Network Statement 2021
Network access and usage conditions of BLS Netz AG for the timetable year 2021

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Network access and usage conditions of BLS Netz AG

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<td>• General changes to addresses</td>
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<td>• Updating of various references to other websites and regulations</td>
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<td>• 2.3.1.1 Amendment of “SMS-EVU”</td>
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<td>• 2.4.3 Regulations relevant to network access now available online</td>
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<td>• 2.5 and 4.3.2.1 Editorial adjustments (aS instead of AS), I-50089 deleted</td>
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<td>• Reference to Point 4.7.2 added</td>
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<td></td>
<td>• 2.7.1.1 Point sub-divided into “Basic Principle” and “Exception”; more precise definition of the scope of application; reference to the FOT’s “ETCS/GSM-R Statement of the Current Position (Standortbestimmung)”</td>
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<td>• 2.7.13 Annex 2.7.13 (Energy measurement systems) has been completely editorially revised. The Annex is now no longer linked to a timetable year.</td>
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<td>• 2.7.14 This point has been sub-divided without any material change</td>
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<td>• 3.3.3.3.2 More detailed editorial definition of voice recording</td>
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<td>• 3.6.2 Regulations now apply to the use of and the allocation of space in loading facilities.</td>
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<td>Capacity allocation</td>
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<td>4.1.5 The Chêne-Bourg–Annemasse route added</td>
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<td>4.2.2.2 Alteration to terminology: “Railway vehicles” instead of “trains”</td>
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<td></td>
<td>4.2.5 and 4.4.1.3 New obligation to supply details when stabling motive power units</td>
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<td>4.4.1.3 New rules in the event of conflicting freight traffic stationary periods</td>
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<tr>
<td></td>
<td>4.4.1.3 Revision of how to resolve motive power unit stabling conflicts</td>
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<td>4.4.4 No framework agreements have been concluded for the 2021 timetable year</td>
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<td>4.8 Point completely revised</td>
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| Services | 5.3.1.2 Regulations now apply to the use of and the allocation of space in loading facilities. |

<table>
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<th>Abbreviations and glossary</th>
<th>Abbreviations amended and corrected</th>
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<td></td>
<td>The term “SMS-EVU” explained with greater precision</td>
</tr>
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**Network Statement 2021: List of changes after the initial publication**

List of the most important changes in updated (amended) versions of the Network Statement 2021.

<table>
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<tr>
<th>Version</th>
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<tbody>
<tr>
<td>1.1</td>
<td>7.5.2020</td>
<td>3.3 Route database deleted</td>
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<tr>
<td>2.0</td>
<td>10.12.2020</td>
<td>General: Following the implementation of the draft &quot;Organisation of the Railway Infrastructure (OBI)&quot; legislation, &quot;trasse.ch&quot; has been replaced where necessary by &quot;TVS&quot; (Swiss Train Path Allocation Body).</td>
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<td>1.3.2 &amp; 1.4.3.3 Railways Arbitration Commission replaced by Rail-Com</td>
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<td></td>
<td>1.10.1 amended to include pre-arranged train paths (PaP)</td>
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<td>2.3.1 Elements of the network access agreement adjusted to meet the new legal requirements.</td>
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<tr>
<td></td>
<td></td>
<td>2.3.2 Section adjusted: agreement with third parties which order train paths</td>
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<tr>
<td></td>
<td></td>
<td>2.5 and 4.3.2.1 and 4.7.1 The provisions regarding exceptional consignments have been aligned with those set out in I-30111. The responsibility for authorising the management of exceptional consignments has been set out more precisely.</td>
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<tr>
<td>2.7.8</td>
<td>New regulation regarding the wheel/rail adhesion threshold value</td>
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<td>2.7.17</td>
<td>New regulation regarding noise from parked vehicles</td>
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<td>4.1.4</td>
<td>Editorial simplification of the regulation regarding withdrawal of train paths</td>
<td></td>
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<tr>
<td>4.4.1.4</td>
<td>New overview of ordering procedures</td>
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<tr>
<td>4.4.3</td>
<td>New regulation in the event of congested routes</td>
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<tr>
<td>4.5</td>
<td>Editorial adjustment</td>
<td></td>
</tr>
<tr>
<td>6.2</td>
<td>Invoicing arrangements adjusted to meet the new legal requirements</td>
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</table>
1. General Information

1.1. Introduction
This Network Statement (NWS) is published by the Infrastructure Division of BLS Netz AG - hereinafter referred to as (BLS) track network or BLS Netz AG.

The BLS track network covers around 11% of Switzerland’s normal-gauge network. SBB (around 80% of the normal-gauge network) and Schweizerische Südostbahn AG (approximately 3.5% of the normal-gauge network) also publish a NWS for their networks. A detailed map is available online.

Train paths (basic and ancillary services) on these three track networks are allocated by the independent train path allocation body Swiss Train Path Allocation Body (TVS), which also ensures that timetables are designed without discrimination. Chapter 4 explains the processes for ordering and allocating timetabled train paths (basic and ancillary services), as well as for the upstream and downstream steps associated with the allocation procedure, and highlights the relevant binding specifications.

1.2. Objective
The NWS contains the access and usage conditions that apply to the track network (within the meaning of Article 10 Paragraph 1(d) of the Rail Network Access Ordinance (RailNAO) and EU Directive 2012/34) and forms part of the Network Access Agreement between the infrastructure manager and the railway undertaking.

It may also be used as a tool for requesting network access and managing traffic on the BLS Netz AG track network. Therefore, the term “applicants” is used below where applicable to both railway undertakings and third parties.

1.3. Legal Framework
This NWS complies with the current legal framework in accordance with Railway Reform 2.2 and the Federal Railway Infrastructure Act of 28 September 2018. Legislative changes will be added to the NWS as updates. Changes will also be listed in the overview of changes.

In its Overland Transport Agreement with the European Union, Switzerland undertakes to apply legal provisions that are equal to those listed in Annex 1 of the agreement. COTIF and CUI are applicable in Switzerland. The applicable Swiss laws and ordinances are published in the Swiss Certified Compilation of Federal Legislation (SR), and are also available online at www.admin.ch.

Below is a list of the most important international and national legislation:

1.3.1. Overview of key international rulings and agreements and EU legislation (to aid interpretation)

<table>
<thead>
<tr>
<th>Number</th>
<th>Designation</th>
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</table>
Implementing Regulation (EU) 2017/2177

Commission Implementing Regulation (EU) 2017/2177 of 22 November 2017 on access to service facilities and rail-related services.

Regulation (EU) 913/2010


Directive (EU) 2012/34


Directive (EU) 2016/2370


Directive (EU) 2016/797


Directive (EU) 2016/798


1.3.2. National legislation (excerpt)

<table>
<thead>
<tr>
<th>Number</th>
<th>Abbreviation</th>
<th>Designation</th>
</tr>
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<tbody>
<tr>
<td>SR 0.742.403.1 – COTIF</td>
<td>-</td>
<td>Convention concerning International Carriage by Rail (COTIF)</td>
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<tr>
<td>SR 0.742.403.12 – Annex E – CUI</td>
<td>-</td>
<td>Uniform Rules concerning the Contract of Use of Infrastructure in International Rail Traffic (CUI)</td>
</tr>
<tr>
<td>SR 0.740.72</td>
<td>LVA</td>
<td>Agreement dated 21 June 1999 between the Swiss Confederation and the European Community regarding the transport of goods and passengers by rail and road (incl. Annexes and final act)</td>
</tr>
<tr>
<td>SR 742.101</td>
<td>EBG</td>
<td>Railways Act</td>
</tr>
<tr>
<td>SR 742.122</td>
<td>NZV</td>
<td>Network Access Ordinance</td>
</tr>
<tr>
<td>SR 742.122.4</td>
<td>NZV-BAV</td>
<td>BAV ordinance on the Network Access Ordinance</td>
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<tr>
<td>SR 742.101.4</td>
<td>–</td>
<td>Business regulation issued by the Rail Transport Commission</td>
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<tr>
<td>SR 742.141.1</td>
<td>EBV</td>
<td>Railways Ordinance. Annex 7 EBV states those technical specifications for interoperability (TSI) which are applicable in Switzerland. Where the national regulations deviate from the TSIs, this will be specified by the FOT by means of notified national technical regulations NNTV.</td>
</tr>
<tr>
<td>SR 742.141.11</td>
<td>AB-EBV</td>
<td>Implementing Provisions for the Railways Ordinance</td>
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<tr>
<td>SR 742.144</td>
<td>RNAA</td>
<td>Federal Law on Railway Noise Abatement</td>
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<td>SR 742.144.1</td>
<td>VLE</td>
<td>Ordinance on Railway Noise Abatement</td>
</tr>
<tr>
<td>SR 742.173.001</td>
<td>FDV</td>
<td>Swiss Rail Service Regulations (R 300.1–15)</td>
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<tr>
<td>SR 742.412</td>
<td>RSD</td>
<td>Ordinance on the Carriage of Dangerous Goods by Railways and Cableways</td>
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<td>SR 742.41</td>
<td>GüTG</td>
<td>Goods Carriage Act</td>
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<tr>
<td>SR 742.411</td>
<td>GüTV</td>
<td>Carriage of Goods Ordinance</td>
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<td>SR 745.1</td>
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<td>Federal Act on Equality for People with Disabilities</td>
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<td>SR 151.31</td>
<td>BehiV</td>
<td>Ordinance on the Elimination of Discrimination against People with Disabilities</td>
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</tbody>
</table>

1.4. Legal status

1.4.1. General remarks

Article 10 Paragraph 1(d) of the Swiss Rail Network Access Ordinance (RailNAO) requires infrastructure managers to publish the conditions of network access.

Art. 10 The infrastructure manager’s obligations

1 The infrastructure manager is to ensure non-discriminatory access to its network, by:
a. applying the same rules both to itself and to third parties when allocating train paths and setting train path prices;
b. treating third parties equally under the same conditions when allocating train paths and setting train path prices;
c. not applying technical conditions which have no basis in current legislation or regulations;
d. publishing the basic conditions for network access, where not detailed in this regulation, and by publishing the most important technical features of the track section, such as profile (gradient), curve radii, length of the passing tracks, platform lengths, route class and safety equipment;
e. offering additional services (Art. 22) where this is possible with the existing infrastructure and available staff.

2 The BAV will specify the type and nature of the publications.

Within Switzerland, SBB, BLS Netz AG, SOB and TVS base this publication on the structure of the Network Statement established in the EU in accordance with Article 27 of EU Directive 2012/34, for the purpose of harmonisation. Further information on the structure can be found under section 1.5.

1.4.2. Liability
All the conditions governing the use of railway infrastructures that are published in this NWS are subject to subsequent legislative changes. Insofar as additional requirements are introduced after publication of the NWS within the context of amendments to Swiss laws and ordinances, compliance with these requirements is mandatory. BLS Infrastructure accepts no liability for the consequences of failure to comply with subsequent amendments to legislation and provisions.

