

Cleveland ARTCC and Boston Virtual ARTCC
Letter of Agreement

Effective: 1 May 2016

1. PURPOSE:

This agreement defines the necessary pre-defined air traffic control procedures and coordination responsibilities between the Cleveland ARTCC (vZOB) and Boston Virtual ARTCC (BVA).

2. SCOPE:

The procedures contained herein must apply unless prior coordination has been effected. The procedures contained herein apply during the transfer of IFR aircraft.

3. DISCLOSURE:

BVA and vZOB are affiliated with the Virtual Air Traffic Simulation (VATSIM) network. The procedures outlined in this document are intended exclusively for use in the VATSIM flight simulation environment and shall never be used for actual flight or air traffic control operations. BVA and vZOB are not affiliated with the FAA in any manner.

4. GENERAL PROCEDURES:

a. BVA/vZOB ATC shall at all times:

- (1) Coordinate and resolve, in a practical manner that provides the smoothest experience to the pilot, all deviations from, and situations not addressed by, this document (e.g., non-standard sectorization, holding, pilots unable to accept LOA routes, aircraft above/below LOA altitudes, etc.).
- (2) Ensure that all aircraft are at a 1X simulation rate prior to initiating handoff
- (3) Ensure that aircraft on the same route segment at the same altitude are separated by not less than 10 nm (steady or increasing) or other value specified herein unless greater MIT separation is requested real-time by BVA/vZOB.

(a) NOTE: Separation of less than 10 nm is permitted provided the trailing aircraft is operating at a speed that will permit it to overtake the lead aircraft, and both are vertically separated.

- (4) Ensure that handoff requests are made at least 10nm prior to the relevant airspace boundary unless otherwise specified in this document. Handoff requests may be initiated up to 50nm without prior coordination.

- (5)** Ensure that all conflicts, imminent situations, and MIT separation issues are resolved prior to handoff.
- (6)** 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.).
- (7)** Ensure the datablock is formatted as follows:
 - (a)** For aircraft climbing to an altitude lower than the flight planned altitude:
 - a. If the altitude is consistent with an LOA procedure, no entry.
 - b. If the altitude is non-standard or not contained within this LOA, a temporary altitude reflecting the cleared altitude.
 - (b)** For aircraft descending to meet an issued crossing restriction, a temporary altitude with the applicable crossing altitude.
 - (c)** 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.
 - (d)** 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:
 - a. Indicated speed restrictions (e.g., “210”, “270+”)
 - b. “M” for Mach speed restrictions (e.g., “M81”, “M78+”)
 - c. “H” for heading assignments (e.g., “H230”)
 - d. “H” and direction for deviations (e.g., “H15L” for 15 degrees left of track)

5. ZBW TO ZOB:

- a.** ROC arrivals must enter ZOB descending to the lowest usable flight level.
- b.** BUF or IAG arrivals must enter ZOB airspace at or below FL270, descending to FL240.
- c.** IAD arrivals on J59 must enter ZOB at or below FL300.
- d.** YYZ, YTZ, and YKZ arrivals must enter ZOB airspace at or below FL320.

