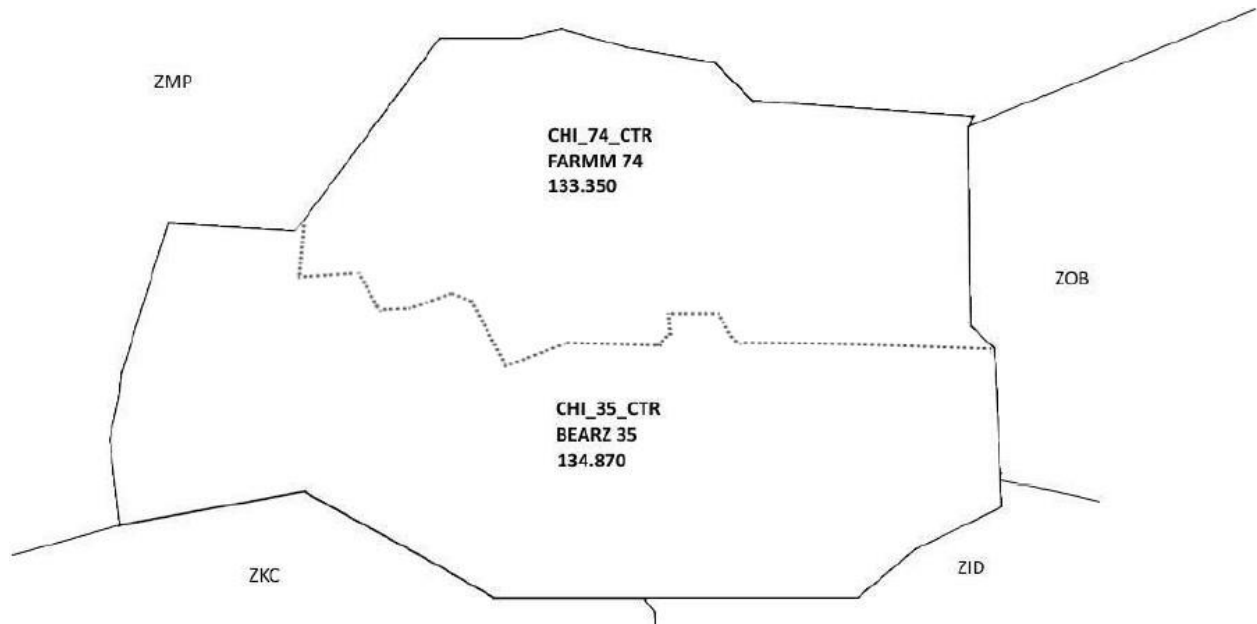
**CHI_94_CTR
(IOWA CITY, HI)
125.570**



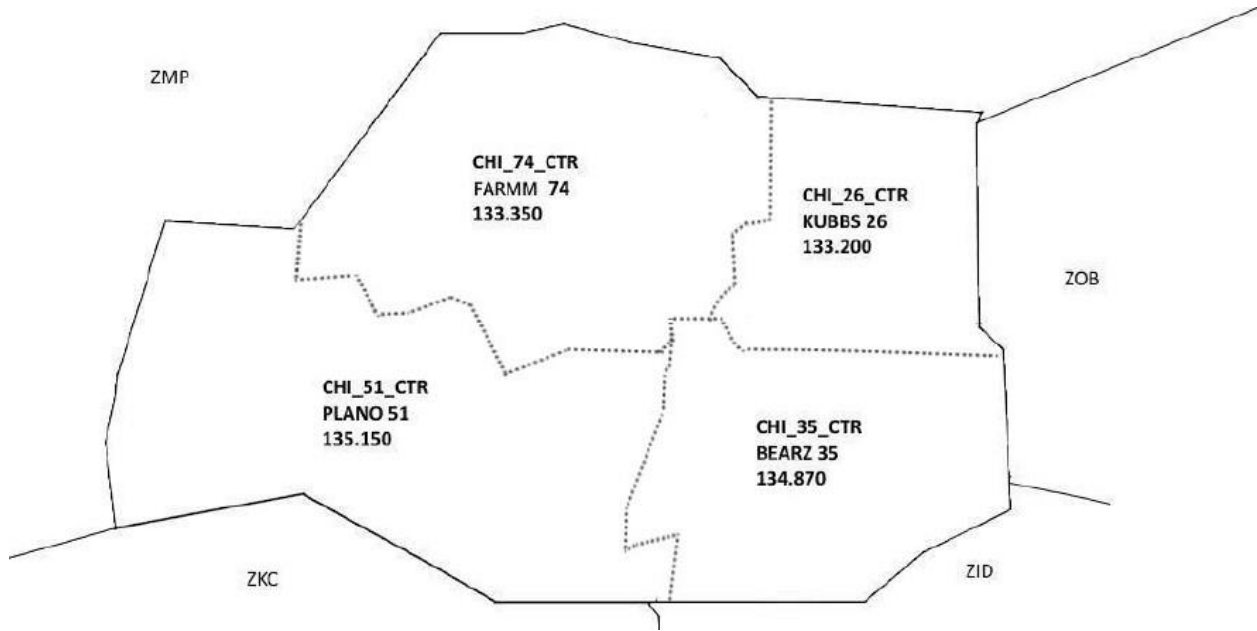