BLS is conscious of the need to ensure that the information in this NWS is correct. It shall not be liable for any direct or indirect damage arising from obvious defects or printing errors in this NWS and in other documents. Furthermore, it rejects all responsibility for the contents of any external websites to which this publication links. Where the contents of linked pages contradict those of this NWS, the latter shall have priority. This reservation does not apply to links on the official publication pages for Swiss laws and ordinances.

This NWS is published in German and English language versions. In the event of differences between language versions, the German version shall be legally binding.

1.4.3. Appeals procedure

1.4.3.1. BLS Infrastructure (with the exception of chapter 4)
Should you have any objections to the content of this NWS, please contact the relevant person named in the list of addresses (section 1.8).

1.4.3.2. Swiss Train Path Allocation Body (chapter 4)
Complaints relating to the content of chapter 4 should be directed to TVS. The contact details are provided in the list of addresses in section 1.8.
1.4.3.3. Rail Transport Commission RailCom
Disputes relating to the granting of track access and the associated conditions are subject to
claims to the Rail Transport Commission RailCom (Art. 29 LVA, Art. 40a EBG).

According to Art. 33f of the Administrative Court Act (VGG) decisions by the RailCom can be re-
tered to the Federal Administrative Court in St. Gallen.

1.5. Structure of Network Statement
The structure of the NWS corresponds to the structure that was devised and adopted by the work-
ing group Network Statement and Corridor Information Document of RailNetEurope (RNE). This
common structure is available at www.rne.eu/network-statements/.

Its goal is to enable readers across Europe to find the information they require for network access
more easily in a uniform format.

• Chapter 1 contains general information on the NWS and points of contact.
• Chapter 2 covers network access and usage conditions.
• Chapter 3 describes the properties of the track network, including capacity restrictions.
• Chapter 4 illustrates the capacity allocation procedure used by TVS.
• Chapter 5 describes the services of the infrastructure managers.
• Chapter 6 contains information on pricing and fees.

Where appropriate, further information is provided in annexes. The numbering of the annexes cor-
responds to the associated section. Example: The Gotthard Base Tunnel is classified as special
infrastructure. Detailed information on the applicable conditions can be found in NWS Annex
3.4.1B.

1.6. Validity and updating process

1.6.1. Validity period
This NWS is valid for the ordering and execution of transport operations in the timetable year 2021
from 13 December 2020 to 11 December 2021.

1.6.2. Updating process
The NWS is kept up to date. Information on new and amended versions is provided in accordance
with the provisions of the Network Access Agreement.

1.7. Publishing
The NWS is provided in digital format in German and English free of charge. Copies of regulations
and more detailed BLS documentation can be obtained for a fee.

1.8. List of addresses
Detailed information on all matters relating to network access and usage can be obtained from the
contact persons shown in the list at https://www.bls.ch/de/unternehmen/leistungen-fuer-dritte/leis-
tungen-fuer-evu, which is always kept up to date.
For general questions about the NWS, please contact

extent

For questions about chapter 4 of the NWS, please make direct contact with

Swiss Train Path Allocation Body
Schwarztorstrasse 31
P.O. Box 3001 Bern Switzerland
Tel: +41 79 928 01 63
info@tvs.ch / info@trasse.ch
www.tvs.ch / www.trasse.ch

1.9. Rail freight corridors
A total of eleven rail freight corridors (RFCs) run through Europe, on the basis of EU Regulation 913/2010. The following goals are set for these corridors:

- Improving cooperation between the infrastructure managers of the countries involved in the areas of capacity allocation, development of interoperable systems and infrastructure expansions and renovations.
- Achieving balance between freight and passenger trains along the rail freight corridors in order to meet the freight train capacity and punctuality requirements.
- Promoting intermodal traffic by incorporating terminals into the rail freight corridors.

RNE has published an interactive map of all rail freight corridors. Switzerland is connected to corridors 1 and 2.

RFC 1 Rhine-Alpine: Zeebrugge/Antwerpen/Vlissingen/Rotterdam/Amsterdam–Köln–Mannheim–Basel–Gotthard/Lötschberg–Genova
For further information, visit www.corridor-rhine-alpine.eu

For further information, visit www.rfc-northsea-med.eu

Where train paths are ordered on the rail freight corridors, dedicated OneStopShops have been available for use since 2013 www.rne.eu/organisation/oss-c-oss/
See also section 1.10.1 on the national OneStopShops.

1.10. RailNetEurope – international cooperation between Infrastructure Managers
RNE was established in January 2004, when representatives of infrastructure managers and train path allocation bodies created a joint European association with the aim of simplifying their international operating activities. This was achieved by developing harmonised business processes, templates, manuals, guidelines and tools, and making solutions available not just to the infrastructure managers involved but also to applicants.

SBB Infrastructure, BLS Netz AG and TVS are members of RNE.

You can find further information at www.rne.eu/organisation/rne-approach-structure.
1.10.1. **OneStopShops (OSS)**

The members of RNE created an international network of OneStopShops to support applicants in matters relating to network access and cross-border train path orders. Within Switzerland, the TVS is responsible for all domestic and international train path applications – with the exception of train paths on freight corridors.

A list of the national contact points is available from [www.rne.eu](http://www.rne.eu).

1.10.2. **RNE IT Tools**

The **Path Coordination System (RNE PCS)** is an international train path coordination tool for applicants, infrastructure managers, train path allocation bodies and rail freight corridors. It is free to use, and user accounts can be requested at [pcs.rne.eu](http://pcs.rne.eu).

The **Charging Information System (RNE CIS)** is a free tool for estimating the costs associated with using European rail infrastructure. It can be accessed at [cis.rne.eu](http://cis.rne.eu); no registration is required. This system should not be confused with the Cargo Information System provided by SBB Infrastructure (CIS Infra).

The **Train Information System (RNE TIS)** (formerly EUROPTIRAILS) summarises information on international trains in one place. The relevant data is supplied to RNE TIS by the infrastructure managers. A free user account can be requested at [tis.rne.eu](http://tis.rne.eu).

2. **Access conditions**

2.1. **Introduction**

Chapter 2 of the NWS sets out the requirements for accessing the BLS track network for national and cross-border traffic.

2.2. **General access requirements**

The legal bases for network access and operations as a railway undertaking are the Swiss Railways Act (EBG), SR 742.101, the Ordinance on the Construction and Operation of the Railways (Railways Ordinance, RailO), SR 742.141.1, the Rail Network Access Ordinance (RailNAO), SR 742.122, and the FOT Ordinance to the Rail Network Access Ordinance (RNAO-FOT), SR 742.122.4.

In order for a Swiss railway undertaking to be able to operate on the BLS track network, a network access permit, safety certification and a network access agreement with the infrastructure manager are required at the administrative level.

The network access permit and safety certification are issued by the Federal Office of Transport (FOT). The FOT guideline on requesting network access permits, safety certificates and safety authorisations describes the necessary steps. The RU shall be responsible for checking the technical compatibility of the rolling stock with the routes to be used. The procedure is described in the OneStopShop.
Network access is granted to foreign railway undertakings on the basis of the applicable international agreements. For instance, on routes close to borders, simplified conditions in accordance with Annex 1 of the FOT guideline on requesting network access permits, safety certificates and safety authorisations may be used.

The contact points are indicated in the list of addresses.

### 2.2.1. Conditions for applying for capacity

The requirements for train path requests are set out in chapter 4.

### 2.2.2. Access authorisation

Subject to statutory considerations and other provisions mentioned in this document, any company is entitled to request network access.

### 2.2.3. Track access permit

The network access permit is issued by the FOT on the basis of Articles 8c and 8d EBG.

Among other things, it certifies that the railway undertaking possesses the required knowledge for safe and reliable rail operation, is financially fit and reliable, and complies with the applicable labour regulations. The network access permit is valid for a maximum of ten years and can be renewed.
In the case of foreign railway undertakings, Article 9 RailNAO stipulates that foreign network access permits may be recognised on journeys for routes close to borders even in the absence of an intergovernmental agreement.

2.2.4. Safety certificate
The safety certificate is issued by the FOT in accordance with Art. 8e of the Railways Act.

The RU shall be responsible for checking the technical compatibility of the rolling stock with the routes to be used. The procedure is described in the OneStopShop.

<table>
<thead>
<tr>
<th>Art. 8e Issue and renewal of safety certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Safety certification is issued by the BAV.</td>
</tr>
<tr>
<td>2 Safety certification includes approving the railway company’s safety management system and approving the precautions it has taken to ensure that operations on the relevant routes are carried out safely. In particular, the company must prove that:</td>
</tr>
<tr>
<td>a. its employees possess the relevant qualifications to ensure safe operations;</td>
</tr>
<tr>
<td>b. the rolling stock meets the requirements for safe operations.</td>
</tr>
<tr>
<td>3 Safety certification is issued for five years at most. It can be renewed.</td>
</tr>
<tr>
<td>4 Where an agreement has been reached with other countries about mutual recognition, then safety certification issued by these countries will also apply within Switzerland.</td>
</tr>
</tbody>
</table>

2.2.5. Solvency (insurance)
Articles 5 and 5a RailNAO describe the requirements concerning financial capacity as follows:

<table>
<thead>
<tr>
<th>Art. 5 Solvency (Art. 8d para. 1b EBG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The railway company will be regarded as solvent if statements made by it indicate that it will be able to meet its financial obligations for at least one year.</td>
</tr>
<tr>
<td>2 If this solvency requirement cannot be met, but financial restructuring is in progress, the BAV can issue provisional approval valid for at most six months.</td>
</tr>
<tr>
<td>3 The details required in respect of solvency are set out in the Annex.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art. 5a Insurance cover (Art. 8d para. 1b EBG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Insurance cover will be regarded as adequate if the company can show that it is insured against the consequences of its liability up to a sum of CHF 100 million per incident or can offer securities to the same value.</td>
</tr>
<tr>
<td>2 If the insurance policy is terminated before the date in the document which shows that insurance cover exists, then the insurance company must undertake to continue to provide cover for claims for compensation or damage in accordance with the terms of the policy until such time as the permit is withdrawn but for no longer than 15 days after the BAV has been informed that the policy has been terminated. The date on which the permit is withdrawn is deemed to be the day on which the withdrawal order takes legal effect.</td>
</tr>
</tbody>
</table>
2.3. Agreement types
The General Terms and Conditions for the Use of Railway Infrastructure (AGB-ISB) form an integral part of the track access agreement. For capacity allocation, the provisions of TVS set out in chapter 4 apply.

2.3.1. Track access agreement
Provisions concerning the track access agreement are covered in articles 15–17 of the Track Access Ordinance (NZV).