6. ZOB TO ZBW:

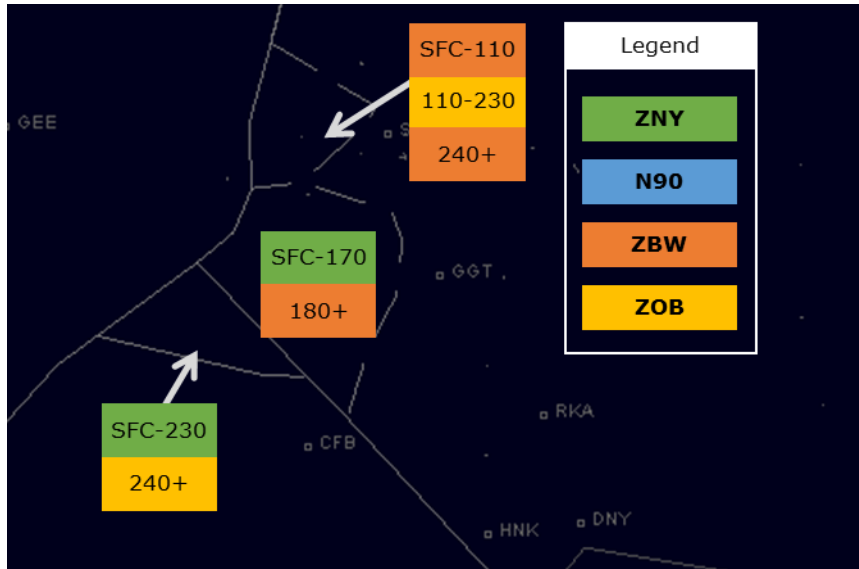
- a.** SYR arrivals shall be handed off to SYR_APP (ZBW if offline) within 10nm of the ARTCC boundary at 11,000' and 250 KIAS, or a lower filed altitude.
- b.** ALB and ALB satellite arrivals must enter ZBW airspace at or below FL290.
- c.** ROC departures must enter ZBW airspace climbing to an assigned altitude at or below FL270.
- d.** EWR and EWR satellite arrivals must enter ZBW airspace on or north of Q140, at or below FL270.
- e.** SWF, POU, and MSV arrivals must enter ZBW airspace at or below FL270.
- f.** HPN, BDR, OXC and HVN arrivals must enter ZBW airspace at or below FL330.
- g.** RME arrivals entering ZBW airspace north of Q935 must be descending to 17,000' or below.
- h.** GTB arrivals must be routed via SYR and enter ZBW airspace at or below FL190 descending to 11,000'.
- i.** BDL arrivals must enter ZBW airspace at or below FL350.

7. GENERAL PROCEDURES

- a.** Either facility may clear aircraft direct HOCKE/DERLO without coordination at or after SYR, contingent upon Misty ATCAA activity.
- b.** Traffic routed via Q935 to join Q29 will become Cleveland ARTCC's control for turns toward JHW when 30 NM east of the ZBW/ZOB boundary.

8. AIRSPACE DELEGATION

- a. ZBW delegates the airspace in the vicinity of west of the SYR VOR between 11,000' – FL230 to ZOB as shown below:



9. ZOB SECTOR SPLITS

a. General

- (1) When Cleveland Center is combined, it will be operated as CLE_64_CTR on frequency 134.900.
- (2) Aside from events and/or special occasions, Cleveland Center splits will be coordinated with adjacent facilities through ATC chat or private messages. Standard sector splits are depicted below.

b. Altitudes

- (1) Low-altitude sectors cover SFC-FL239. High-altitude sectors cover FL240-FL600.

c. Splits

(1) HI/LO Split

- (a) When Cleveland Center is split into a HI/LO split, ZBW will initiate handoffs to CLE_64_CTR on 134.900 for aircraft between SFC and FL230. ZBW will initiate hand-offs to CLE_77_CTR on 134.120 for aircraft between FL240 and FL600.

(2) East/West Split

- (a) When Cleveland Center is split in an east/west split, ZBW will initiate all hand-offs to CLE_64_CTR on 134.900 no matter the altitude.

(3) Solo Endorsement Sector

- (a) ZOB delegates its C1 trainees a solo endorsement on the CLE_77_CTR sectors, which borders ZBW. Anytime a solo endorsed CTR trainee is online, their call sign will be CLE_7S_CTR on frequency 134.120. This sector, when opened, will cover all altitudes.

(4) Other Splits

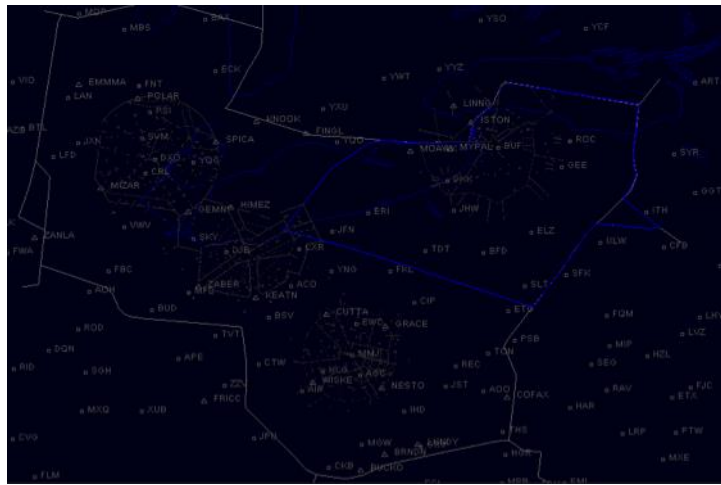
- (a) Aside from a HI/LO split or an east/west split, all previously stated sectors will always border ZBW unless in the case of a seven-way LO CTR split.