Low East-West Split



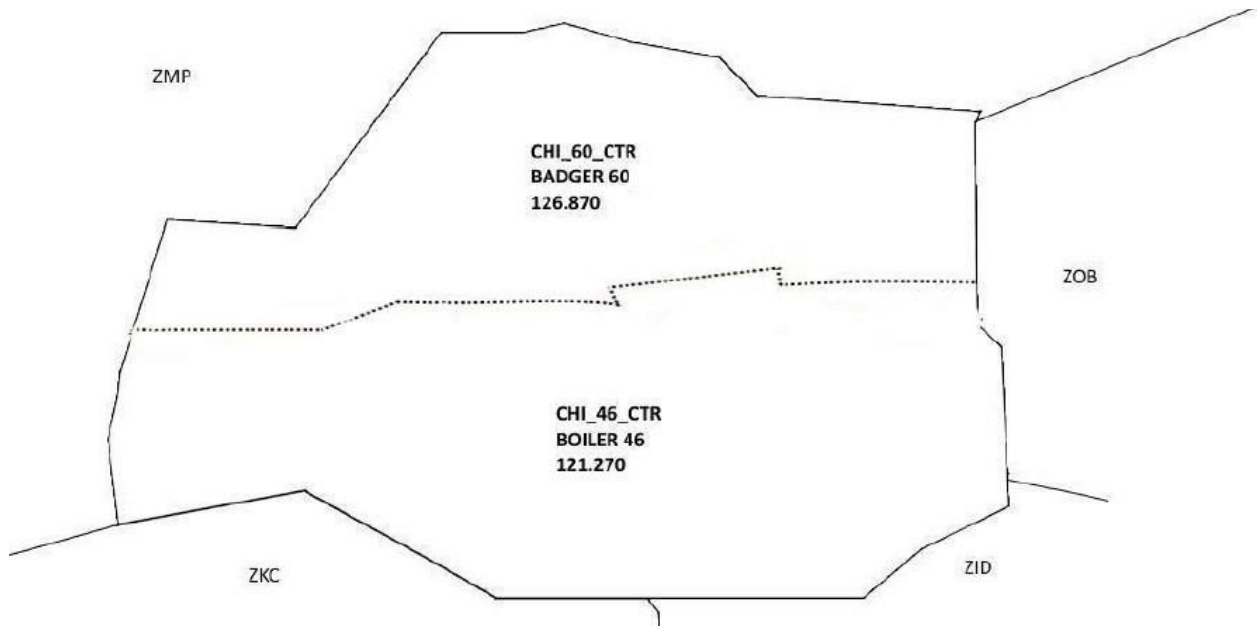
Low North-South Split



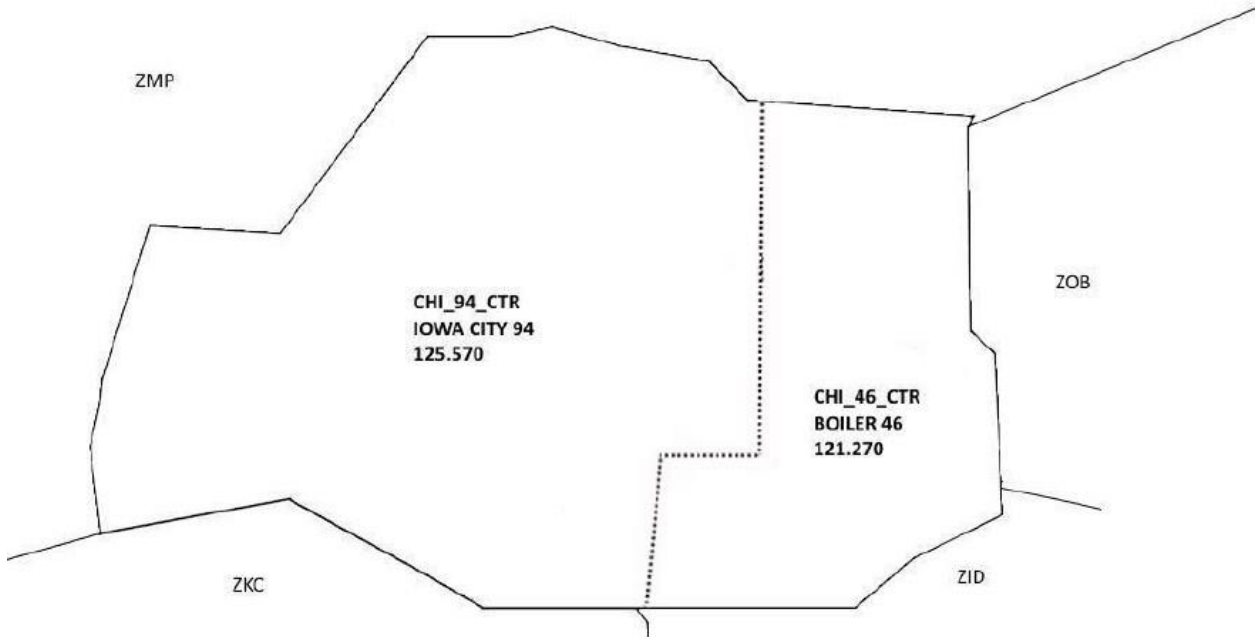