If all the requirements set out in section 2.2 are satisfied, a track access agreement may be signed. If the BAV is unable to issue permits by the time requested, the track access agreement will be concluded subject to permits actually being granted. This agreement governs the general aspects of collaboration between the IM and the RU. It must be produced in written form and in duplicate in an official Swiss language or in English, and must contain the following constituent parts:

- the General Terms and Conditions for the Use of Railway Infrastructure (AGB-ISB)
- the IM’s list of infrastructure services
- the IM’s Network Statement
- the basic and ancillary services allocated by the TVS

By concluding a track access agreement, the RU is not bound to place train path orders. The template for such an agreement can be found in the OneStopShop. TVS, also receives a copy of each concluded track access agreement.

2.3.1.1. Accounting code (Debicodes)
Railway undertakings are identified via an accounting code for the purpose of purchasing and billing for services. This code is issued to the railway undertaking by the infrastructure manager.

The RU must comply with the following rules in its use of the accounting code:

- The accounting code issued must be used every time a train path is ordered
- Train paths (train numbers) must be ordered with a single accounting code for the entire Swiss section of the route.
- So as to determine responsibility for safety, the “SMS-EVU” must, without fail, be entered in the NeTS-AVIS ordering tool.

2.3.1.2. Regulating responsibilities in operational transfer stations when changing between two Rus with network access through BLS Infrastructure
This section defines the point at which the contractual relationship between a railway undertaking and infrastructure manager passes from one railway undertaking to the other. This provision specifies in further detail the requirements from Annex 1 “Routes close to borders” of the guideline on requesting network access permits, safety certificates and safety authorisations in Switzerland.

Basic principle
The arriving RU shall remain party to the contract and thus the contact for BLS Infrastructure until the departing locomotive driver declares that the train is ready to depart. Then the departing RU shall become party to the contract.

Alternative provisions for marshalling yards
For vehicles in the “marshalling yard through traffic” process (splitting up, sorting, forming freight trains via the shunting hump), the contractual relationship is transferred over once splitting up is complete (e.g. as soon as the vehicles have stopped on the marshalling track). Responsibility for the assignment of the vehicles is not affected by this regulation; it always remains with the outgoing railway undertaking.

The above provisions shall also apply to marshalling operations by third parties in the transfer station. In all other respects, the AGB-ISB shall apply. Any liability on the part of the third party shall be determined based on the relevant statutory provisions.

2.3.2. Agreements with third-party orderers (Applicants)

According to Article 9a Paragraph 4 EBG,

| 4 A request for track access along a train path in a specific location and for a specific length of time can be made by any company interested in putting on rail traffic. At least one month before commencing operations, the company must submit a track access permit or commission a railway undertaking to put on the rail traffic. The railway undertaking putting on the traffic must submit a safety certificate by the time it commences traffic operations at the latest. |

An agreement is not a pre-condition for being able to order train paths in Switzerland. The provisions issued by the TVS as regards applying for and allocating train paths apply irrespective of whether an agreement has been previously concluded.

2.3.3. Framework Agreements

Applicants and infrastructure managers may conclude framework agreements in accordance with Article 12b RailNAO; see also section 4.4.4.

2.4. Operational rules

2.4.1. Train service regulations

The FOT publishes the train service regulations on the basis of Article 11a RailO. These apply to all railway undertakings that use Swiss railway infrastructure and comprise the safety rules for all railway journeys.

The regulations can be accessed at bav.admin.ch – Rechtliches – Fahrdienstvorschriften (FDV) (in German/French/Italian).

Article 11a RailO also states that on routes close to borders, the FOT may deem the train service regulations of the neighbouring country to be applicable. For example, for Italian railway undertakings operating from and to Chiasso (Viaggiatori and Smistamento station sections), the regulations published in the applicable directory of the Italian infrastructure manager RFI (Fascicolo di Linea 25) shall apply (in accordance with the agreement on the route sections of the Swiss and Italian track network laid between the national borders and the border stations and the access to these route sections, concluded between the Federal Office of Transport (FOT) and the Agenzia Nazionale per la Sicurezza delle Ferrovie (ANSF) on 8 July 2014.)

2.4.2. Implementing provisions, operating regulations and recommendations
The railway companies (railway undertakings and infrastructure managers) shall adopt the implementing provisions, operating regulations and technical and operational recommendations of Art. 12 and 12a RailO in connection with the train service regulations.

2.4.3. Regulations relevant to network access
The regulations relevant to network access can be viewed in the OneStopShop. The electronic document distribution system LIDI can be used to have amendments delivered in PDF format and, if requested, also as hardcopy. Paper copies of regulations can be provided subject to payment of a fee. Details on how to obtain the documentation are provided in section 5.5.6.

2.5. Special consignments / heavy loads
The provisions regarding exceptional consignments (aS) are set out in the following documents:
- IRS 50502
- Implementation regulation FDV Infrastructure I-30111 and associated regulations

Exceptional consignments are divided into two categories:
- those not requiring Infrastructure to take operational measures
- those requiring Infrastructure to take operational measures (security measures at the signal box)

An individual, case-by-case processing time applies to heavy goods shipments not covered by the provisions of UIC leaflet 700. This should be agreed depending on the type of heavy goods shipment or settled on a case-by-case basis. In any event, we would ask you to contact the office listed in the address directory as early as possible to apply for an exceptional consignment (aS) approval number.

The FOT will authorise RUs to transport exceptional consignments by issuing a "freight traffic" type safety certificate; RUs must submit the relevant CIS/ZIS data. Measurement and test runs with special train numbers not including CIS/ZIS are excepted from these provisions. The IM and/or the TVS reserve the right to contact the FOT if these directives are not observed.

The only train path applications which will be processed under the BV1 to BV4a ordering procedures (annual timetable and annual timetable update (JUP)) are those for scheduled service trains carrying exceptional consignments and not requiring Infrastructure to take operational measures:
- assuming a valid exceptional consignment (aS) number has been issued in accordance with Point 4.7.1.

Extraordinary consignments requiring Infrastructure to take operational measures are to be ordered under ordering procedure BV4b (short-notice orders for special trains) by means of either
- a train path order for special trains and a transport plan or
- just with a transport plan for trains that have already been arranged.

They are to be ordered using the NeTS-AVIS ordering tool in the interim timetable while adhering to the requirements set out in Point 4.7.1. Point 4.3.2.1 sets out the ordering deadlines.

2.6. Dangerous goods
The RSD Ordinance (Ordinance on the transportation of dangerous goods with railways and cableways/SR 742.412), I-50026 (Network access: Dangerous goods regulations) and I-50062 (Restrictions on the transportation of dangerous goods with chlorine as a main substance) apply to the carriage of dangerous goods.
See also point 4.7.2.

Parked full train loads of dangerous goods must be inspected according to specification I-50026 and reported to the network management. Should the railway undertaking fail to conduct the required inspection for full train loads of dangerous goods, it shall be sent a single reminder by the infrastructure manager via e-mail. If there is still no inspection within the grace period specified by the infrastructure manager, the latter may commission the inspection at the expense of the railway undertaking.

2.7. Vehicle approvals and technical requirements

Area of validity
The technical requirements listed in this section apply in principle to the entire BLS track network. Further requirements for particular infrastructure facilities (e.g. fire protection requirements in specific tunnels) are set out in the annexes to section 3.4.1.

Accreditation body
The FOT is responsible for accepting rolling stock (obtaining the necessary operating permit/ type acceptance). The legal bases are set out in the Swiss Railways Act, Swiss Railways Ordinance and Implementing Provisions to the Railways Ordinance (IP-RailO). The FOT publishes guidelines for the accreditation of railway vehicles and for the accreditation of historic railway vehicles.

Support
Inspection of the technical network access conditions as per this section by the Technical Network Access (TNZ) department of SBB Infrastructure is part of the FOT's accreditation procedure and a strict requirement for access to BLS's track network.

The main focus of the investigative work is on making certain that the vehicles and BLS Infrastructure’s equipment and systems are mutually compatible in order to ensure their safe and reliable interaction. The TNZ specifies, in consultation with the applicant (RU, vehicle manufacturer, independent testing body), those infrastructure requirements for which evidence of compliance must be provided and checks whether the conditions have been met and the relevant evidence has been furnished (particularly in the case of uniquely Swiss requirements, so-called national technical rules). The TNZ issues non-objection certificates (similar to a report) for each aspect as its formal comment on the evidence submitted and as confirmation of compliance with the infrastructure requirements (proof of compatibility):

- Provisional non-objection certificates (for test runs)
- Definitive non-objection certificates (for commercial journeys)

TNZ also supports the interested railway undertakings/vehicle keepers and manufacturers in matters relating to network access, i.e. from creation of the requirements specification through to acceptance of traffic on the BLS track network. TNZ is authorised to attend the test journeys carried out by the railway undertakings on the BLS Infrastructure track network at any time. It thus makes an important contribution to ensuring safe circulation of traffic on the BLS track network and preventing operational disruptions.

The following technical and operational requirements must be met:
2.7.1. **Train control equipment**

2.7.1.1. **Minimum equipment with trackside signalling**

**Principle**

Vehicles that want to travel on the BLS Infrastructure network (excluding ETCS Level 2 routes) must be equipped with at least ETM-S (SIGNUM system) or ETM-M (SIGNUM and ZUB system). Every vehicle for which a type approval or an operating permit (initial registration) is sought must either be fitted with an ETCS train control system in accordance with Baseline 3 or must at the very least be prepared in such a way that a system can be easily installed subsequently.

Systems to be operated in conjunction with trackside signalling must at the very least have the following software versions:

- ETM-M: Version 1.00
- ETM-S: Version 1.00
- ZUB 262 ct (DAZ-Variante): Version 14 *
- ZUB 262 ct (MVB-Variante): Version 14 *
- ZUB 262 (light-Variante): Version 15
- ETCS Baseline 3: BL 3.4.0

* The transitional provision communicated by the FOT shall apply.

**Exception**

La Chaux-de-Fonds–Le Locle-Col-des-Roches: The conventional SIGNUM magnets are due to remain installed until December 2021. This is due to the SNCF vehicle TER X73500, in which it is not possible to install ETM-S/M.

To prevent the warning and stop signals from being transmitted twice (SIGNUM magnets and EuroSIGNUM P44), SIGNUM receiver antennae (excluding SNCF vehicle TER X73500) are no longer permitted to be active on this route. The affected railway undertakings have been informed. See also the “ETCS/GSM-R Statement of the Current Position (Standortbestimmung)” issued by the FOT on 14 February 2019.

2.7.1.2. **Minimum equipment with cab-signalling**

Vehicles must be fitted with an approved and functioning on-board ETCS system in order to travel on routes equipped with ETCS Level 2 (cab signalling).