(5) Diagrams

(a) East/west split



(b) Solo endorsed sectors



10. ZBW SECTOR SPLITS

a. General

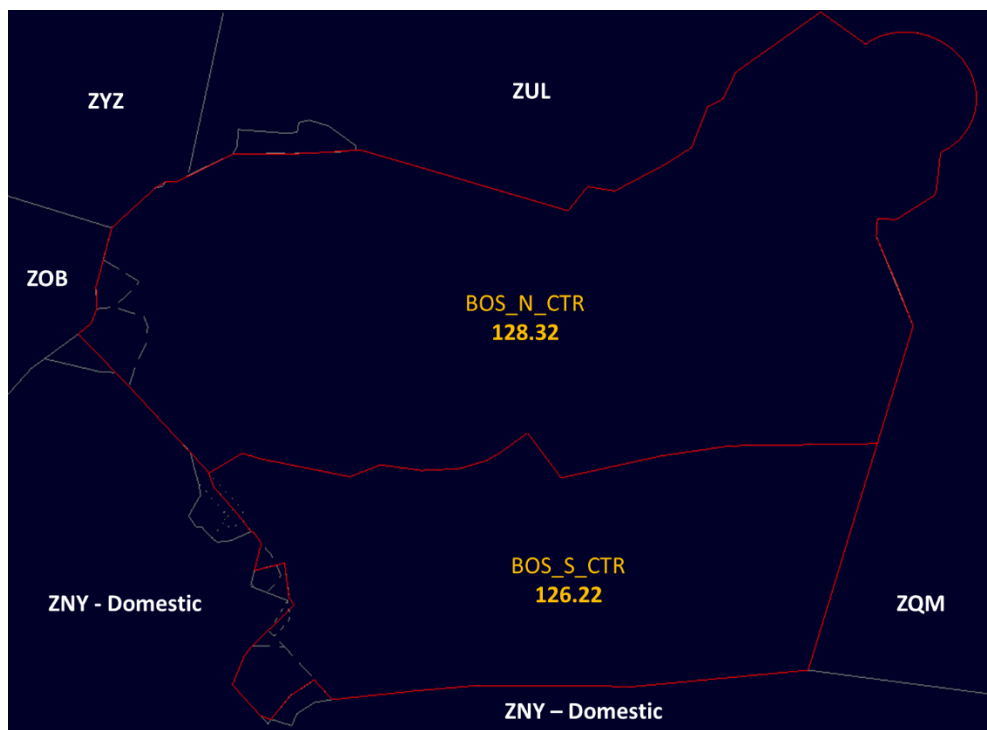
- (1) When Boston Center is combined, it will be operated as BOS_CTR on frequency 134.700.
- (2) Outside of events, Boston Center splits will be coordinated with adjacent facilities through the use of the air traffic control channels. Standard sector splits are shown below.

b. Altitudes

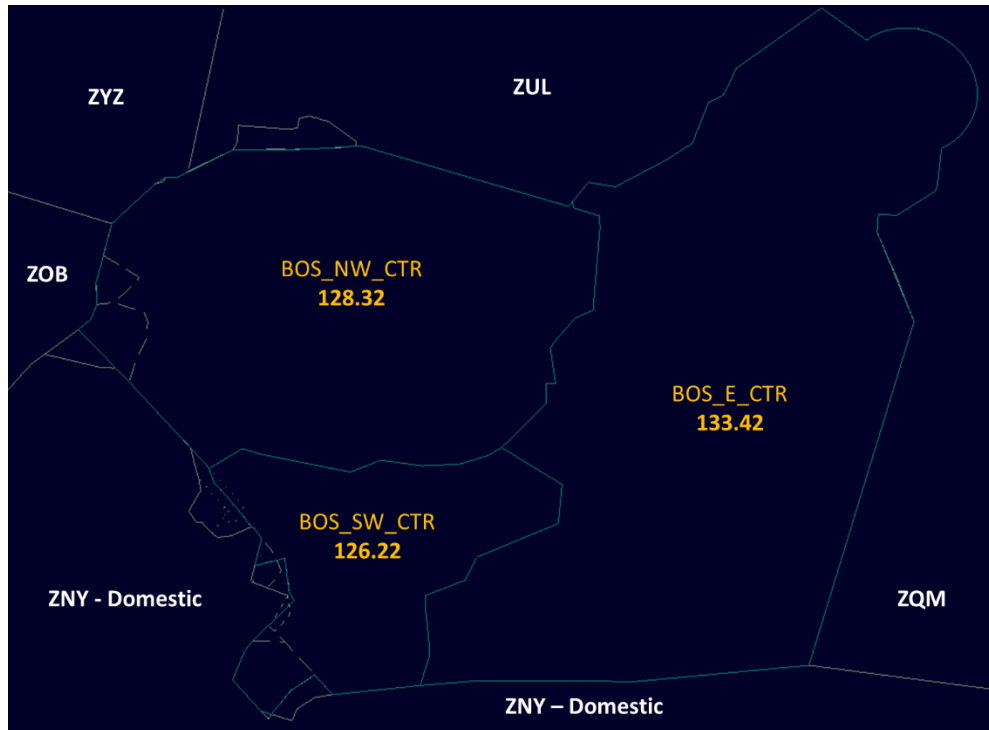
- (1) High-altitude sectors cover FL240 – FL600. Low-altitude sectors cover the surface to FL239.