Low Four-Way Split



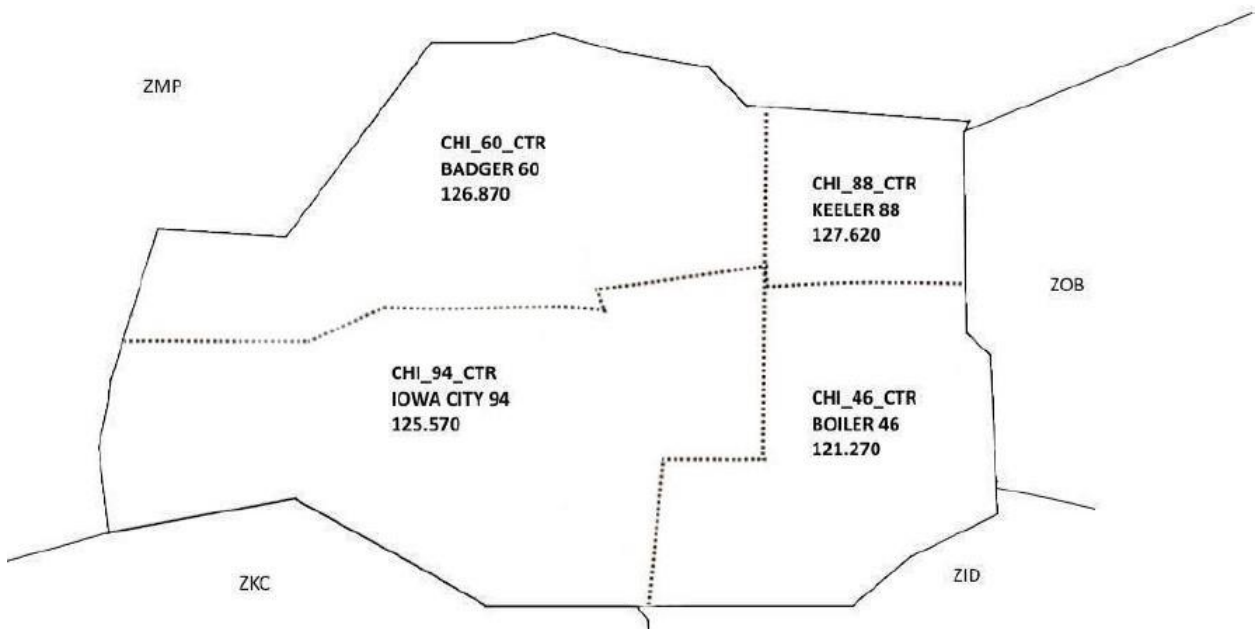
High North-South Split