2.7.1.3. **Driving without adequate train control equipment**

As a general rule, all leading vehicles must be equipped with the Automatic Train Protection that is present on the infrastructure being driven on. If this is not possible (e.g. driving with historic rolling stock or test runs at overspeed), an exception permit must be obtained from the FOT, which has published a corresponding guideline.

2.7.1.4. **Universal system maintenance**

The infrastructure manager defines the details that are required for the universal care and maintenance of the train control systems in accordance with IP-RailO. The railway undertaking shall provide the information to the infrastructure manager upon request (e.g. log files from on-board units), promptly and free of charge (within a maximum of seven days) and the infrastructure manager is to treat this information as confidential.
2.7.2. Wheel track interaction
Wheel/track interaction is based on the limiting conditions and limit values set out in the AB-EBV. An inspection is to be conducted taking into account the relevant Swiss legal provisions/ specialities and in accordance with CEN standard EN 14363 (Testing for the acceptance of running characteristics of railway vehicles – Testing of running behaviour and stationary tests). The vehicles are to be inspected, in accordance with the standard, in their usual position in the train composition and with their buffer lubrication and couplings in a condition appropriate for normal operation.

The following serve as guidelines and benchmarks:
- Adherence to the limiting conditions and limit values set out in the AB-EBV
- Internationally recognised standards (EN 14363, EN 15663, UIC 518, UIC 645)
- The Swiss track network with its many very small curve radii 250 m ≤ R < 400m (test range 4 in accordance with EN 14363 and UIC 518)
- Specific lines with a significant number of extremely small curve radii R < 250m in accordance with I-50127 (test range 5, not covered by EN 14363 or UIC 518)
- Ensuring that points on tight curves can be traversed safely and without undue strain on the track and maintaining the minimum buffer overlap in accordance with I-50007
- Minimum technically traversable radius (curve radius) in accordance with I-50007
- Route classes (interface between the vehicles’ maximum load and the infrastructure) in accordance with I-50064

2.7.3. Interface between load limits of vehicles and infrastructure
In accordance with EN 15528 and I-50064 (technical specification for effecting the interface between load limits of vehicles and infrastructure in line with the EU standard EN 15528), the line category is determined by the maximum wheelset load and the mass per unit of length. The line category of an entire train is always determined based on the vehicle in the train that has the highest load, i.e. that is in the highest-numbered line category. Compatibility is ensured if the vehicle’s line category (or payload limit for freight wagons) is the same as or lower than the line’s own category, taking account of the maximum permitted speed.

2.7.4. Pantograph/overhead line interaction
Pantographs require component approval from the BAV in accordance with the BAV Guideline on the Acceptance of Railway Vehicles.

The following serve as guidelines and benchmarks:
- Adherence to the limiting conditions and limit values set out in the AB-EBV
- Adherence to the force criteria in accordance with EN 50367
- Adherence to the contact wire uplift criteria in accordance with EN 50119
- Adherence to the pantograph requirements in accordance with EN 50206
- Infrastructural requirements governing the interaction between pantographs and overhead lines in accordance with I-50088
- Verification of pantograph gauges (see also section 3.3.2.1)
- Optimised pantograph horns
- BLS Infrastructure’s many different overhead power line systems (compliance will be demonstrated over several reference sections of track depending on the intended employment)
- Specific SBB regulations (I-50088)
2.7.5. Flange lubrication
All rolling stock in use on the BLS track network must have flange lubrication ("Spurkranzschmierung"). Detailed requirements governing the lubricants to be used (especially with regard to their environmental impact), the required quantities and frequency of lubrication can be found in the Swiss Public Transport Association’s Technical Rail Regulation 49410.

2.7.6. Electrical requirements for motive power units
In order to guarantee safe and reliable interaction of motive power units with infrastructure installations and systems, the following conditions must be met and the corresponding proof submitted with the type acceptance for the motive power units:

2.7.6.1. Requirements for input admittance
In order to reliably prevent the line-side converters of motive power unit converters, including the associated line-side converter controller, from generating network resonances and thus possibly rendering the traction current supply network unstable, the input admittance frequency response must be passive for any values above a defined threshold frequency. The corresponding requirements for input admittance of motive power unit converters and the specifications for motive power unit frequency response measurements are set out in BLS Regulation I-20005. This regulation is a binding operating rule within the meaning of Art. 12 para. 4g EBV.

2.7.6.2. Requirements for power limitations
In order to prevent failures arising from underor overproduction in the case of special configurations of the traction power supply network, motive power units must be equipped with a frequency-dependent power limitation function in accordance with SBB Regulation I-55068. In order to prevent a power outage in the event of a weak power grid, e.g. where there are long supply bypasses or special circumstances such as failure of a substation, motive power units must be equipped with a voltage-dependent power or current limitation function in accordance with SBB Regulation I-50069. The regulations are binding operating rules within the meaning of Art. 12 para. 3g EBV for vehicles accepted for operation since 1 January 2011.

For older motive power units, the aim is for these functions to be added within the context of general software updates.

2.7.6.3. Compatibility with track-release systems
Adherence to EN 50238 will ensure the compatibility of all rolling stock with track-release systems. This standard is divided into three sections: process (EN 50238-1, formerly EN 50238), parasitic currents (CLC/TS 50238-2) and magnetic interference (TS 50238-3).

More detailed documents exist for SBB / BLS infrastructure which set out specific Swiss characteristics supplementing the provisions of CLC/TS 50238-x. These are:
- SBB Regulation I-50097 on parasitic currents and
- SBB Regulation I-50098 on magnet interference.

All rolling stock with electronic equipment on board (and in particular static convertors with output of 500 W or higher) must be able to prove compliance for all parts of that equipment with EN 50238, I-50097 and I-50098. Depending on the vehicle and the operational concept, proof of compliance obtained abroad on a 15 kV/16.7 Hz system (and, as necessary, 25 kV/50 Hz for certain of SBB Infrastructure’s cross-border routes) may also be presented for EN 50238 parts. Details of any CLC/TS 50238 parts that are not yet complete are contained in I-50097 und I-50098.
2.7.7. Communication devices

Authorised GSM-R-compatible devices equipped with Swiss GSM-R SIM cards can be used in Switzerland.

In addition, devices which are equipped with SIM cards from the rail IMs shown below can also be used on the GSM-R routes listed in the roll-out plan (see also Section 3.3.3.3.1) by means of “International GSM-R Roaming”:

- DB Netz AG (Germany)
- RFI S.p.A. (Italy)
- SNCF Réseau EPIC (France)
- ProRail N.V. (Netherlands)
- Infrabel SA (Belgium)
- ÖBB-Infrastruktur AG (Austria)

Communication using GSM-R devices is essentially possible on the entire BLS rail network, either through the existing GSM-R radio coverage or (on routes which are not or not yet covered) by means of “National Roaming”. On BLS routes with no GSM-R radio coverage, “National Roaming” should be used. As regards foreign railway undertakings whose GSM-R devices are fitted with foreign SIM cards which do not support “National Roaming” but whose train services will on rare occasions run on routes where only “National Roaming” is available, appropriate access arrangements will be made separately.

Requests (from a mobile subscriber to the movements inspector) for train paths for shunting manoeuvres must be transmitted using GSM-R devices. As regards regular shunting manoeuvres, radio route commands (digital train path requests via mobile radio) should be used.

The reference documents for GSM-R are those European TSI CCS specifications based on the GSM-R baselines which are currently applicable within Switzerland.

It is recommended that vehicles be fitted with GSM-R-compatible cab radios. Using handheld radios is only permitted on regular train services under the following conditions:

- Hands-free operation must be guaranteed. The train driver must not be distracted from his tasks by using his hand-held radio.
- Radio reception in the driver’s cab must be good enough for voice communication. Achieving the minimum level is the responsibility of the RU. It is not envisaged that an external antenna should be installed.
- It must be possible for the hand-held radio to be supplied with power from an external source.

On trains making irregular journeys on the BLS network, the minimum requirement is for a handheld device capable of sending and receiving a “Railway Emergency Call”.

The list of authorised GSM-R terminal devices can be seen in the FOT’s Domain Safety Engineering.

The communication systems to be used on each route are listed in I-30131 RADN.

From 1 January 2021, communication on routes with “National Roaming” will only be possible with 3G or 4G/LTE-compatible terminal devices. Smartphones or specially enabled cab radios are most suitable for this.
See also the “ETCS/GSM-R Statement of the Current Position (Standortbestimmung)” issued by the FOT on 14 February 2019.

2.7.8. Brakes

The electric or electrodynamic brakes may explicitly also be used for rapid brake application on the BLS Infrastructure track network. Where electric brakes are used, it must be ensured if they fail that rapid braking is continued automatically and reliably (e.g. failure of the external power supply).

According to AB-EBV, the limit value or maximum permissible adhesion value for wheel/rail adhesion for vehicles with wheel slide protection systems is $\mu = 0.22$. This means that manufacturers and/or operators can define the adhesion value limit in respect of vehicles with wheel slide protection systems as a function of the existing dynamic braking system (including thermal load capacity) and of the operational requirements.

The use of eddy-current brakes or other brake systems that operate independently of the friction between the wheel and the rail is not permitted on the BLS Infrastructure track network for service and emergency brakes.

Exceptions

- Electromagnetic rail brakes may be used for emergency braking. This also includes rapid brakes that are triggered either by reducing the pressure of the main brake pipe in accordance with UIC leaflet 541-06 (with the corresponding speed thresholds) and/or via direct manual operation.
- The use of eddy current brakes which act on the infrastructure is only possible following additional local inspections or a route upgrade. Route-specific compatibility with track-release systems must be demonstrated (axle systems which are not intended for this purpose could suffer permanent damage) and the permanent way must be approved for their use.

2.7.9. Sanding (greater adhesion)

Equipment which automatically dispenses sand if the driver initiates emergency or rapid braking is not permitted and must be deactivated for rail operations within Switzerland. Sanding by single traction units of up to four axles, including multiple unit control, is not permitted on BLS Infrastructure’s rail network when travelling at less than 40 km/h. (Exceptions are emergencies in order, for example, to avoid passing a signal at danger or to prevent a collision/see also I-30111, section 13.3.

2.7.10. Aerodynamics

In order to ensure safe operation when affected by side winds, the method for determining the side wind stability (vehicle assessment) according to EN 14067-6 Table 2 shall be used (for passenger cars, multiple units and locomotives in the speed range above 160km/h and for freight wagons in the speed range above 120km/h up to the maximum speed of the vehicle). As far as is known today, this guideline covers all parts of the BLS track network which are critical as regards side wind. A special risk assessment should be submitted in coordination with the infrastructure manager if corresponding proof cannot be obtained. In addition, operational conditions should be defined if necessary to ensure that the vehicles can be operated safely in the entire speed range.