c. Splits:

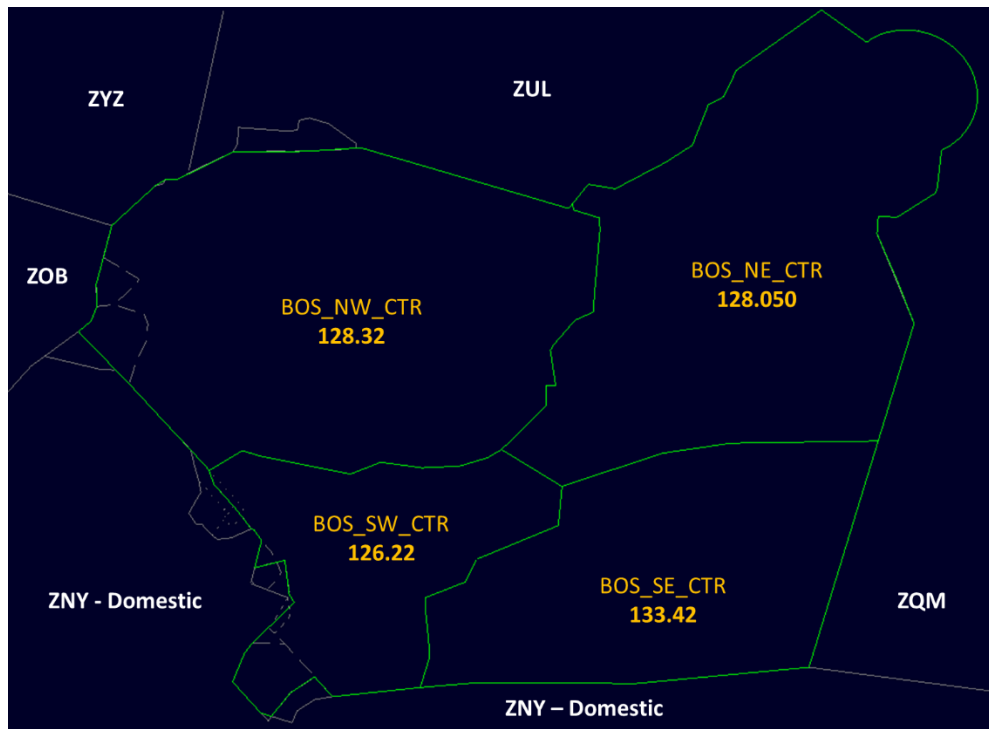
- (1) Two-Way:



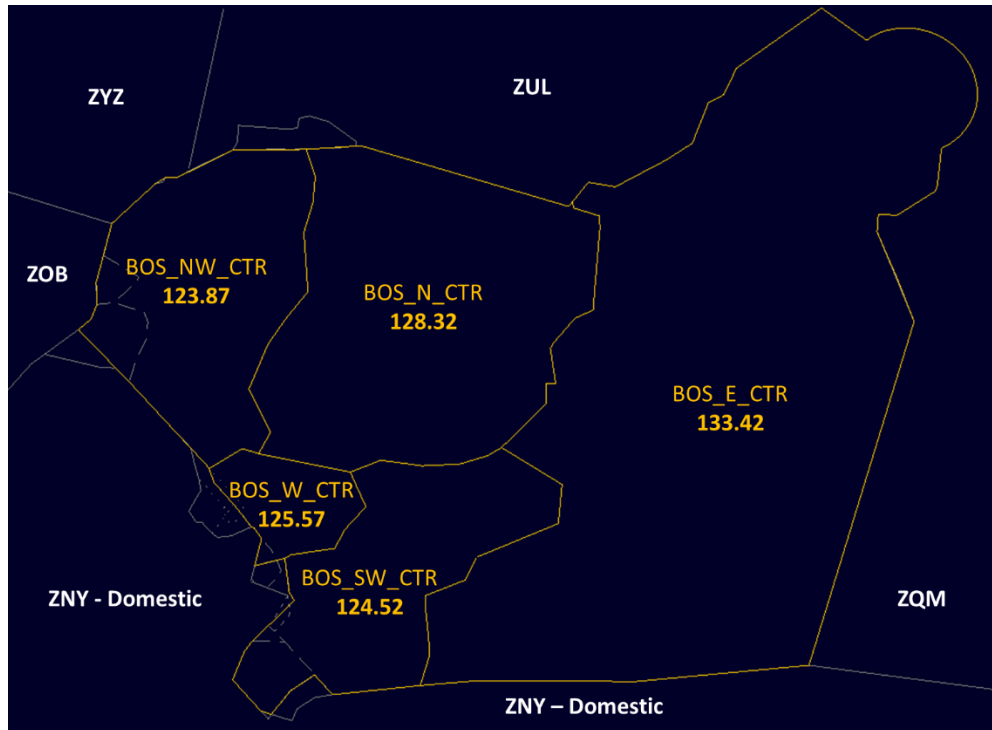
(2) Three-Way:



(3) Four-Way:



(4) Five-Way:



ATTACHMENT #1: ZBW PROCEDURES FOR ZOB ARRIVALS

ARRIVAL	ROUTE/STAR	Altitude to enter ZOB airspace
ROC	N/A	Lowest usable flight level
BUF or IAG	N/A	At or below FL270, descending to FL240
IAD	J59	At or below FL300
YYZ, YTZ, YKZ	N/A	At or below FL320

ATTACHMENT #2 ZOB PROCEDURES FOR ZBW ARRIVALS

PROCEDURE	ROUTE/STAR	Altitude to enter ZBW airspace
SYR arrivals	N/A	11,000' and 250 KIAS; handoff to SYR_APP if staffed, otherwise ZBW
ALB and ALB Satellite arrivals	N/A	At or below FL290
ROC Departures	N/A	Climbing to altitude at or below FL270
EWR and EWR Satellite arrivals	On or north of Q140	At or below FL270
SWF, POU, and MSV arrivals	N/A	At or below FL270
HPN, BDR, OXC, and HVN arrivals	N/A	At or below FL330
RME arrivals	North of Q935	Descending to 17,000' or below
GTB arrivals	N/A	At or below FL350
BDL arrivals	N/A	At or below FL350

ATTACHMENT #3

SATELLITE AIRPORTS

KALB Satellites	KALB, KGFL, KSCH, 5B2, NY0, KDDH, KAQW, KPSF, 1B1, KGBR, K23
KEWR Satellites	12N, 1N7, KDCW, 4N1, N05, N07, KMMU, 3N5, KFWN, KTEB, 13N, 47N, KLDJ, 39N, N51, KSMQ

Approved 02-04-2017 by email

Mani Manigault
Air Traffic Director
VATUSA - Northeastern Region

Quoting Joe Carr <datm@clevelandcenter.org>:

[Hide Quoted Text]
Hello Mani,

Just running a few of our newly updated LOA's, QRC's, and SOP's through you as per VATUSA instructions.

You can find the links below for each of the files - If you prefer them all bundled as an attachment let me know.

*LOAs _____

ZAU-ZOB - <https://www.dropbox.com/s/pw9hzx45pbzigr4/ZAU-ZOB%20LOA.pdf?dl=0>
ZBW-ZOB - <https://www.dropbox.com/s/xrrxie5rpqipwep/ZBW-ZOB%20LOA.PDF?dl=0>
ZNY-ZOB - <https://www.dropbox.com/s/z6s7ciypic91lue/ZNY-ZOB%20LOA.pdf?dl=0>

Thank you,
Joe Carr

DATM - Cleveland ARTCC

02-04-2017