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Adaptation of the airspace structure 2025: Zurich airspace redesign

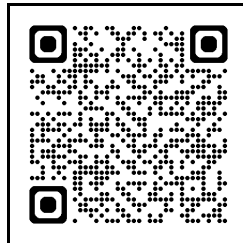
Adaptation of the airspace structure 2025: Zurich airspace redesign

The Swiss airspace structure is regularly reviewed to ensure it is fit for purpose and is adapted if deemed necessary. Based on Article 2 paragraph 1 of the Ordinance on Air Navigation Services (ANSO; SR 748.132.1), the airspace changes documented in this AIC are proposed for 2025. They were prepared on behalf of the respective applicants by the Airspace Design Expert Team (AD ET) of the High Level Airspace Policy Body (HLAPB), which consists of members of the FOCA, Military Aviation Authority (MAA), the Swiss Air Force and Skyguide. The general aviation associations were informed in advance about these airspace changes by FOCA in the National Airspace Management Advisory Committee (NAMAC).

Prior to the adaptation of the airspace structure, the stakeholders are hereby given the opportunity to comment on these adaptations, insofar as they are affected. Within this document, you may find the rationale for and the change of the airspace structures with a visualization, however the coordinates may be found via the following link and/or QR-code:

For a graphical representation, kml files are available under following links:

URL: <https://www.skybriefing.ch>



Preferably use swiss geo admin to upload kml files.

URL: <https://s.geo.admin.ch/lrvz4ayfayqb>

The opinion shall be submitted in writing, including a rationale, latest 5 October 2024 to:

Post: Federal Office of Civil Aviation
Airspace Section
3003 Bern

Any airspace change is subject to a positive safety and risk assessment, which, for procedural and scheduling reasons, may not have been fully completed at the time of the publication of this AIC.

Taking into account the comments received, the FOCA will then issue its decision on the modification of the airspace structure. An appeal against this decision can be taken to the Federal Administrative Court.

No correspondence on submitted opinions will take place during the consultation process.

Publications of Swiss airspace changes for 2025

As Switzerland has to publish chart-relevant adjustments next year, it was decided to publish the airspace changes 2025 as well as the publication of the aeronautical charts as of 20-MAR-2025. This is in line with the agreement with the neighboring countries concerned.

Zurich and Dübendorf airspace redesign

General:

After two consecutive attempts to redesign the airspace around airport Zürich, Flughafen Zürich AG (FZAG), Swiss International Airlines (SWISS) and Skyguide requested DETEC to mandate FOCA to take the lead for a third attempt for redesigning the airspace around Zürich airport. This, since FOCA would be able to enforce decisions in the case where no agreement can be reached between all stakeholders. The Zürich Redesign project started in March 2018 with the relevant aviation stakeholders, the basis for the airspace redesign were the already approved and existing Instrument Flight Procedures (IFP) of the airport. These IFP are described in the "Betriebsreglement" of Zürich airport and were not altered in the redesign project, meaning that the flight profiles remain as they are today. Although the project is named Zürich redesign, it encompasses as well the airspace of the military airport Dübendorf. For Dübendorf as well, only the existing IFP were used for the airspace design. The redesign of Zürich and Dübendorf airspaces necessitated adjustments to other airspace elements that were also impacted by these changes. This includes the adaptation of restricted areas (LSR) for gliders within Zurich TMAs (no operational change, only the dimensions are altered to fit the new TMA structure) as well as the A9 Corridor and the Jura Mittelland-Alps line (small effect on the lower limit of airspace C - FL100 vs. FL130/FL150). Finally, FOCA and the concerned stakeholders took the opportunity of the redesign project to elaborate a restricted area (LSR) around Speck-Fehraltorf Aerodrome to fulfill the regulatory requirements imposed to local operations. The current procedures established between Dübendorf ATC and Speck-Fehraltorf airport remain unchanged with the introduction of the LSR.

The redesign of the airspace around Zürich airport was elaborated in an iterative process with the aviation stakeholders in both Switzerland and Germany, whereby FOCA set a required "Target Level of Safety" (TLS) of "one collision in a billion aircraft movements (1×10^{-9})". How the design evolved is described more in detail below, after which the actual design with the horizontal and lateral dimensions is visualized. A general description of the design that was applied is the following:

FOCA ordered a study for a "Collision Risk Modelling" (CRM) where the TLS needed to be applied on the risk of a collision between aircraft flying according to Instrument Flight Rules (IFR) under Air Traffic Control (ATC) Service from and to Zürich airport and aircraft flying according to Visual Flight Rules (VFR). Based on the Zürich traffic volumes and all Radar tracks of both the IFR and VFR aircraft and the conducted Airspace Infringements of the VFR aircraft, a model was set up and the minimum distance between an IFP and the border of the airspace for that a clearance is required was estimated. This distance is called the CRM buffer value. All buffers were drawn around the nominal tracks of the IFPs of both Zürich and Dübendorf that are essential for airspace protection in compliance with the directive of FOCA "Airspace Design Principles Switzerland" (ADP CH) and formed the basis of the new airspace of the Zürich redesign project.

Subsequently, a minimum airspace volume was created and divided into Control Zone (CTR) and Terminal Control Areas (TMA). These volumes adhere to the criteria set by the International Civil Aviation Organization (ICAO) and the ADP CH. It needs to be emphasized, that however the Dübendorf CTR is reduced in favor of the Zurich CTR the working area of Dübendorf TWR remains identical as to today. The reason for the reduction of the CTR is to prevent overlapping airspaces. For airspace users there is no change as to today for requesting crossing clearances into the CTRs.

In addition to this basis structure the needs of Skyguide for a safe, efficient and fluent handling of the IFR traffic to and from Zürich airport, the general aviation (motorized and non-motorized) and the military were discussed in an expert working group. This expert group (FOCA, Skyguide, Swiss Air Force, AOPA on behalf of the motorized general aviation as agreed with AeCS, SFVS on behalf of the non-motorized general aviation as agreed with the SHV) agreed on the airspace design in this document.

The part of the redesign over German territory is not part of this consultation, this will be dealt with separately with both the German regulator and stakeholders.

The airspace design as presented in this document merely provides a sufficient buffer between the IFR and VFR traffic in order to avoid a close proximity or even a collision between IFR and VFR traffic. Furthermore, this airspace design allows Skyguide to vector IFR traffic to Zürich airport onto runway 14 (main landing runway) from both the east and west at two different altitudes, which is not possible in the current airspace structure, thus improving the safety.

Where compliance to regulatory criteria could not be met or where it would lead to an increased safety risk (e.g., pre-programmed airspace infringements due to other procedures), a marginal deviation to ADP CH criteria was applied. All deviations will be documented and listed in the appropriate ADP CH Annex for traceability and transparency.

Overview of Zurich airspace adaptation:

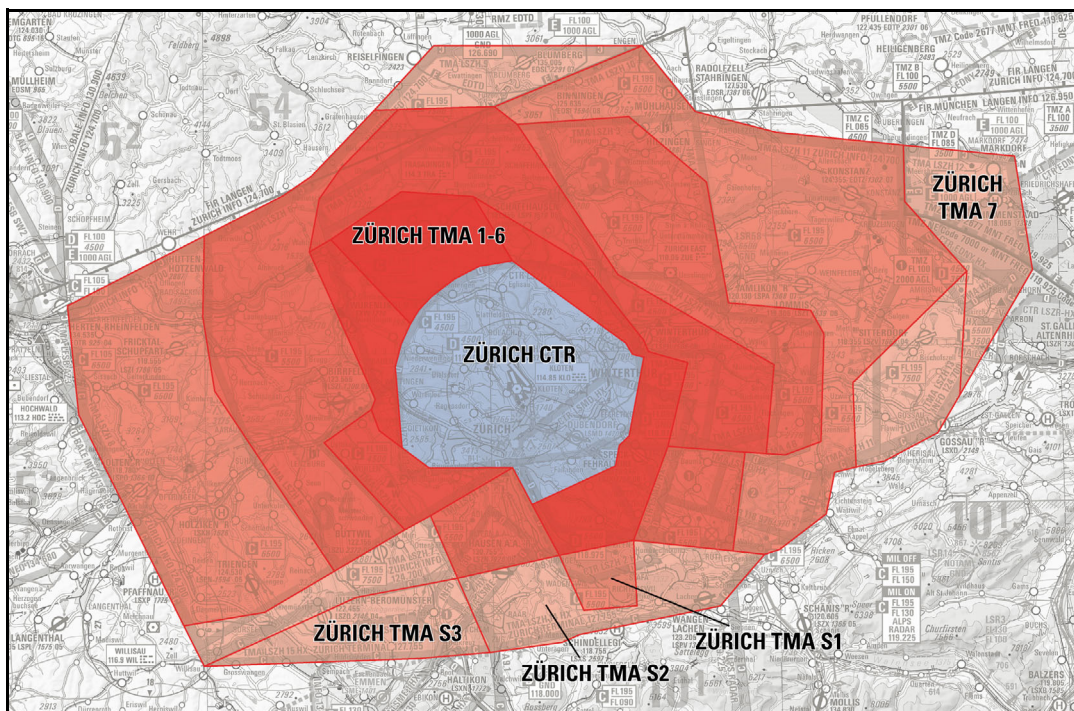


Figure 1 - Overview ZRH Airspace

CTR

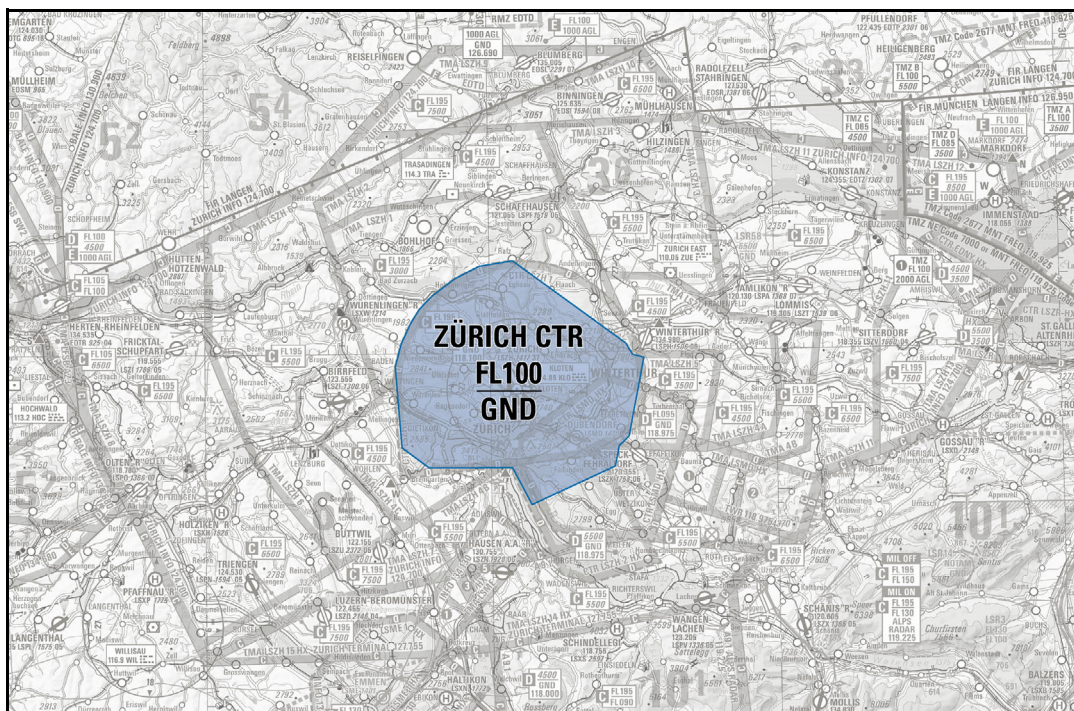


Figure 2 - ZRH CTR

Vertical Dimensions:

- Upper limit: FL100
- Lower limit: GND
- Airspace Class: D

Zurich TMA 1

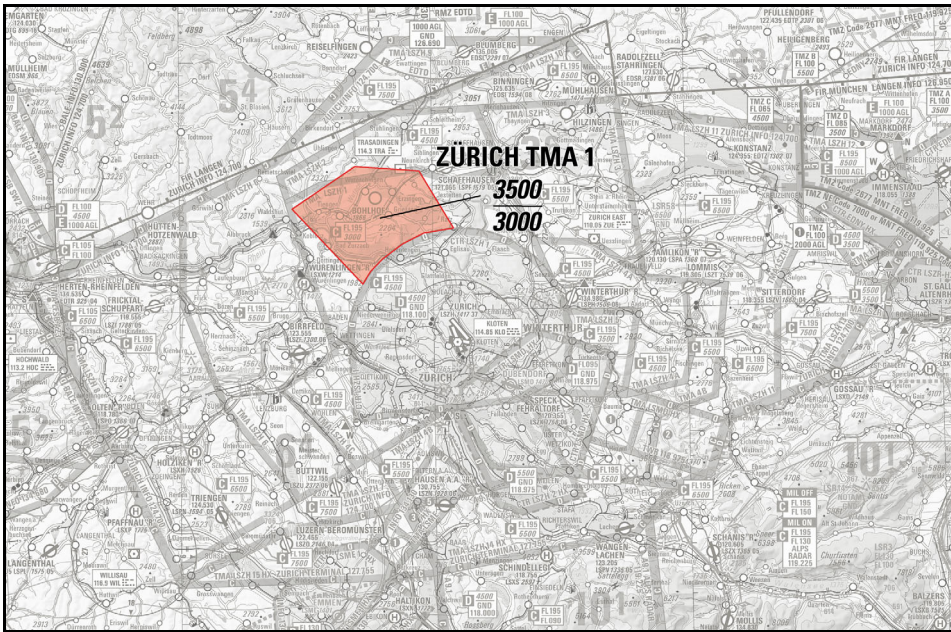


Figure 3 - ZRH TMA 1

Vertical Dimensions:

Upper limit: 3500 ft AMSL

Lower limit: 3000 ft AMSL

Airspace Class: C

Zurich TMA 2

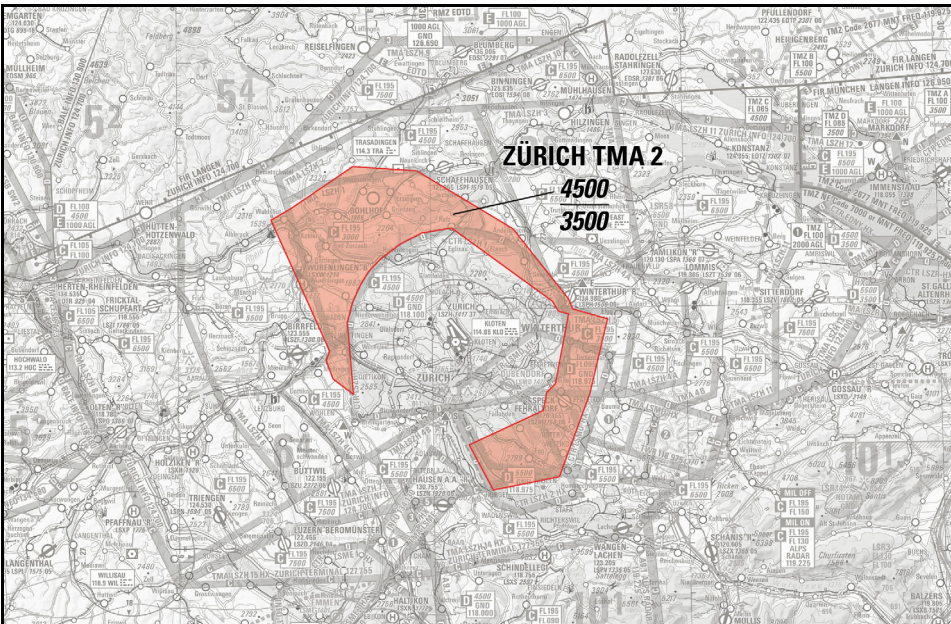


Figure 4 - ZRH TMA 2

Vertical Dimensions:

Upper limit: 4500 ft AMSL

Lower limit: 3500 ft AMSL

Airspace Class: C

Zürich TMA 3

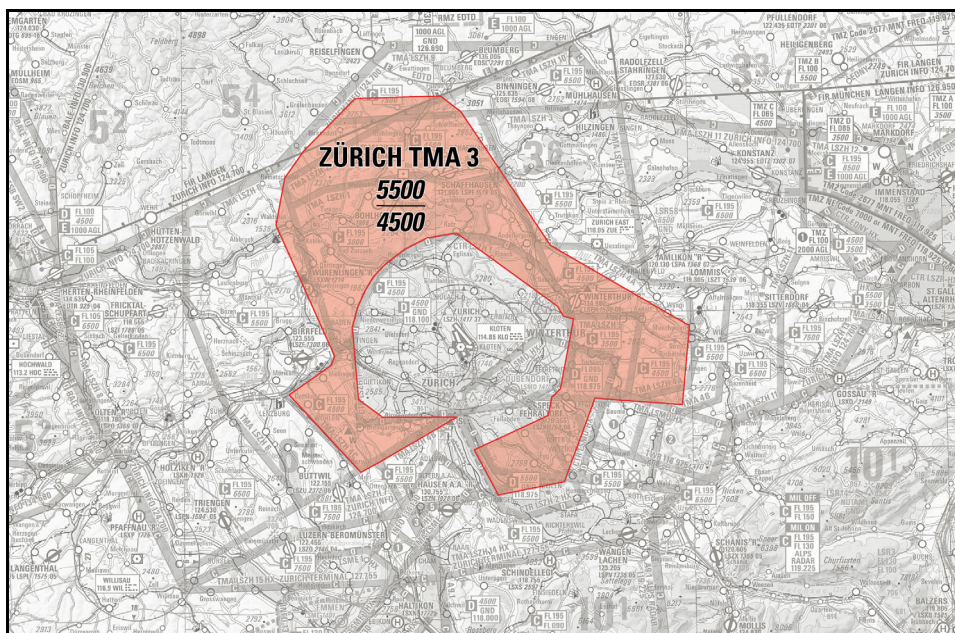


Figure 5 - ZRH TMA 3

Vertical Dimensions:

Upper limit: 5500 ft AMSL

Lower limit: 4500 ft AMSL

Airspace Class: C

Zürich TMA 4

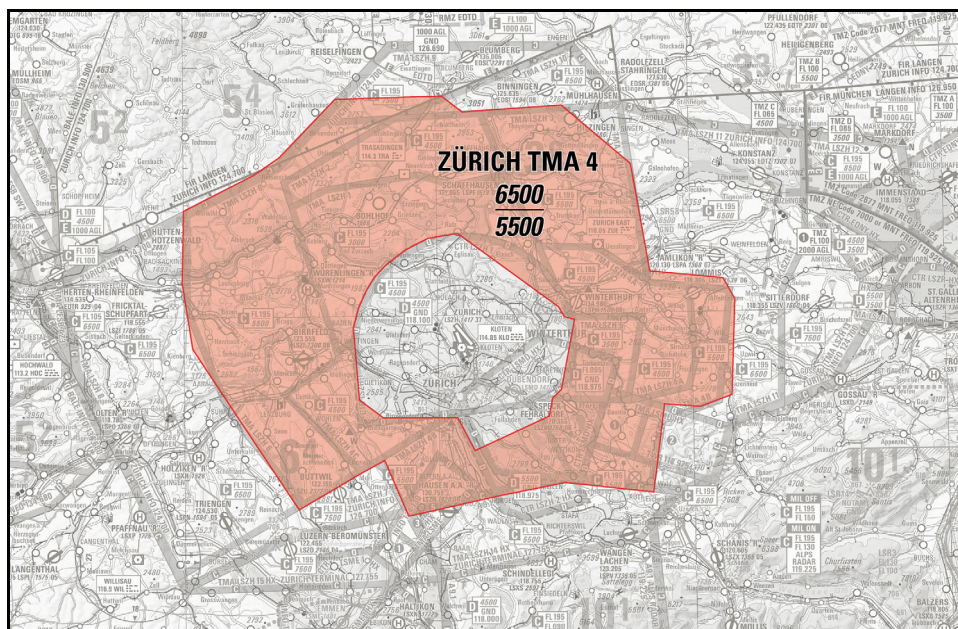


Figure 6 - ZRH TMA 4

Vertical Dimensions:

Upper limit: 6500 ft AMSL

Lower limit: 5500 ft AMSL

Airspace Class: C

Zurich TMA 5

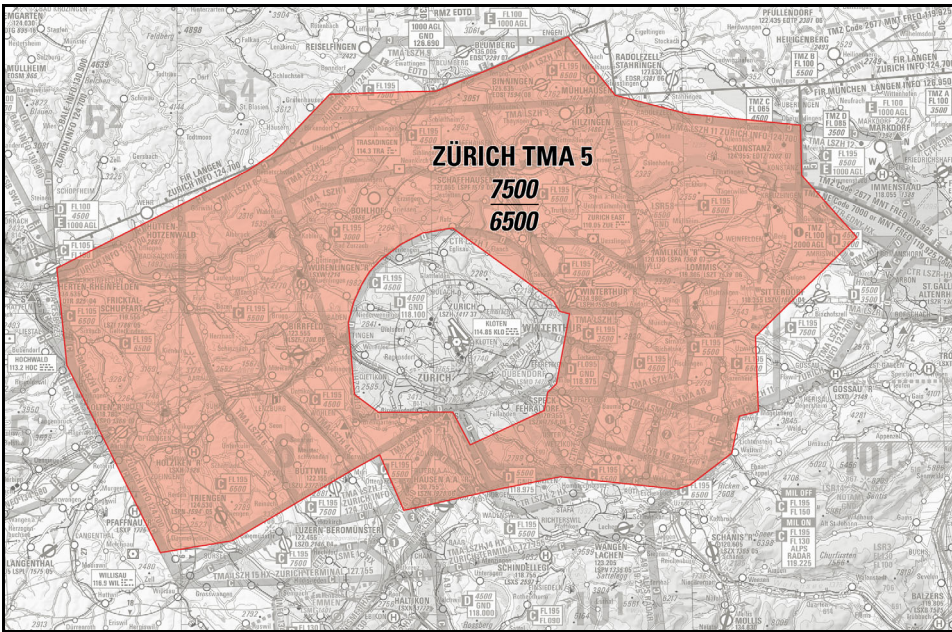


Figure 7- ZRH TMA 5

Vertical Dimensions:

Upper limit: 7500 ft AMSL

Lower limit: 6500 ft AMSL

Airspace Class: C

Zurich TMA 6

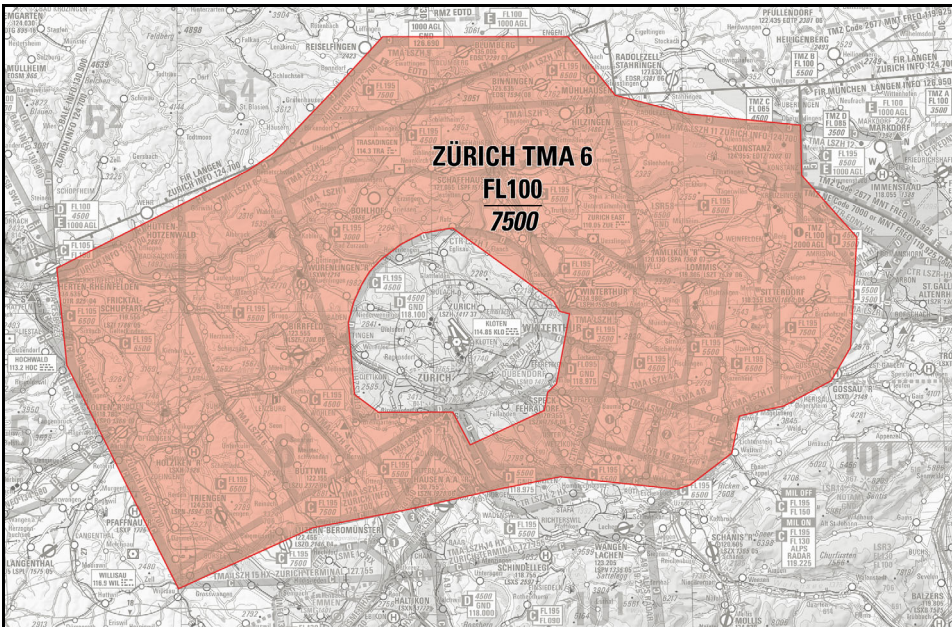


Figure 8 - ZRH TMA 6

Vertical Dimensions:

Upper limit: FL100

Lower limit: 7500 ft AMSL

Airspace Class: C

Zurich TMA 7

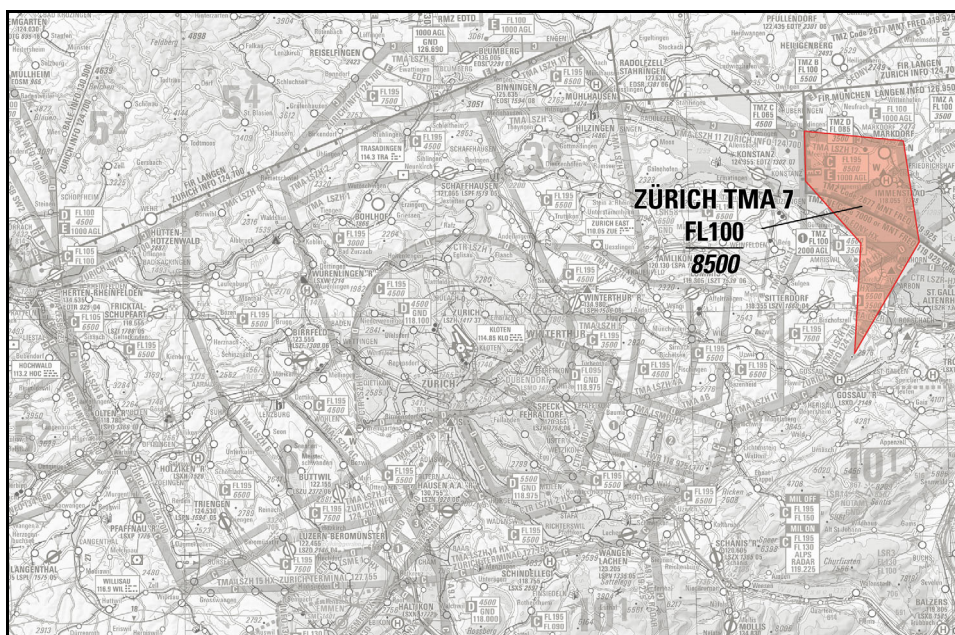


Figure 9 - ZRH TMA 7

Vertical Dimensions:

Upper limit: FL100

Lower limit: 8500 ft AMSL

Airspace Class: C

Zurich TMA S1 (SOUTH 1) / HX

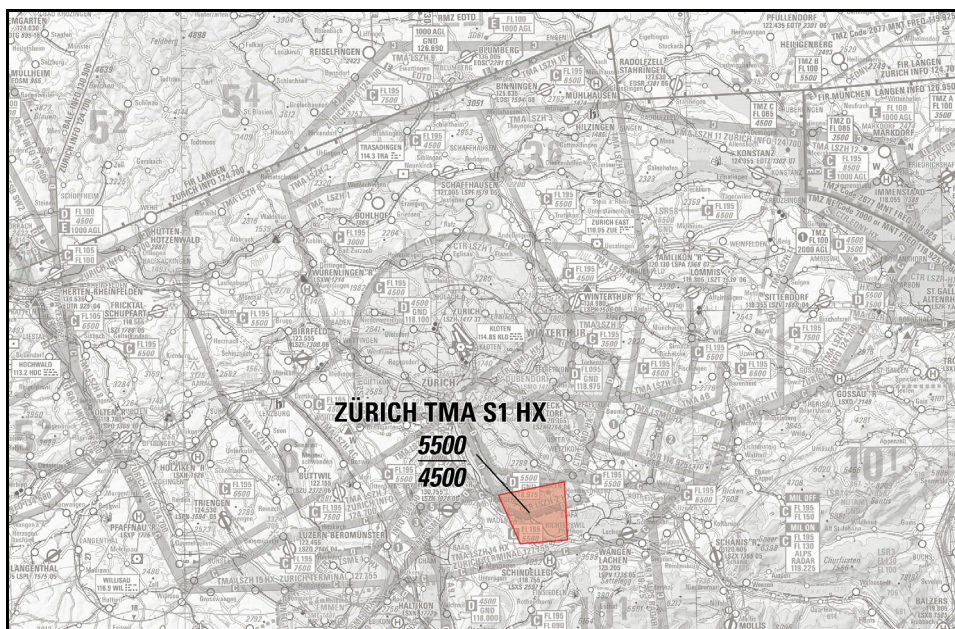


Figure 10 - ZRH TMA S1 (HX)

Vertical Dimensions:

Upper limit: 5500 ft AMSL

Lower limit: 4500 ft AMSL

Airspace Class: C

Zurich TMA S2 (SOUTH 2) / HX

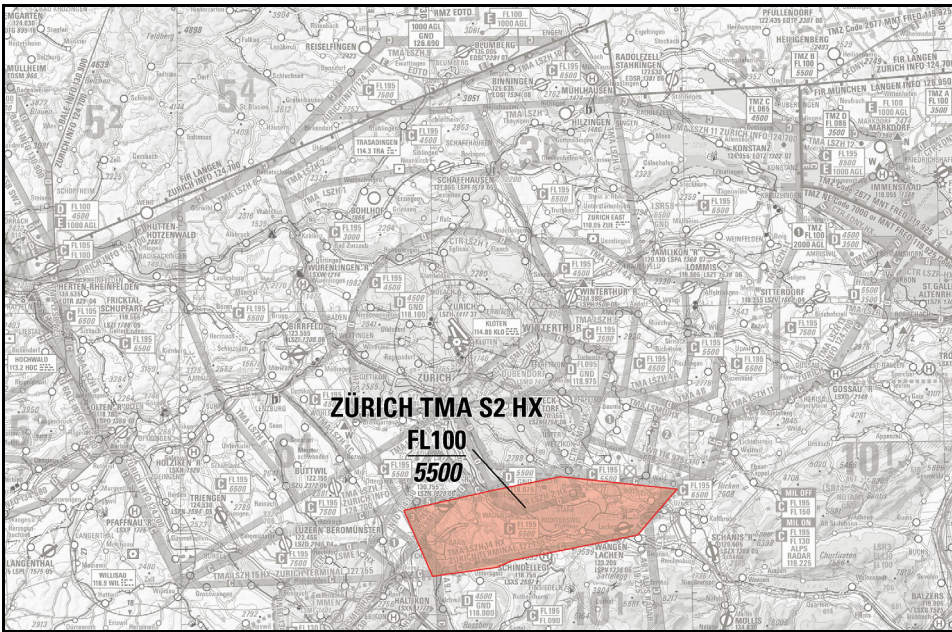


Figure 11 - ZRH TMA S2 (HX)

Vertical Dimensions:

Upper limit: FL100

Lower limit: 5500 ft AMSL

Airspace Class: C

Zurich TMA S3 (SOUTH 3) / HX

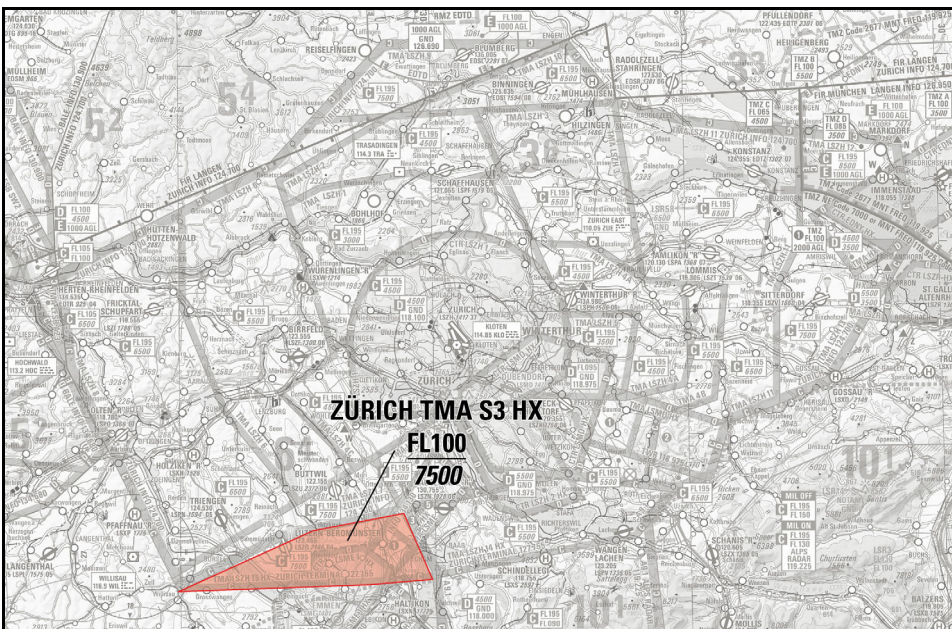


Figure 12 - ZRH TMA S3 (HX)

Vertical Dimensions:

Upper limit: FL100

Lower limit: 7500 ft AMSL

Airspace Class: C

Overview of Dübendorf airspace adaptation:

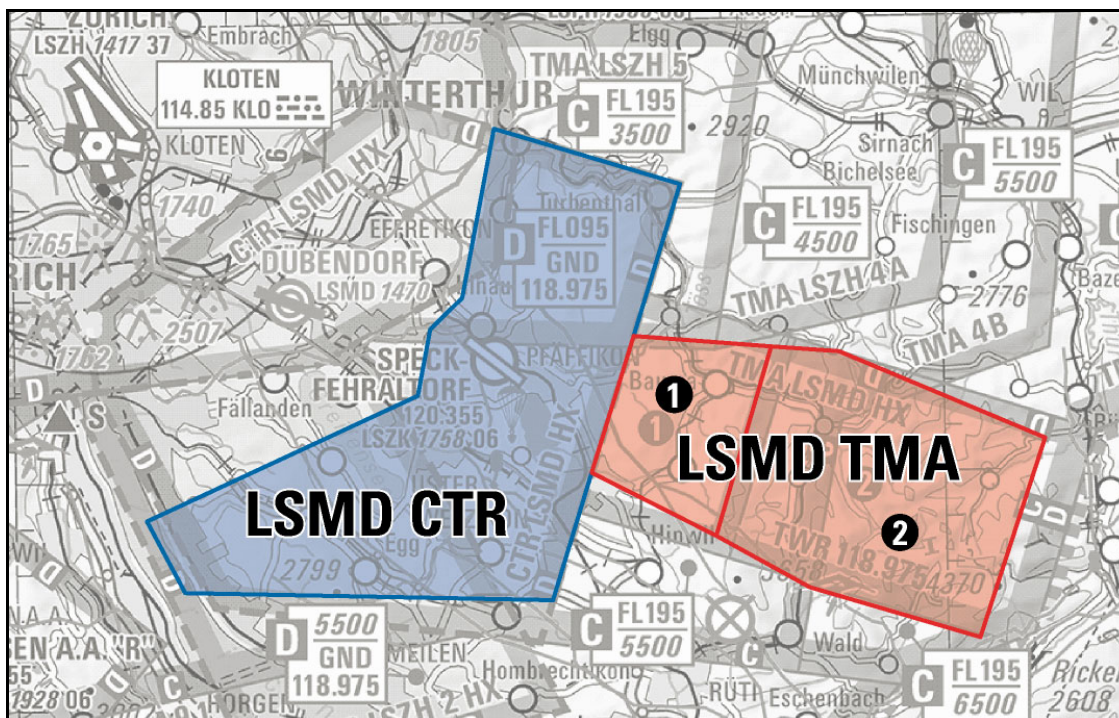


Figure 13 - DUB Airspace

CTR Dübendorf

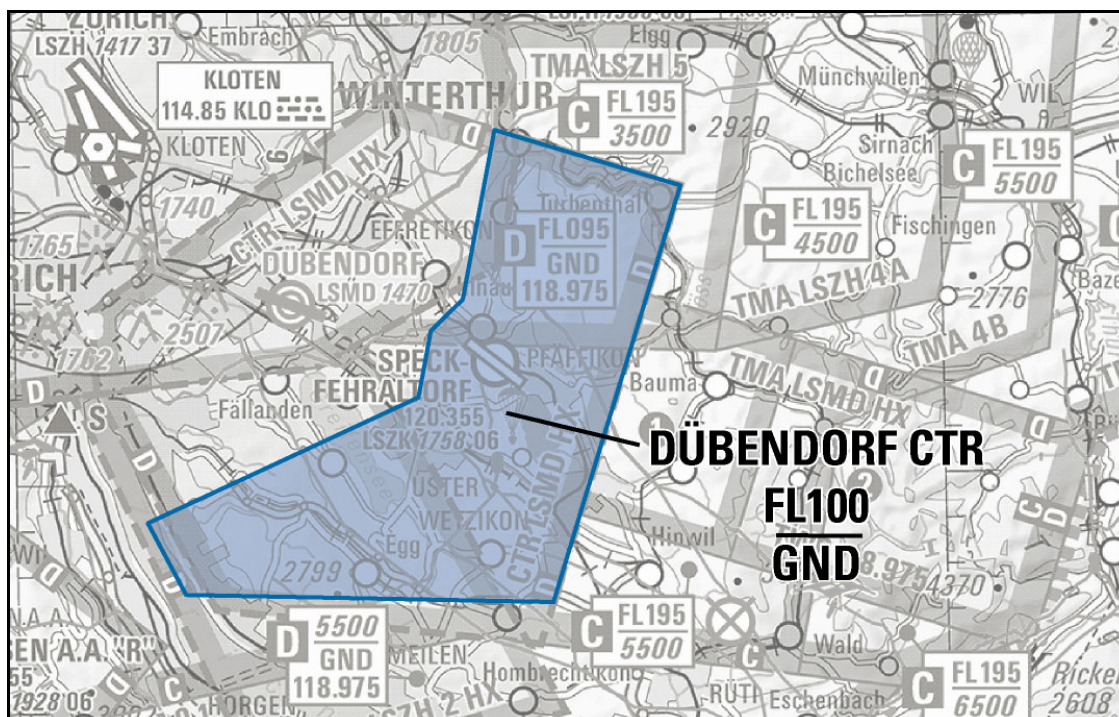


Figure 14 - DUB CTR

Vertical Dimensions:

Upper limit:	FL100
Lower limit:	GND
Airspace Class:	D

Dübendorf TMA 1

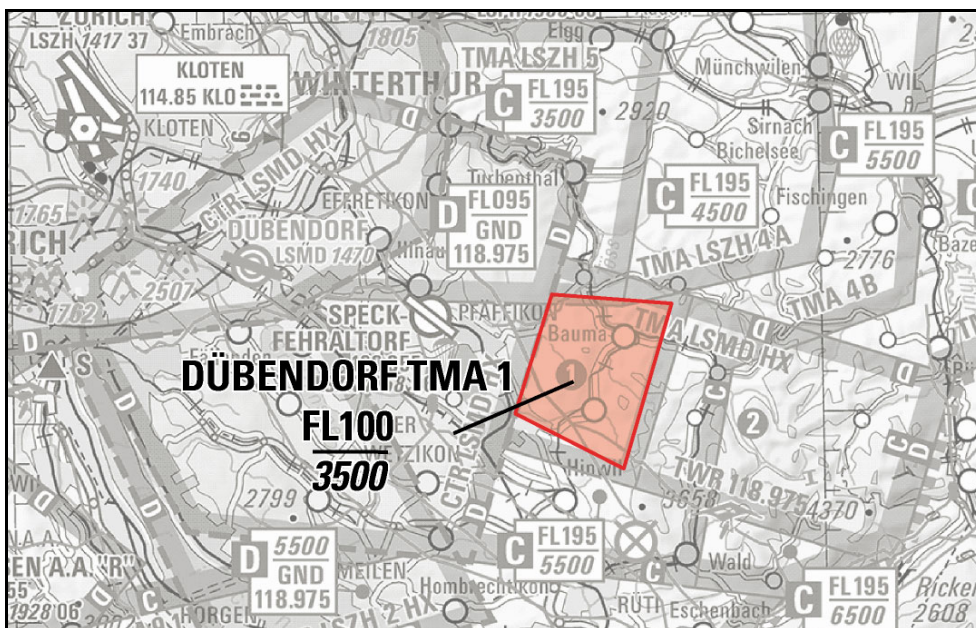


Figure 15 - DUB TMA 1

Vertical Dimensions:

Upper limit: FL100
Lower limit: 3500 ft AMSL
Airspace Class: D

Dübendorf TMA 2

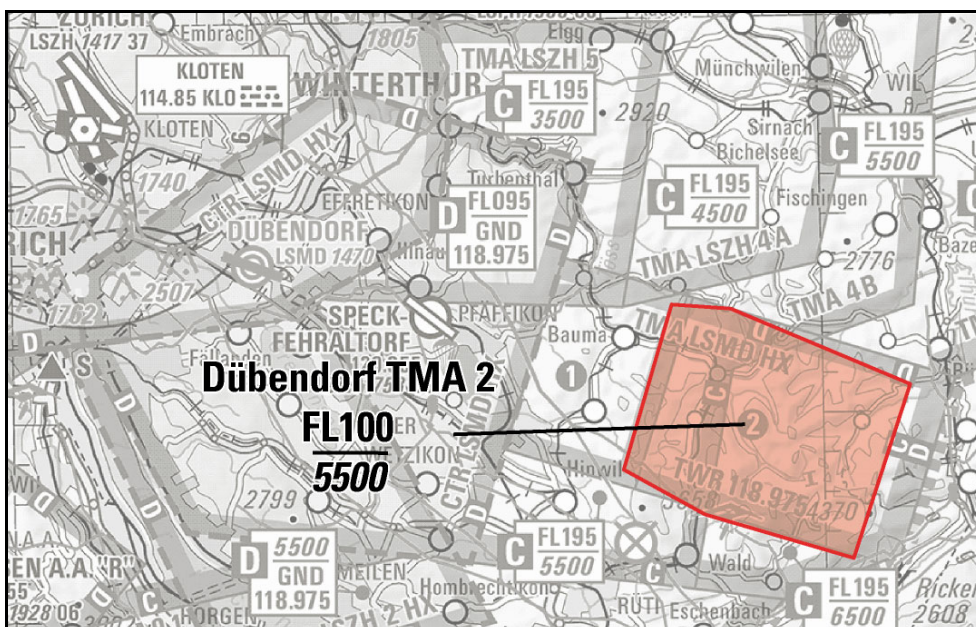


Figure 16 - DUB TMA 2

Vertical Dimensions:

Upper limit: FL100
Lower limit: 5500 ft AMSL
Airspace Class: D

Overview of LSR for gliders within TMA

The current areas are shown in blue, the proposed LSRs in red.

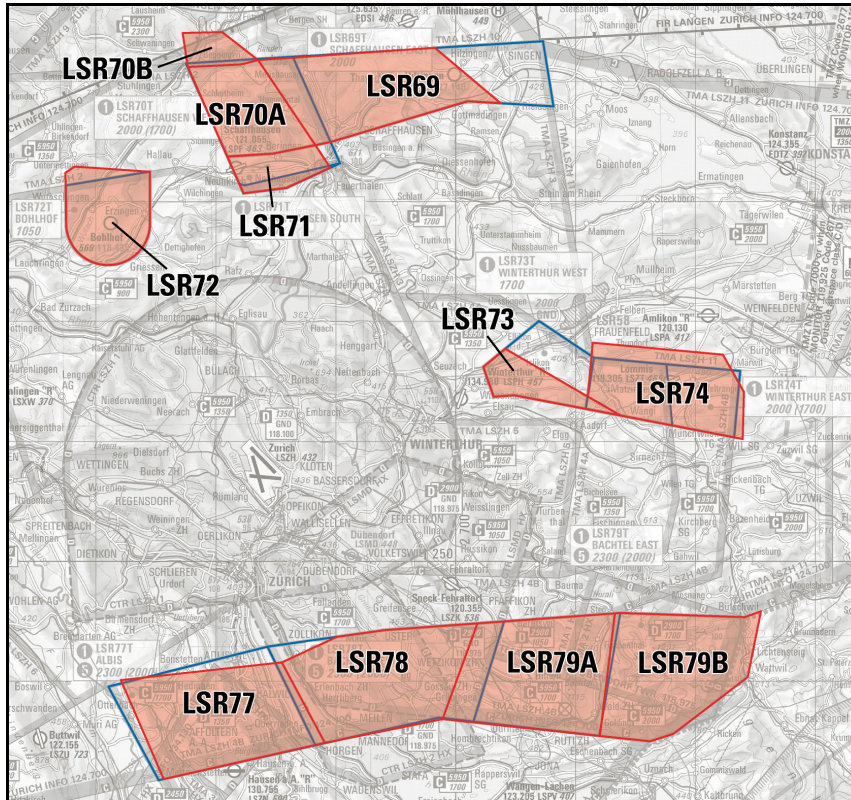


Figure 17 - LSR for glider within TMA (Zurich)

LSR69 Schaffhausen East

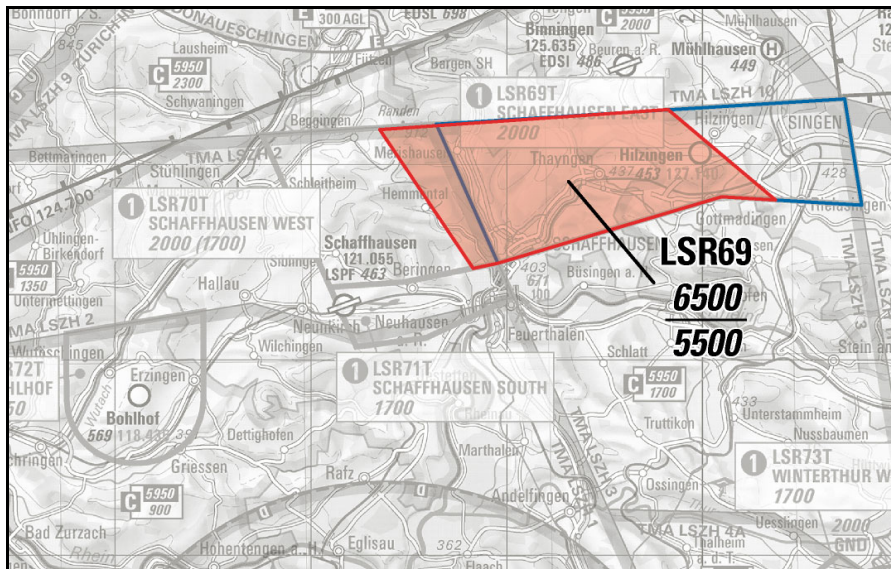


Figure 18 - LSR69 Schaffhausen East

Vertical Dimensions:

Upper limit: 6500 ft AMSL

Lower limit: 5500 ft AMSL

Airspace Class: E

LSR70A Schaffhausen West

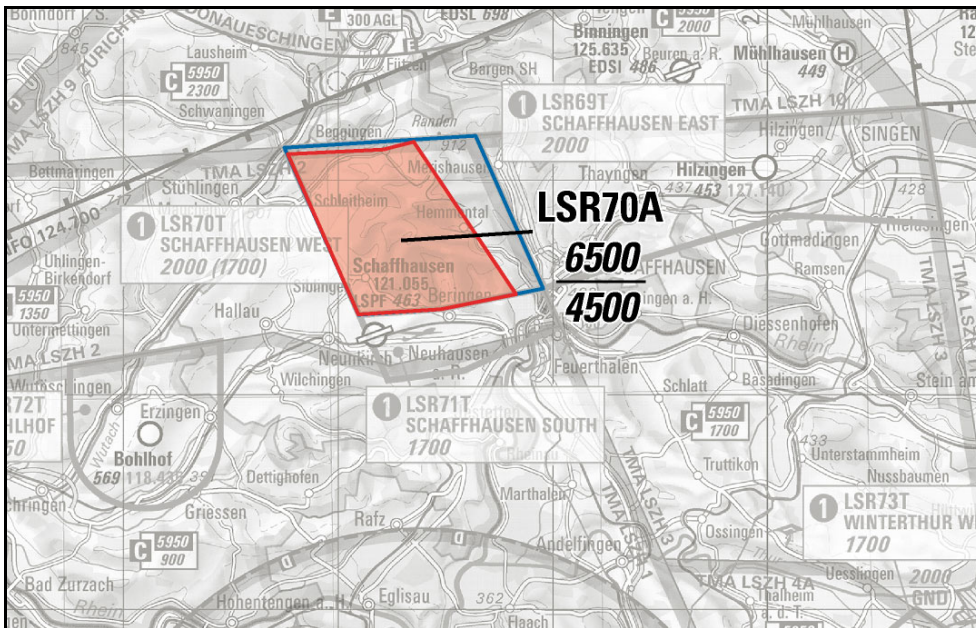


Figure 19 - LSR70A Schaffhausen West

Vertical Dimensions:

Upper limit: 6500 ft AMSL

Lower limit: 4500 ft AMSL

Airspace Class: E

LSR70B Schaffhausen North

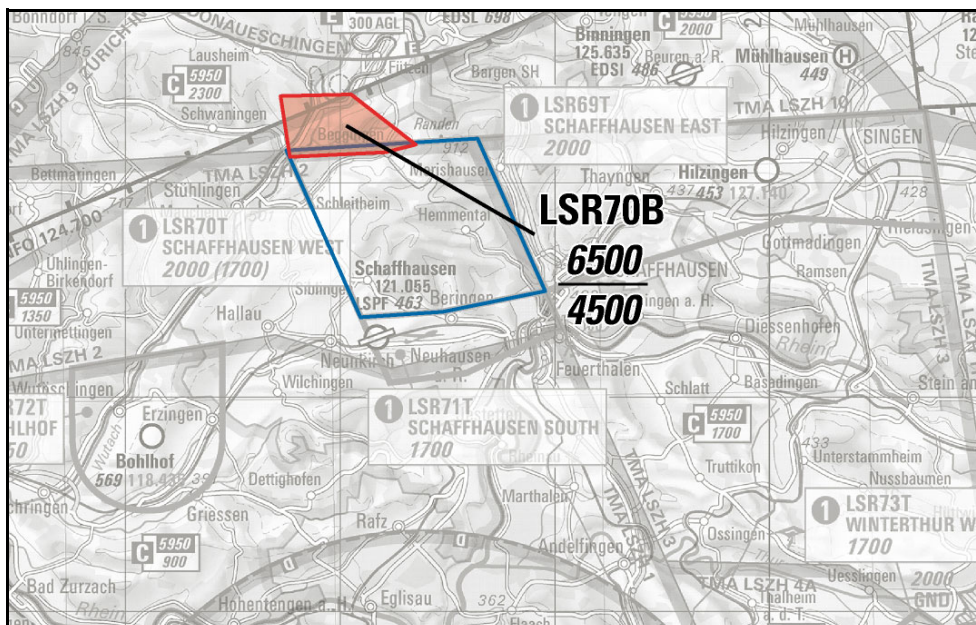


Figure 20 - LSR70B Schaffhausen North

Vertical Dimensions:

Upper limit: 6500 ft AMSL

Lower limit: 4500 ft AMSL

Airspace Class: E

LSR71 Schaffhausen South

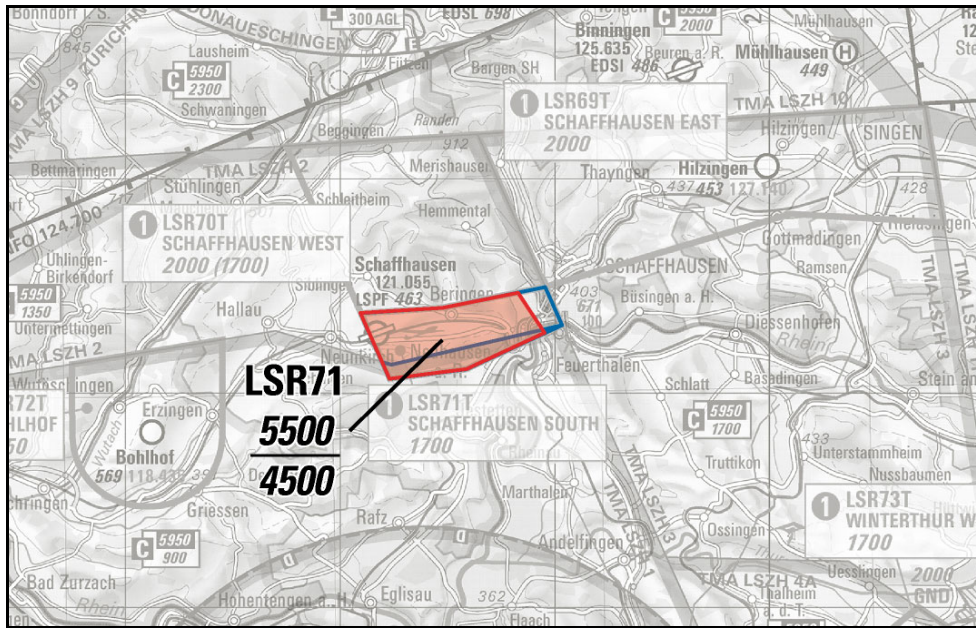


Figure 21 - LSR71 Schaffhausen South

Vertical Dimensions:

Upper limit: 5500 ft AMSL

Lower limit: 4500 ft AMSL

Airspace Class: E

LSR72 Bohlhof

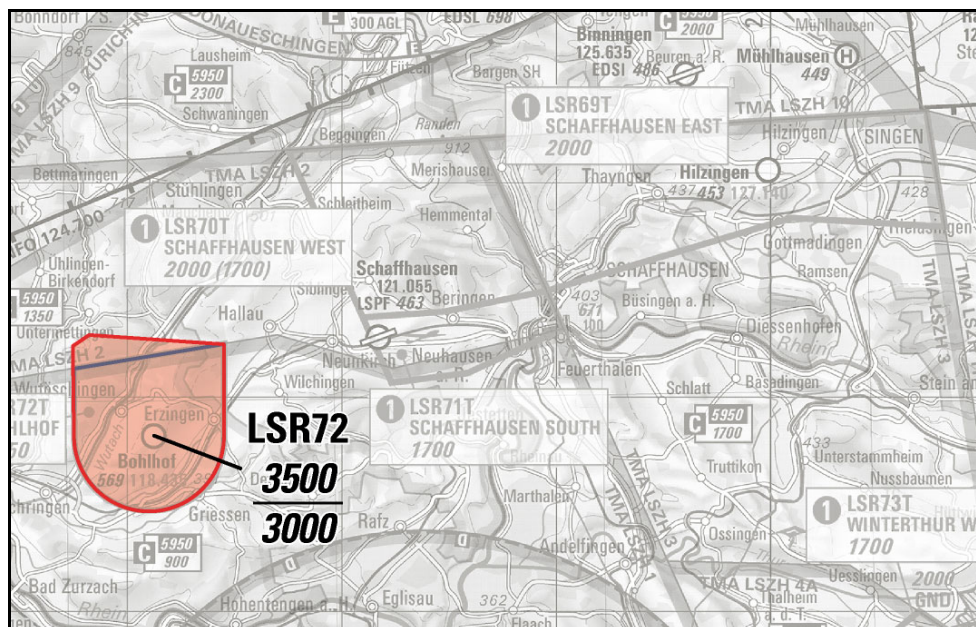


Figure 22 - LSR72 Bohlhof

Vertical Dimensions:

Upper limit: 3500 ft AMSL

Lower limit: 3000 ft AMSL

Airspace Class: E

LSR73 Winterthur West

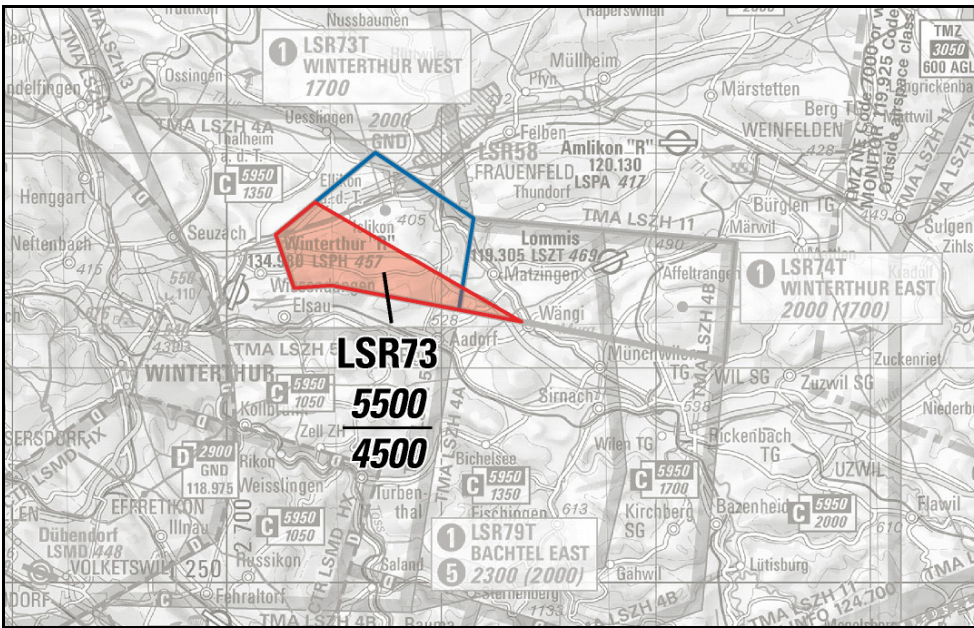


Figure 23 - LSR73 Winterthur West

Vertical Dimensions:

Upper limit: 5500 ft AMSL

Lower limit: 4500 ft AMSL

Airspace Class: E

LSR74 Winterthur East

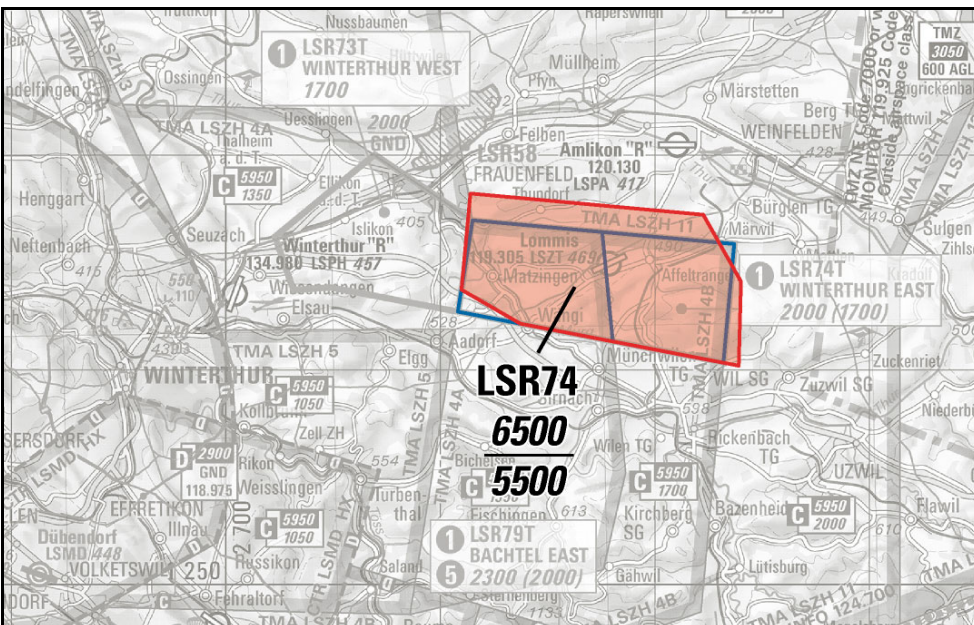


Figure 24 - LSR74 Winterthur East

Vertical Dimensions:

Upper limit: 6500 ft AMSL

Lower limit: 5500 ft AMSL

Airspace Class: E

LSR77 Albis

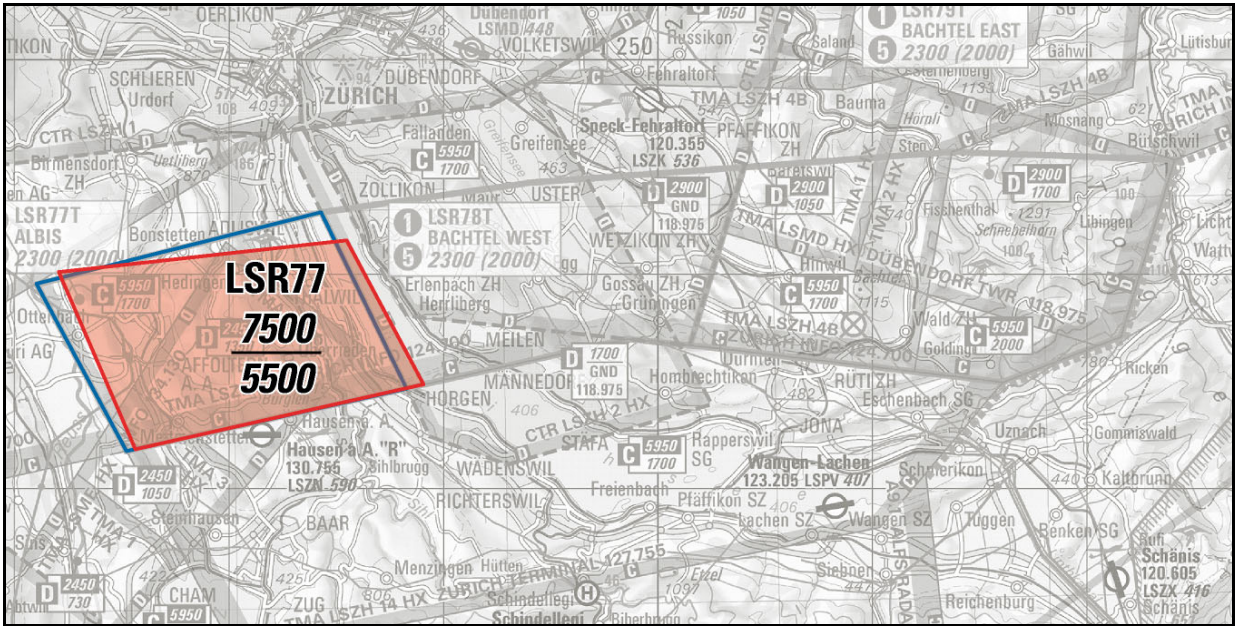


Figure 25 - LSR77 Albis

Vertical Dimensions:

Upper limit: 7500 ft AMSL
Lower limit: 5500 ft AMSL
Airspace Class: E

LSR78 Bachtel West

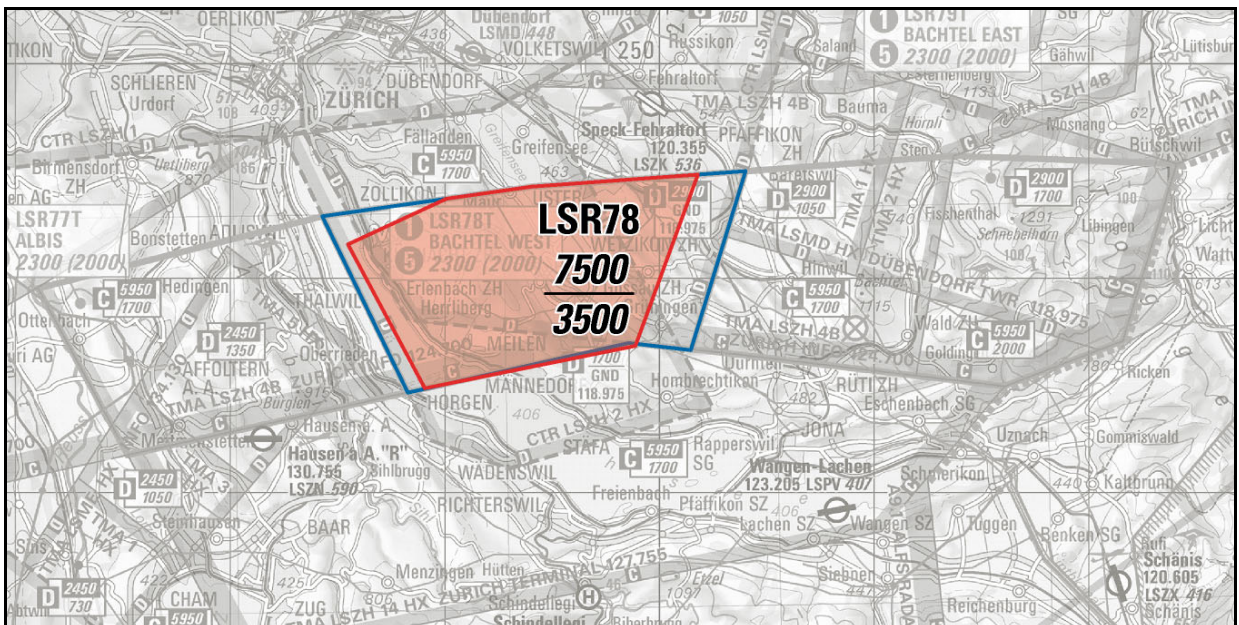


Figure 26 - LSR78 Bachtel West

Vertical Dimensions:

Upper limit: 7500 ft AMSL
Lower limit: 3500 ft AMSL
Airspace Class: E

LSR79A Bachtel Center

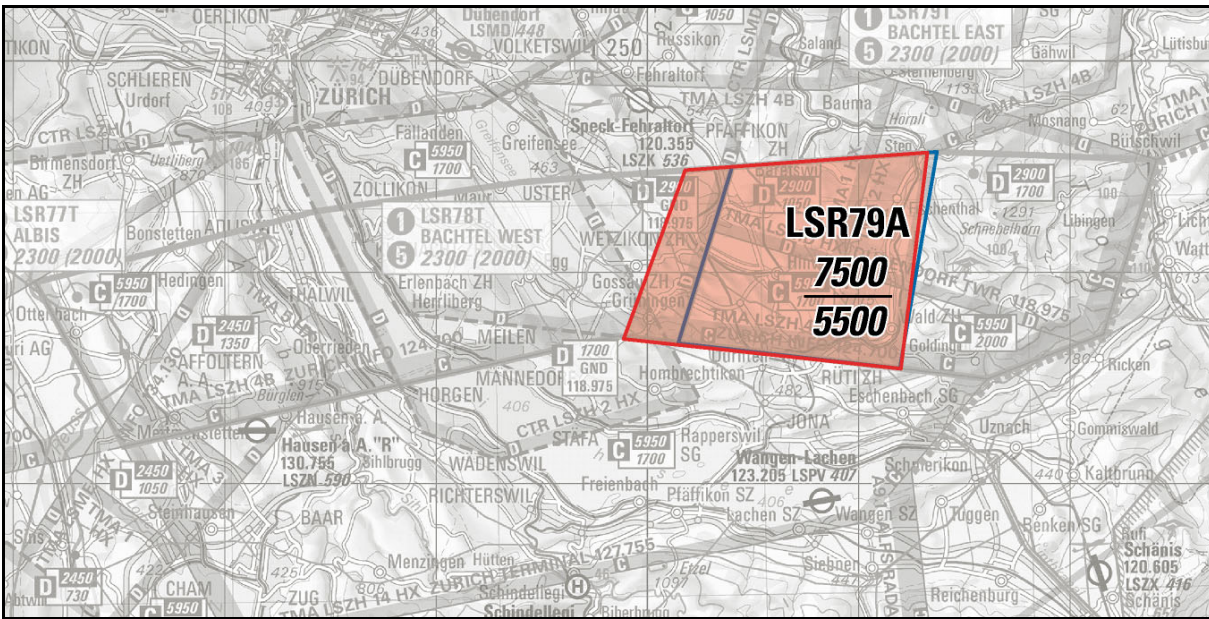


Figure 27 - LSR79A Bachtel Center

Vertical Dimensions:

Upper limit: 7500 ft AMSL

Lower limit: 5500 ft AMSL

Airspace Class: E

LSR79B Bachtel East

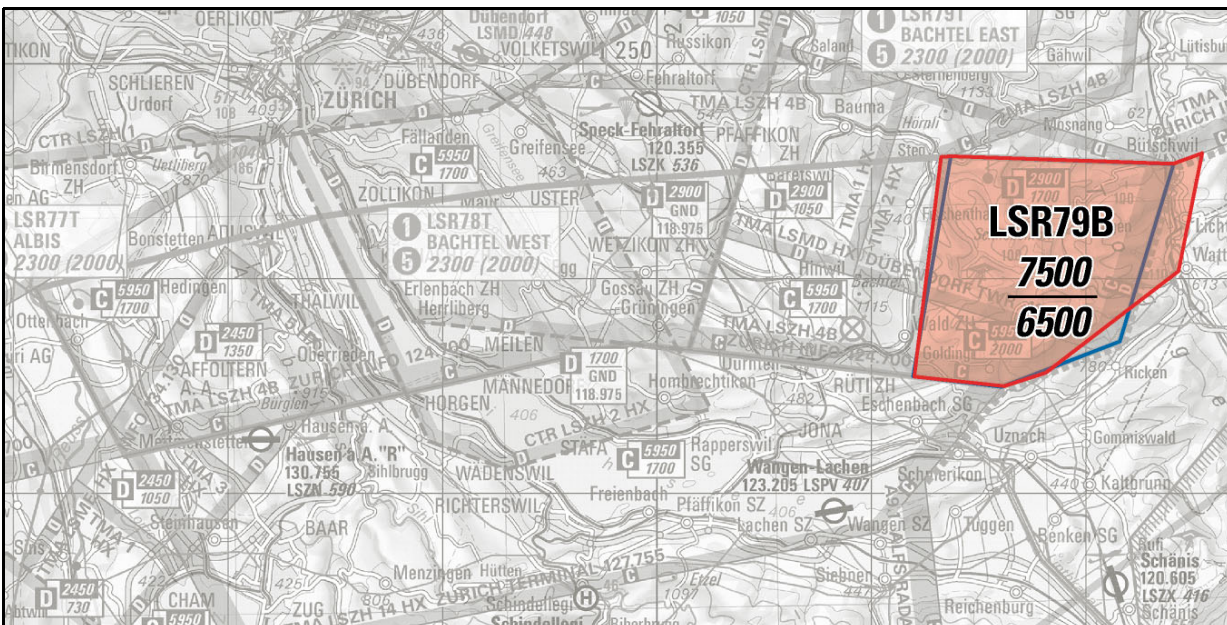


Figure 28 - LSR79B Bachtel Center

Vertical Dimensions:

Upper limit: 7500 ft AMSL

Lower limit: 6500 ft AMSL

Airspace Class: E

Overview of LSR Speck



Figure 29 - Overview of LSR Speck

LSR Speck A



Figure 30 - LSR Speck A

Vertical Dimensions:

Upper limit: 2500 ft AMSL
Lower limit: GND
Airspace Class: G

LSR Speck B

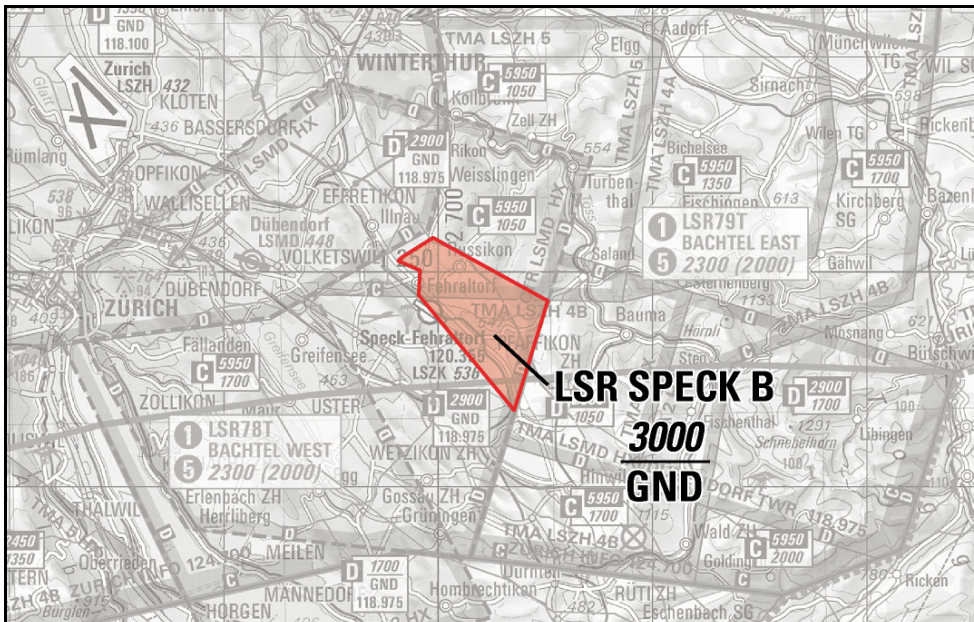


Figure 31 - LSR Speck B

Vertical Dimensions:

Upper limit: 3000 ft AMSL
Lower limit: GND
Airspace Class: G

Overview of A9.1 corridor

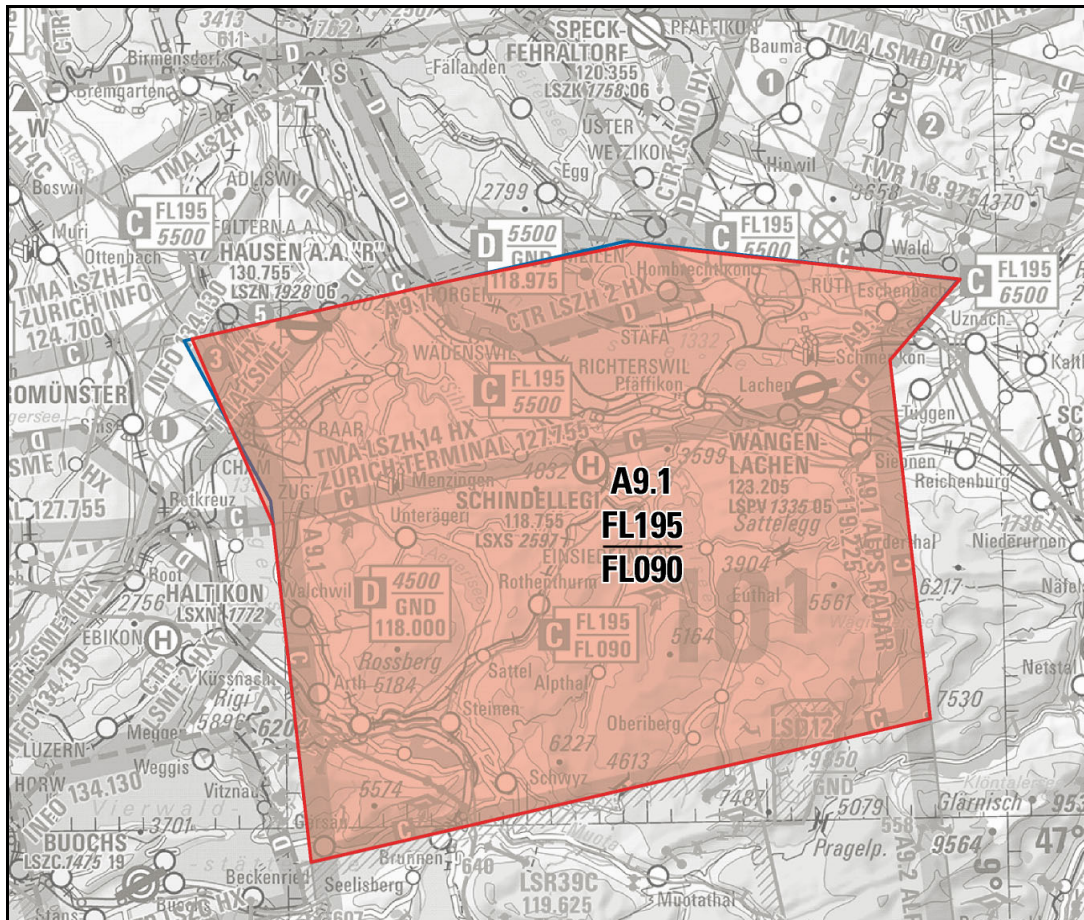


Figure 32 - A9.1 corridor

Vertical Dimensions:

Upper limit:	FL195
Lower limit:	FL090
Airspace Class:	C

Overview of Jura Mittelland-Alps line

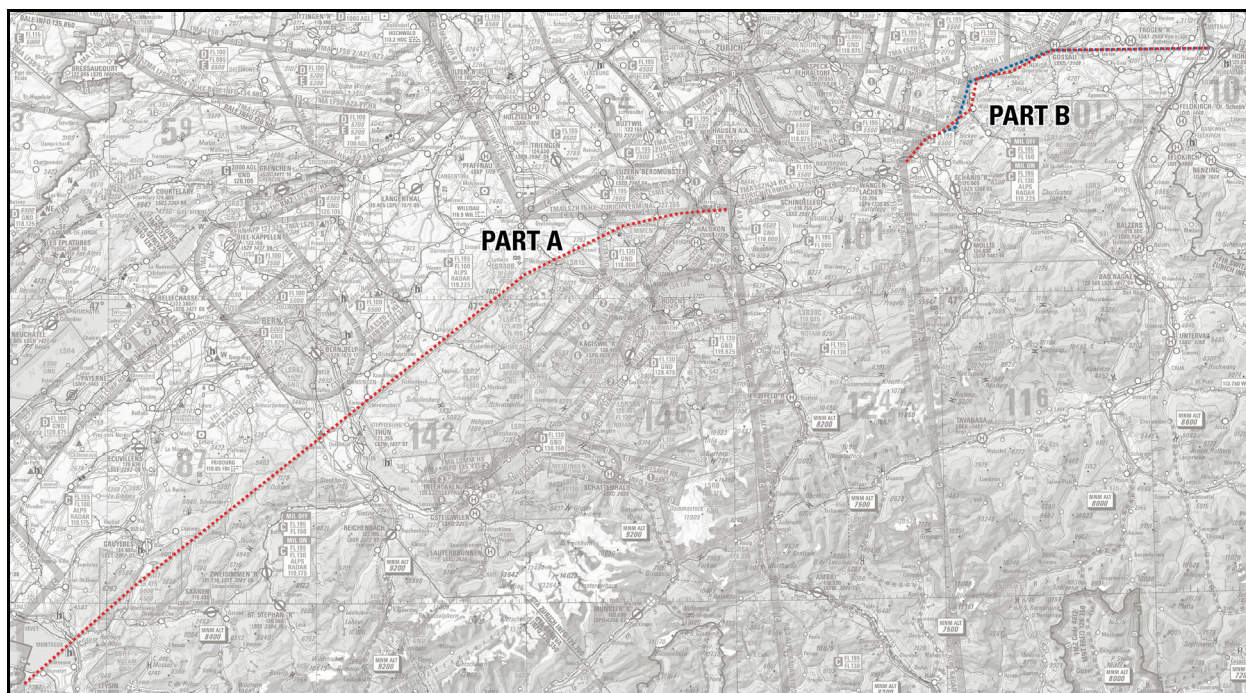


Figure 33 - Mittelland Jura - Alps line

- END -

FOCA/SILR