If test runs in the extended speed range at faster than 200km/h (test speed) are to be conducted on BLS Infrastructure’s network, details are needed of the maximum pressure surge in tunnels [train/tunnel pressure pattern at a fixed location in a tunnel ($\Delta p_{N}/\Delta p_{N} + \Delta p_{Fr}/\Delta p_{N} + \Delta p_{Fr} + \Delta p_{T}$)]
produced by the vehicle being tested in the maximum possible train length in accordance with TSI LOC & PAS.

2.7.11.  Negotiating curves at high speeds
For negotiating curves at speeds above the R series (tilting trains, passive tilt mechanisms), a route-specific licence for the higher speed is required for each route travelled in addition to the general vehicle licence (operating permit with R series licence). Further details on licensing requirements and procedures can be found in Document I-20019.

2.7.12.  Intervention (rescue/rerail of trains)
Before commercial commissioning of newly registered vehicle types, Intervention (kommando.lbs@bls.ch) has to be informed with technical documentations in accordance with I-50131 (Operational intervention requirements governing the registration of new rail vehicles) for the purpose of towing. (see also EU Directive 1302/2014 TSI LOC & PAS, Clause 4.2.2.2.4 “Rescue coupling”). If necessary RU (or the manufacturer) instructs the necessary specific vehicle information.

2.7.13.  Energy measurement (with energy measurement systems)
The specifications concerning energy measurement systems for calculating actual power consumption according to RailNAO are defined in Annex 2.7.13 to the NWS.

If the railway undertaking renounces the use of energy measurement systems for measuring power consumption, invoices will be based on the flat-rate fees published in the List of Services.

2.7.14.  Vehicle type and determining the vehicle price

2.7.14.1.  Applying for a new vehicle type
Before a new vehicle or one which has been subjected to technical modifications is introduced onto the SBB and BLS network, it must be assigned a j type. Journey time calculations for train path planning and other operational systems are based on this. Values for the vehicle’s dynamics must be submitted to SBB Infrastructure for this purpose. The exact procedure is explained in the OneStopShop under Rolling Stock Data.

2.7.14.2.  Determining the vehicle type
Determining the vehicle price includes the option of applying the basic pricing element of wear and tear when calculating the train path price; see also Point 6.1.1. The exact procedure can be found in the OneStopShop under Determining the Vehicle Price.

In the case of unknown vehicles or those that have not been priced, standard values are used for billing.

2.7.15.  Emergency brake neutralisation and toilet systems
Prevention of stopping in the event of emergencies in tunnels and channels and on bridges (e.g. emergency brake neutralisation), as well as closed toilet systems, are not generally required. However, they are compulsory for some specific infrastructure according to section 3.4.1.

2.7.16.  Use of measuring vehicles by the RU
Measuring vehicles, such as commercially operated vehicles fitted with an On-Board Monitoring (OBM) system, which are used by RUs on the BLS network and which measure and record data about the permanent way, may only operate after consultation with BLS Infrastructure and after signing a confidentiality agreement (incl. stating the purpose of such measuring). The contact
address can be found in the address list. The data gathered should be used in accordance with the provisions set out in Point 3.3. Otherwise, permanent way measuring systems installed in the vehicle must be switched off.

2.7.17. Noise from parked vehicles
Noise from parked trains is not defined in the TSI Noise or in other railway-related regulations; in Switzerland it is subject to the Noise Protection Ordinance (LSV) SR 814.41. The LSV classifies the noise from parked vehicles as industrial and commercial noise (see Annex 4, Point 1 of LSV 814.41). The limits for exposure to industrial and commercial noise, ascertaining the noise rating level and the level corrections to be taken into account as well as additional allowances are described in Annex 6 to the LSV.

Details of the procedure and of how noise from parked vehicles is assessed can be found on the website of the Federal Office for the Environment (FOEN). The following relevant documents and the FOEN calculation tool needed for assessing the source of the noise are available under the heading "Parked trains":

[1] EMPA Investigation Report 460395-2a, commissioned by the FOEN, "Beurteilung und Begrenzung des Lärms von abgestellten Zügen" ("Assessment and Limitation of Noise from Parked Trains"), 29.01.2015

In accordance with [1], when assessing the noise level at the noise emission site, the following corrections are to be applied to those vehicle noise emission sources which are identified as significant:

<table>
<thead>
<tr>
<th>Sound source</th>
<th>K1 Day / Night</th>
<th>K2 (Tone content)</th>
<th>K3 (Pulse content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating/ventilation/air conditioning systems</td>
<td>5 / 10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cooling systems: Fans</td>
<td>5 / 10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cooling systems: Pumps</td>
<td>5 / 5</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Air compressors</td>
<td>5 / 5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Preparing trains for service</td>
<td>5 / 5</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

The calculations and inputs into the Excel tool referred to in [2] require the dominant sound sources from the vehicle to be recorded using measuring equipment and account to be taken of the following parameters:
• Sound output level in third-octave spectra
• Activity duration (continuous and intermittent)
• Geometric arrangement of the sound sources on the vehicle

These measurements are recorded both while the vehicle is parked and also during transitional procedures as the vehicle is moving into its parking location and back out of it (preparing the train for service). If parking conditions vary due to the weather, these should be recorded. This also applies to automatically generated safety and component testing of the vehicles.

By inputting these measurements into the Excel tool, it is possible to determine the 'critical distances' from emission sites at the locations where the vehicles are parked. The shorter the vehicle's critical distance, the easier it is to park the vehicle anywhere throughout Switzerland.

Vehicles are to be configured in such a way that they have a parking mode (parked with no occupants, snooze or standby mode) which limits noise emissions and energy consumption in a technically, economically and operationally acceptable way and which can be activated within the shortest possible time once the vehicle is no longer in operational use.

Based on the LSV exposure limits, it is recommended that the noise emissions from the vehicles should not exceed an A-weighted equivalent continuous sound pressure level of $L \leq 50 \text{ dB}(A)$. If this recommendation is followed (measured at the usual measuring positions according to EN ISO 3095 as the assessment parameter; the reference value is the individual value at each measuring position measured from the centre of the track at 1.2 m and 3.5 m above the upper surface of the rail), it will permit positive (i.e. small) safety distances to be achieved.

### 2.8. Staff acceptance

The BAV is responsible for approving staff. The provisions contained in Regulations (EU) No. 1158/2010 and No. 1169/2010 apply. All application documents must be submitted to the FOT.

### 2.9. Data provision

The railway undertakings must provide the infrastructure manager with train data in order to facilitate the provision of various infrastructure services (including timetable planning, train control, customer information and intervention) for a properly functioning railway system, as well as to ensure that train path prices are calculated fairly (basic price by wear and rail power consumption). The associated provisions are defined in Annex 2.9 to the NWS.

### 2.10. Service vehicles

Owing to their use on work sites (construction service), certain railway vehicles are classed as “rail-bound construction and maintenance machines” (for construction, maintenance and inspection of the trackbed, substructures, engineering works and overhead contact line systems, self-driving or towed) in accordance with Article 57 of the Railways Ordinance and the FOT directive on the approval of rolling stock as service vehicles. These include, according to Art. 57.1 of the Implementing Provisions to the Railways Ordinance (Definition and categorisation of service vehicles):

- [1] Rail-bound vehicles (or machines) according to EN 14033
- [2] Road/rail vehicles (or machines) according to EN 15746
- [3] Demountable machines according to EN 15955
- [4] Trailers according to EN 15954

The following are classed as working equipment (not service vehicles):
• [5] Portable machines and trolleys according to EN 13977

For the area of application “Driving and working on railway infrastructures”, service vehicles [1]–[4] also require an operating licence from the BAV as a prerequisite to use on the BLS Infrastructure track network. Here, simplifications to conventional railway vehicles are possible under certain circumstances in accordance with Art. 57.2 of the Implementing Provisions to the Railways Ordinance.

In addition to the FOT operating licence, road/rail vehicles [2], demountable machines [3] and trailers [4] require a work permit from SBB Infrastructure in accordance with Regulation I-40036 (work permits for service vehicles). The use of unbraked service vehicles is prohibited regardless of the gradient. This applies in particular to trailers [4], which may only be used with automatic brakes.

Service vehicles which cannot meet the technical network access conditions (infrastructure requirements) (e.g. road/rail vehicles), or for which the infrastructure requirements have not been fully examined, are classed as special vehicles under the train service regulations (TSR) (see I-30111, Chapter 4.2, Clause 4 as a supplement to TSR R 300.4, Clause 2.2.4) and are subject to specific conditions of use. If service vehicles are used for commercial shunting and train operations in centralised areas, the same infrastructure requirements must be met as for conventional railway vehicles. If you have any questions or if anything is unclear, please consult SBB Infrastructure Technical Network Access (see also section 2.7).

BLS Infrastructure cooperates with SBB Infrastructure and also recognises SBB’s work permit for the BLS network.
3. Infrastructure

3.1. Introduction
Chapter 3 of the NWS describes the infrastructure of the BLS track network.

The SBB, BLS Netz AG and SOB Infrastructure track networks are organised in accordance with the valid train-path allocation regulations (Art. 17 IP-RailO).

According to Art. 62 EBG and in analogy to EU practice, infrastructure is defined as meaning all resources (including staff and installations) that need to be available and in working order for train services to operate. This primarily includes the infrastructure capacity (train paths) and installations that facilitate access to the rail system such as platforms, including their access routes. The term “infrastructure” covers both capacity management and operations. Power supply installations are also part of infrastructure.

3.1.1. Change of use process safety
BLS Infrastructure reserves the right to initiate a change of use process safety (NAeP), i.e. a risk assessment of safety-relevant concerns, questions and elements [Requirement of the BAV audit of 2004/2011, Commission Regulation (EC) No 352/2009 of 24 April 2009 on the adoption of a common safety method on risk evaluation and assessment as referred to in to Article 6(3)(a) of Directive 2004/49/EC of the European Parliament and of the Council, and the resulting SBB Group Directive K 250.1 “Specialist implementing provisions for addressing safety-relevant changes” dated 1 January 2012]: This is carried out as standard on the basis of a new service request (request/order for a new train path by an RU/applicant) or other triggering criteria in order to identify any newly emerging safety shortfalls (e.g. insufficient platform lengths, missing departure blocking devices, missing stop boards, insufficient flank protection measures, etc. The NAeP is performed using an electronic tool (App-NAeP). BLS Infrastructure also requires RUs to fill in the “Train Operating Company – Basic Information” form. This form already contains a vehicle matrix showing the most common passenger vehicle types. Some of the criteria applied are given below:

**Passenger trains**
The NAeP focuses primarily on systematic changes to or increases in the frequency of the service offer or on extensive changes to the rolling stock to be used in the medium term (planning horizon ≤ 6 years). BLS Infrastructure thus requires detailed basic information at an early stage. This includes rolling stock lengths and types, cycles and information on train personnel as well as forwarding. As previously, the NAeP is also used for individual scheduled or special extra trains, e.g. during peak hours, to which additional coaches/modules are attached or which operate during at least one timetable year with different rolling stock. Other major trigger criteria are changes in stops, stations with new train turn-arounds and new crossing points/overtaking points.