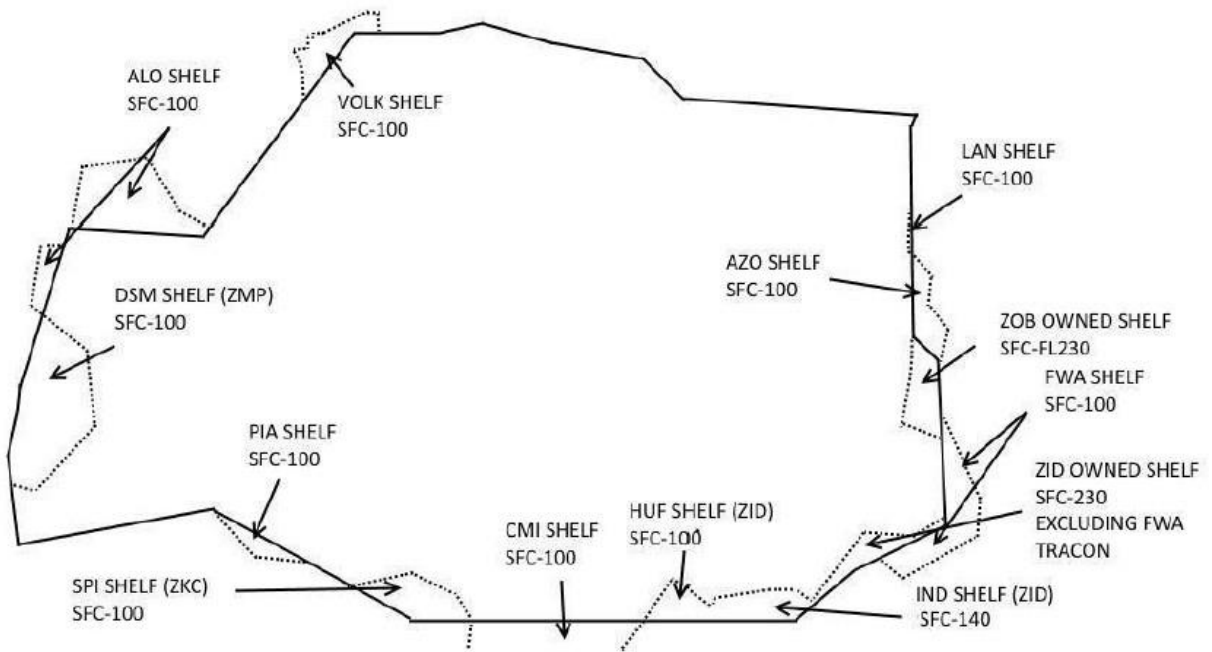
High East-West Split



High Four-Way Split



Airspace Shelves



Military Airspace