**Freight trains**
The most important criteria for initiating a change in freight traffic use are if system/catalogue paths or shunting processes at stations are fundamentally modified or routes/service points have freight paths (re)assigned to them.

If the NAeP is conducted, the RU should expect to receive a response in no less than thirty days.

If safety-relevant infrastructure measures are identified, BLS Infrastructure clarifies whether the RU can compensate for these through organisational measures. If not, BLS Infrastructure reserves the
right to only approve the service request after relevant infrastructure upgrades have been implemented or to reject it on the grounds of insufficient project funds.

The majority of the safety-relevant infrastructure elements are based on the Implementing Provisions for the Railways Ordinance (AB-EBV), with which all RUs and IMs are obliged to comply.

3.1.2. Exceptional use of infrastructure
In the event of exceptional use of the infrastructure (e.g. major event, unusually high passenger frequencies, large numbers of visitors/private individuals near the tracks, etc.), the railway undertaking shall notify the infrastructure manager as soon as possible so that the necessary safety measures can be organised.

3.2. Extent of network

3.2.1. Borders
BLS Netz AG does not border on any foreign infrastructures, and in Switzerland borders mostly on the infrastructure of Swiss Federal Railways (SBB) AG. Below is a list of the bordering networks.

3.2.2. Connected railway networks

3.2.2.1. Foreign normal-gauge networks
BLS Infrastructure has no borders with foreign infrastructure networks.

The key transit routes are the north-south axis from Schaffhausen/Basel to Chiasso/Luino or Brig/Domodossola (via the BLS network) and the east-west axis from St. Margrethen/Buchs (St. Gallen) to Genève.

The precise definitions of the network borders are set out in I-30121 under the heading «Border station».

3.2.2.2. Domestic IMs

- Bern SBB www.sbb.ch
- Brig (Brig Lötschberg) SBB www.sbb.ch
- Burgdorf SBB www.sbb.ch
- Ins ASM www.asmobil.ch
- Ins TPF www.tpf.ch
- Interlaken Ost BOB www.jungfrau.ch
- Interlaken Ost ZB www.zentralbahn.ch
- Kerzers SBB www.sbb.ch
- Konolfingen SBB www.sbb.ch
- Langenthal SBB www.sbb.ch
- Lengnau SBB www.sbb.ch
- Moutier SBB www.sbb.ch
- Neuchâtel (Neuchâtel Mail) SBB www.sbb.ch
- Obermatt SBB www.sbb.ch
- Solothurn SBB www.sbb.ch
- Solothurn West SBB www.sbb.ch
- Thun (Thun Abzweigung) SBB www.sbb.ch
- Thun (Thun Schadau) SBB www.sbb.ch
- Visp (St. German) SBB www.sbb.ch
- Wolhusen SBB www.sbb.ch
3.3. **Network description**

Up-to-date statistical information on the BLS track network is published on the portal https://www.bls.ch/de/fahren.

BLS Infrastructure cooperates with SBB Infrastructure’s Permanent Way Data Management department.

Data about the permanent way can be requested from SBB Infrastructure’s Permanent Way Data Management department. The contact address can be found in the address list. The data include train-path allocation data, effectively measured track layout data and traction current data. The data will be made available following receipt of a written purchase order and a signed confidentiality agreement (incl. a statement of the purpose for which the data will be used) and the issue of an invoice. The company requesting the data will receive the non-transferable right to use and benefit from the data supplied. All technical documentation made available by SBB / BLS Infrastructure will remain its property and may not be copied, duplicated or brought to the knowledge of third parties in any way without its written consent.

If measuring vehicles such as vehicles with an On-Board Monitoring (OBM) system are used, the provisions set out at Point 2.7.16 will apply.

3.3.1. **Geographical description**

3.3.1.1. **Track typologies**

There are no separate tracks for passenger and freight services (mixed traffic routes are used). Detailed information on the routes can be found in I-30131 RADN.

3.3.1.2. **Track gauges**

The track gauge is 1,435mm. Curve radii are designed to be as minimal as possible:

- Main track: R\text{min} = 150m
- Shunting track: R\text{min} = 135m
- Siding track: R\text{min} = 80m or 35m

The minimum radius that interoperable vehicles must be able to traverse in accordance with the TSI is R\text{min} = 150m. However, this is not sufficient for unrestricted operation on BLS Infrastructure’s rail network. If rail vehicles are also to be able to travel on shunting track and older rail systems without any restrictions, the curve radius requirements in accordance with I-50007 must also be met. Further details can be found in I-30111, Section 5.3, Point 4.

See also UIC leaflet 502-2 “Exceptional consignments – Outline procedure”. Industrial and private sidings are governed by separate rules.

3.3.1.3. **Stations**

The stations on the BLS track network are operated by the BLS Real Estate Division.

3.3.2. **Technical data**

Technical information on the BLS network and the conditions of use are provided in I-30111, I-30121 and I-30131 RADN.

3.3.2.1. **Loading gauge**
Unlimited-use vehicles

- Upper area: max. EBV O1 (including UIC G1)
- Lower area: in accordance with UIC Leaflet 505-1
- Calculation rules (calculation of vehicle construction gauge) associated with the reference line: in accordance with UIC Leaflet 505-1.

Vehicles designed for use on specific routes (especially double-deck vehicles)

- Upper area: max. EBV O2
- Lower area: in accordance with UIC Leaflet 505-1
- Calculation rules (calculation of vehicle construction gauge): in accordance with UIC Leaflet 505-1 (for vehicles running exclusively in Switzerland: in accordance with EBV special regulation)
- See I-30111, Section 5.1, Point 4.9 regarding routes approved for use by double-deck rail vehicles

Please note
The calculation of vehicle construction gauge in accordance with EN 15273-2 (with Austria variant for CH) corresponds to the vehicle construction gauge calculation in UIC 505-1.

Intermodal freight

- I-30111, Section 5.1, Point 4.8 provides a summary of the route codes

Pantograph (see also section 2.7.2.3)

- Pan head width 1,450mm, insulated end horns, envelope: in accordance with UIC Leaflet 608.
- Profile certification for pantographs in accordance with EN 15273-2, UIC 505-1.
- Exception for historic vehicles: pan head with 1,320 mm authorised (routes with specific track access conditions are excluded).
- Further details can be found in I-30111, Section 5.1, Point 3.1.

Technical aspects of track access with regard to the loading gauge are described in detail in Regulation I-20030 (Technical Aspects of Track Access: The Vehicle Clearance Line – The Impact of the Loading Gauge on Vehicles and their Loads).

3.3.2.2. Route classes
The standard route category is D4. All further information can be found in chapter 5.1 section 4.2 of I-30111.

3.3.2.3. Inclines and gradients
The gradient columns in I-30131 RADN list the critical descents and ascents for each route section.

Chapter 5.3 section 3 of I-30111 lists the routes with steep descents – classified as category A or B – on which special provisions according to the train service regulations apply.

3.3.2.4. Maximum authorised speed
The maximum speed depends on the section of the route, the train composition and the train series and brake class. Details of the route which are required for the journey can be found in the RADN block tables in I-30131 or in the DMI for ETCS Level 2 routes. The right is reserved to impose speed variations (slower or faster) for operational reasons, e.g. due to shipments of hazardous goods, exceptionally large consignments or test runs.
3.3.2.5. Maximum train lengths
The maximum train lengths are specified in chapter 5.1 sections 6.1 and 6.2 of I-30111.

3.3.2.6. Power supply
The network for train journeys is fully electrified and has a standard voltage and frequency of 15 kV/16.7 Hz with tolerances according to the standard EN 50163.

3.3.3. Signalling system and en route communications

3.3.3.1. Signalling systems
On the BLS Infrastructure network, the Swiss L and N signal systems are used for train journeys with trackside signalling.

ETCS Level 2 is used with cab-signalling.

Further information can be found in chapter R 300.2 “Signals” of the train service regulations.

3.3.3.2. Train assignment system
BLS has used the Rail Control System (RCS) for train assignment since 2009.

3.3.3.3. Route communications

3.3.3.3.1. Coverage
The current status of the GSM-R train radio provision is published in the SBB / BLS Telecom rollout plan.

There are currently no plans to equip the entire BLS route network with GSM-R. On some routes where it is possible to do so, GSM-R coverage is provided via a public mobile phone operator's existing mobile phone network (national roaming):

A reduced range of GSM-R functions will be available on these routes. The changeover points between “national roaming” and the GSM-R network are listed in the RADN route tables.

3.3.3.3.2. Recording voice communications
Voice communications during train traffic management on the BLS AG rail network are recorded. These recordings allow reconstruction of the chain of communication related to an incident leading to an accident or a dangerous situation.

Recordings are made up of voice communications by Infrastructure’s control centres (Network Control, regional operation centres [BZs], shunting yards, railway stations, the Wayside Train Monitoring Systems (WTMS) intervention centre and SBB Cargo’s operation points) as well as by all mobile services which communicate with those control centres (locomotive engineers, conductors, shunters, construction and maintenance personnel, intervention, etc.).

Conversations which are conducted via a telecommunications link between the drivers and the train crew, and team conversations conducted by construction, maintenance and shunting teams, will also be recorded.
If an incident occurs, the Safety and Operations staff of BLS Infrastructure have exclusive access to recorded voice communications and context data in order to analyse the particular incident.

It is possible, for good reasons, to listen retrospectively to one’s own voice communications. A written application to do so must be submitted to the point of contact shown in the list of addresses within 5 days after the relevant voice communication was recorded.

**Content of a voice communication recording**

BLS AG records context data and voice communications which take place in an operational context between Infrastructure’s control centres and the mobile field centres and which could offer useful insights when analysing an incident. The data contains:

- Voice communication content: The complete content of a voice communication between two participants.
- Time stamp: Start, end and duration of the communication.
- Participants: Details of all participants (name, phone number, organisation) in the communication. This also applies to conference calls.
- Registered role: The name of the participant’s registered operative role in the communications system.
- Location of remote terminals (if available): Information about the location of the participating remote terminals.
- Communication type: Information about the type of communication and the technical interfaces.

Note: The above list is not exhaustive and can be extended.

**Informing the parties involved**

- BLS personnel will be informed through a corporate directive.
- Third-party personnel will be informed by the NWS. Senior managers are responsible for disseminating information within their organisation.
- Unless callers have previously contractually agreed to recordings being made (see note below), a voice message will inform callers that the call will be recorded. This ensures that each caller is aware that their call will be recorded.
- In the event of an incident, no message will be issued about the special safekeeping (storing) of recorded voice communications and context data.

**3.3.3.4. Train control systems**

**3.3.3.4.1. Trackside signalling**

On the BLS network, the Automatic Train Protection systems SIGNUM and ZUB or ETCS Level 1 LS are used with trackside signalling.

The signal positions (warning and stop signals) and speed monitoring shall be transmitted to the vehicle from the Eurobalise/Euroloop via the following transmission paths:

- Packet 44 to the ETM antenna of the ETM-S (SIGNUM system) or to the ETM antenna of the ETM-M or ZUB 262 (SIGNUM and ZUB system) (ETCS Level 0)
• ETCS telegram to the ETCS antenna of a vehicle equipped with an ETCS system according to Baseline 3 (ETCS Level 1 Limited Supervision)

**Exception**
La Chaux-de-Fonds–Le Locle-Col-des-Roches: The conventional SIGNUM magnets are due to remain installed until December 2021. This is due to the SNCF vehicle TER X73500, in which it is not possible to install ETM-S/M. Cf. also Point 2.7.1.1.

### 3.3.3.4.2. Cab-signalling
ETCS Level 2 is used with cab signalling and is currently active on the following lines:
- Bahn-2000-Strecke between Mattstetten (excl.) and Rothrist (excl.)
- Bahn-2000-Strecke between Wanzwil and Solothurn (excl.)
- Brunnen (excl.)–Flüelen–Altdorf–Rynächt–Erstfeld (excl.)
- Gotthard Base Tunnel
- Bodio (excl.)–Pollegio Nord–Biasca (excl.)
- Biasca (excl.)–Osogna–Claro–Castione (excl.)
- Lausanne (excl.)–Vevey–Villeneuve–Roche VD (excl.)
- Puidoux (excl.)–Corseaux-Cornalies (excl.)–Vevey-Funi–Vevey
- Bellinzona (excl.)–Giubiasco–Sant’Antonino (excl.)–Cadenazzo (excl.)
- Ardon (excl.)–Sion–Sierre–Salgesch (excl.)
- Bellinzona (excl.)–Giubiasco–Sant’Antonino–Cadenazzo (excl.)
- Bellinzona (excl.)–Giubiasco–Ceneri Base Tunnel–Vezia–Lugano (excl.)

### 3.4. Traffic restrictions
No restriction on use has been imposed under EU Directives 2012/34 and 2016/2370.

#### 3.4.1. Specialised infrastructure
- Rail 2000 routes Mattstetten–Rothrist, Wanzwil–Solothurn and connecting line Rothrist–Zofingen [Annex 3.4.1A to the NWS](#)
- Gotthard Base Tunnel route and Gotthard panoramic route [Annex 3.4.1B to the NWS](#)
- Ceneri Base Tunnel route Giubiasco–Ceneri Base Tunnel–Vezia [Annex 3.4.1C to the NWS](#)
- Running transition at Chiasso station [Annex 3.4.1D to the NWS](#)
- CEVA (Geneva–Annemasse (France)) [Annex 3.4.1E to the NWS](#)
- Seetal line Waldibrücke–Lenzburg according to I-30121, (structure gauge smaller than EBV O1) line 431

#### 3.4.2. Environmental restrictions
Due to noise control requirements, certain routes are subject to operating restrictions. These are set out in the annexes to section 3.4.1 (see in particular Rail 2000 routes).

#### 3.4.3. Dangerous goods
For restrictions in stations and at operating points, see I-30121.

For restrictions in connection with the main substance chlorine, see I-50062 and D IY 260/20.

#### 3.4.4. Tunnel restrictions
Exceptions and restrictions applicable to thermally powered trains (coal, oil, diesel) are set out in chapter 16.1 of I-30111 and in I-30121.

#### 3.4.5. Bridge restrictions
Running restrictions on bridges can be found in I-30121.
3.5. Availability of the infrastructure

3.5.1. Route opening times

Article 6 RailNAO-FOT specifies the following:

1. The normal operating hours for a route shall be deemed to be the time period between the first and last passenger train listed in the official timetable publication.

2. From Monday to Friday, routes suitable for freight operations should generally be open from 4.00 a.m. onwards.

3. The routes specified in Appendix 4 shall in principle be open 24 hours a day.

The remaining route opening times are published online in November for the following timetable year.

3.5.2. Capacity restrictions

BLS Infrastructure bundles several maintenance activities together within a single possession. Timely information about the details of any capacity restrictions will be issued in accordance with the FOT’s regulation relating to access to the railway network (NZV-BAV). Further information can be found in chapter 4.5 of this NWS.

At the time of publication of this NWS, restrictions according to Annex 3.5.2 to the NWS are known. Specific usage restrictions may arise due to conditions imposed by planning approval ordinances issued by the relevant licensing authority.

BLS Netz AG publishes the capacity limitations that apply to its network in its own NWS.

3.6. Service facilities

This section describes locations and details of the service facilities operated by BLS Netz AG.

3.6.1. Passenger stations

The procedure for determining platform lengths is based on the provisions set out in chapter 6.1 section 4 of I-30111.

The RU is obliged to use only rolling stock that is compatible with stations (in terms of platform height). Train length should not exceed the length of the platform. Vehicles on which the doors can be locked from a central point away from the platform are also acceptable.

If the RU does operate inappropriate formations, it is responsible for meeting the additional requirements necessary to maintain the required standard of passenger safety and comfort at its own expense. The RU is also responsible for bearing any costs for required measures even if, at the time that train paths were allocated/ordered, exceptions were agreed with regard to restrictions because of platform height or length.

The infrastructure manager is not liable for damages if the formations concerned are incompatible with a particular station. The state of the installations at the time of train path allocation shall prevail.

3.6.2. Cargo handling and terminals for combined traffic

A map of loading platform facilities is published at www.railway.tools.
Information on the combined traffic terminals can be found on the [TUV website](#) (keyword Services/Corridors for competitive freight traffic «Combined transport terminals»).

### 3.6.3. Marshalling yards

Placeholder

### 3.6.4. Sidings and systems for preparation, supply and disposal

Some sidings have systems that fall under the ancillary services that are to be offered without discrimination according to Article 22 RailNAO. These include preliminary braking systems, the provision of water and power to passenger trains (pre-heating/pre-cooling) and the disposal of waste, sewage and used water. The precise locations of these facilities can be obtained from the relevant point of contact shown in the list of addresses.

Where trains or wagons are stabled with dangerous goods, the provisions of section 2.6 must be complied with.

### 3.6.5. Maintenance facilities

BLS Netz AG do not operate their own maintenance facilities.

### 3.6.6. Wayside train monitoring systems

BLS Infrastructure has installed various wayside train monitoring systems (WTMS) across its network that are used to monitor the technical condition of rolling stock and loading (see ZKE handbook (I-50099 and I-30111, section 9.11). These train monitoring systems also included RFID readers, allowing vehicles with RFID tags (in accordance with “RFID in Rail” Standard EN 17230) to be uniquely identified. In the event that intervention thresholds are exceeded, BLS Operations will intervene as per BLS’s operating regulations.

Wayside train monitoring systems consist of various sensor and surveillance systems, reliably detecting technical problems on trains and facilitating the necessary response (e.g. halting trains or reducing speeds) by providing immediate, location-independent data analysis. A dense and comprehensive network of static track-mounted measuring equipment checks relevant physical characteristics of trains as they pass at scheduled section speed. Response stations are fitted with the necessary reporting systems. Automatic vehicle identification using “RFID in Rail” enables automated and simplified intervention and permits the automatic exchange of data and information about the vehicle’s condition with the RU and vehicle owners.

The following measuring systems are distributed throughout the network to enhance safety:

**RFID**

Recognises vehicle numbers and vehicle side with complete certainty based on “RFID in Rail” (EN 17230).

**Clearance profile and antenna detectors**

Detects clearance infringements and gauge limits being exceeded and the aerials of vehicles on piggyback trains coming into contact with the catenary.

**Fire detectors**

Detects fires on moving trains.
Wheel load check points
Detect load displacement, overloading and serious wheel defects.

Hot axle box and blocked brake detectors
Monitors the temperature of axle bearings, wheel rims and brake discs, making it possible to prevent derailments as a result of axle and wheel failures.

Dragging equipment detection
Detects dragging parts of vehicles and loads.

Uplift measurement
Detects impermissible upward force of the current collector.

SBB’s train monitoring facility (IZ-ZKE) in Erstfeld coordinates operations in an alarm situation.

3.6.7. Inland port facilities
Hafenbahn Schweiz AG operates port facilities in Basel Kleinhüningen and Birsfelden. You can find more detailed information on the website of Hafenbahn Schweiz AG.

3.6.8. Relief facilities
BLS Netz AG has a fire-fighting and rescue train in Frutigen. These trains are also authorised to travel on foreign networks in order to provide assistance.

3.6.9. Refuelling facilities
For information on the services and conditions of access for tank facilities, please contact the centre of excellence for fuel tank facilities (KPZ TTA): kpz-tta@sbb.ch

3.7. Third-party service facilities
In Switzerland, in accordance with Art. 6 of the Freight Transport Ordinance (GüTV), access to intermodal transshipment facilities, port installations and sidings jointly financed by the federal government must be granted without discrimination.

For their part, third-party providers of service facilities in EU member states are, in accordance with EU Implementation Order 2017/2177, also obliged to provide their services without discrimination.

RNE has created a corresponding document which is similar to the common structure of the NWS and enables third-party providers to present and publish the access, usage and allocation conditions. The template is divided into six sections:

1. General information
2. Services offered
3. Detailed description of the facility
4. Fees
5. Access conditions
6. Capacity allocation

The European Rail Facilities Portal is available either as an alternative or as a supplementary way of publicising these services.

3.8. Infrastructure development

The following details reflect the status of planned upgrades at the time of publication of this NWS. The intention is to provide preliminary information for applicants. BLS Infrastructure cannot guarantee that the dates given will not change.

More detailed information on the expansion of the BLS track network can be found on the website for BLS Infrastructure projects.
4. Capacity allocation

4.1. Introduction

4.1.1. Purpose of these provisions
This 4th chapter, compiled by Trasse Schweiz AG (trasse.ch), explains the processes and provisions for ordering and allocating timetabled train paths (basic and ancillary services), as well as the steps which need to be taken before and after the allocation procedure, and cites the relevant regulations. These are binding on all applicants and apply irrespective of the existence of an agreement between the applicant and the IM or the TVS.

Ordering and allocating catalogued corridor train paths is carried out in accordance with the procedures and provisions for freight traffic corridors Rhine–Alpine or North Sea–Mediterranean. Details can be found in chapter 4 of the relevant corridor information documents, published on the corresponding websites of the corridor organisations (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.1.2. Legal basis
The definitive legal requirements for ordering and allocating train paths and ancillary services can be found in the Railways Act (EBG; especially Articles 9a and 9b), in the Rail Network Access Ordinance (NZV; particularly section 4) and in the Federal Office of Transport’s Ordinance to the Rail Network Access Ordinance (NZV-BAV). This list is by no means exhaustive.

The deadlines for ordering train paths and ancillary services are defined and published by the Federal Office of Transport (BAV) for the coming two-year timetable period.

4.1.3. The requirement to order train paths
The SBB (cf. Section 1.1), BLS and SOB rail networks may only be used if the appropriate train paths have been ordered and allocated. In order to ensure coordination with other rail traffic movements, this also applies to the infrastructure managers (IM) themselves if they are intending to use their own networks for their own operations (e.g. special service vehicles) or have their own needs to use parts of the network (e.g. the need to park vehicles in marshalling yards).

The requirement for train paths to be ordered is irrespective of the frequency and regularity of the intended network usage. Both regular-service train paths (for regular movements) and special train paths (for one-off movements) must be ordered.

4.1.4. Permits and documents required for train path orders
It is not absolutely essential for a track access permit (see section 2.2.3), a safety certificate (see section 2.2.4) and a track access agreement (section 2.3.1) to have been issued before a train path is applied for and allocated. At least one month before commencing operations, the applicant must either submit a track access permit or instruct a railway undertaking (RU) to carry out the rail movements. The safety certificate must have been issued at the very latest by the time rail operations commence (Art. 9a para. 4 EBG).

If an applicant is not able to use a train path which has been definitively ordered and firmly allocated because the track access permit, the safety certificate or the track access agreement have not been issued in time or because the name of the RU instructed to carry out the rail movements on the applicant’s behalf is not known, then the applicant will be liable to pay compensation as laid down in the infrastructure managers’ current service provision catalogues.
The same cancellation fee will be owed if the applicant does not in good time state which RU will be carrying out the task and if, as a consequence, the TVS has to withdraw the train paths which it had allocated to it.

4.1.5. Geographical areas to which these provisions apply
In addition to the networks listed in section 1.1 – and on the basis of treaties or bilateral agreements between the infrastructure managers and subject to the relevant foreign legislation – these provisions apply to the routes between the border in the Simplon tunnel and Domodossola, from Pino-Confine to Luino, from Les Verrières-Frontière to Pontarlier from Boncourt to Delle and from Chêne-Bourg to Annemasse. However, these provisions do not apply to the SBB routes from Vallorbe to the border in the Mont d’Or tunnel, from Le Locle-Col-des-Roches to the border in the Col-des-Roches tunnel and from La Plaine to the border. The SNCF Réseau conditions apply to these three cases. The provisions of the RFI apply to the route from Stabio to the border. For more information on train paths for cross-border routes, please see section 4.2.4.

4.2. Process description

4.2.1. Overview
Train paths can be ordered for the annual or current timetables. The Figure is a simplified pictorial representation of the individual phases of the train path order process and shows the sections of this chapter in which each phase is explained.

4.2.2. Train path requests/orders

4.2.2.1. Train path studies
Explanatory notes
Train path studies (timetable studies) enable applicants to examine the feasibility of new or amended service and production concepts, using an iterative process to develop them further with a view to ordering train paths for the annual or current timetables.

Requests for train path studies must be submitted to the relevant infrastructure manager via the NeTS-AVIS ordering tool or order form for train path studies (see list of addresses for contact address).
Binding nature of train path studies
Responses to the results of train path studies in no way constitute binding approvals for
the allocation of timetabled train paths, and do not exempt the applicant from submitting train path
requests in accordance with the normal ordering procedure.

Optional study observation by TVS
In order to ensure an absence of discrimination, those requesting studies can demand that the
study process be observed by TVS. If they disagree with the methods used to carry out
the study, the requestors can also contact TVS once the studies are complete (for the relevant
contact address, see the list of addresses).

4.2.2.2. Annual timetable
Requests for train paths and provisional allocation
Train paths (basic services) for the annual timetable are to be ordered from trasse.ch no later than
14 April 2020 using the NeTS-AVIS ordering tool (for international train paths, see section 4.2.4).
The planning data in the NeTS-AVIS ordering tool will be partially available to applicants from 28
February 2020 in order to assist with applications.

The applicant shall ensure that its train path requests are submitted on time and in the correct for-
mat, using the prescribed ordering tool. trasse.ch cannot complete this task on behalf of
the applicant under any circumstances; it can also not add any missing information or correct any
incorrect details. However, trasse.ch can offer assistance with operating the ordering
tool to new or inexperienced applicants, as long as they register their interest at least one month
before submitting the train path requests.

If requests are incomplete or not plausible, trasse.ch will set a deadline of five (5) working days to
amend or correct insufficient, missing or impermissible details. If the applicant does not meet this
demand, trasse.ch will not process the train path request. If the necessary details only reach
trasse.ch after the deadline, the relevant request will be processed with a lower priority than other
requests submitted in full and on time.

Variant requests, i.e. applications with two or more implementation options, are not permitted be-
cause they take up unnecessary planning time and tie up track capacity. In the event
of a variant request, therefore, trasse.ch will grant the party making the request a grace period of five
(5) working days to decide on one order variant and withdraw the other(s). If the appli-
cant fails to comply with this request in good time, trasse.ch will not consider the variant request.

If, by the train path request deadline, too little is still known about certain requirements for train
paths to be allocated in the normal way (e.g. locomotive and tractor-hauled freight trains),
it is recommended that these train paths are ordered subsequently. However, retrospectively or-
ders are assigned a lower priority than requests submitted on time.

Applicants will receive a provisional allocation of train paths for national and for cross-border routes
from trasse.ch on 6 July 2020. This gives the applicant a binding train path offer, and thus the as-
surance of being able to develop its production concepts. Each provisional allocation is made sub-
ject to the feasibility of the ancillary services ordered. In the event of outstanding conflicts, train
paths will only be allocated once these have been resolved, but as soon as possible.

Requesting and allocating ancillary services
For the annual timetable ordered ancillary services, in particular capacities for stabling railway ve-
hicles and using loading sidings/facilities must be ordered no later than 26 June 2020 using the
“Ancillary Services Order Form”. trasse.ch will definitively allocate these additional services on 24 August 2020. In the event of outstanding conflicts, train paths will only be allocated once these have been resolved, but as soon as possible.

Formation groups in marshalling yards influence train path allocation for the related basic service. For this reason, requests to use formation groups in marshalling yards in the annual time table must be submitted by 8 April 2020 using the NeTS-AVIS ordering tool together with requests for the basic services.

The customer service team at trasse.ch will be on hand to provide advice and support to applicants if anything is unclear (see the list of addresses for the contact address).

Submission of train path requests after the normal train path allocation deadline
Train paths for the annual timetable can still be requested after the normal deadline has passed. However, requests of this kind will be allocated a lower priority than those submitted on time and, irrespective of the type of traffic, will be processed on a first come, first served basis.

Definitive train path orders and allocation
The train paths requested (basic services) must have been definitively ordered by 17 August 2020. trasse.ch will definitively allocate the basic services on 24 August 2020.

Catalogued corridor train paths for freight traffic
Ordering and allocating catalogued corridor train paths is done in accordance with the procedures and provisions for freight traffic corridor Rhine-Alpine or North Sea-Mediterranean (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.2.2.3. Current timetable
Ordering train paths
Train paths and ancillary services can also be ordered at short notice for the current timetable year. However, orders submitted during the current timetable are given a lower priority than those ordered and allocated for the annual timetable, and can only take up remaining capacity. They will be allocated on a first come, first served basis, regardless of the traffic type involved.

Train paths for the current timetable year are to be requested using the NeTS-AVIS ordering tool (for international train path requests, see section 4.2.4). Infrastructure managers are bound to their offer for five (5) working days. If the offer is not accepted within this period, it will be deemed to have been refused by the applicant.

Catalogued corridor train paths for freight traffic
Ordering and allocating catalogued corridor train paths is done in accordance with the procedures and provisions for freight traffic corridor Rhine-Alpine or North Sea-Mediterranean (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.2.3. Train path catalogues

4.2.3.1. National timetable process
For freight traffic on the north-south Gotthard and Lötschberg-Simplon corridors, train path catalogues – as defined in EU Directive 2012/34 (Art. 40 para. 5 and Annex VII, section 4) – are available as an ordering aid when submitting train path requests and for service planning.
Annual timetable process
The train path catalogues will be posted from the middle of January 2020 on the trasse.ch website (keyword: Services/Usage of train paths «Path catalogue Gotthard/Lötschberg») and will show the train paths available for transalpine freight traffic in the forthcoming annual timetable. The times specified in the train path catalogues for border stops and shift changes should be taken into account when requesting train paths. Orders for border stops that exceed the guideline times are possible but will put an excessive strain on the capacity of the nodal point.

Remaining capacity in the current timetable
The train path catalogues published on the trasse.ch website (keyword: Services/Usage of train paths «Remaining capacity Gotthard/Lötschberg») show the remaining capacity available in the current timetable. They are to be used as a planning aid for train path orders in the current timetable. Updates are usually published at the annual timetable update intervals coordinated internationally in each case.

4.2.3.2. Catalogued train paths for freight traffic corridors
The OSSs for the freight traffic corridors Rhine-Alpine and North Sea-Mediterranean publish the catalogued corridor train paths in the Path Coordination System (PCS) ordering tool. Unlike catalogued national train paths, catalogued corridor train paths cannot be varied, i.e. train path requests must adhere strictly to the published train path parameters. The choice of proposed operating points for the catalogued corridor train paths (known as Flex-PaPs) specially designated for this purpose is the only exception. These can be reduced by the applicant if they are not required.

Further details can be found in the relevant corridor information documents published on the corresponding websites of the corridor organisations (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.2.4. Train paths for cross-border services (does not apply to catalogued corridor train paths)

Ordering formalities
Train paths for cross-border services (except for catalogued corridor train paths) can either be applied for from the relevant national train path allocation bodies or from the OSS network operated by the infrastructure managers and independent train path allocation bodies affiliated to RailNetEurope (RNE). The OSS network allows applicants to use the PCS ordering tool to submit their harmonised requests for the entire international route to a single train path allocation body affiliated to the network. Details of the train path request and allocation procedures for cross-border traffic can be found in the “Procedures for International Train Path Requests” guideline (see www.rne.eu; keyword Timetabling).

When crossing over to networks operated by non-Swiss infrastructure managers, orders should be submitted as detailed on the TVS website (Search term: “regulations at border stations” for services/usage of train paths).

Note
Formal allocation of train paths takes place in accordance with the relevant national provisions.

4.2.5. Information required for train path requests and orders

Annual and current timetables
- Compulsory fields as specified in the ordering tools:
• Applicant’s name
• Cross-border services: name(s) of the foreign partner applicants
• Name of the RU instructed to carry out the rail movement (if already known, cf. section 4.1.4)
• Accounting code (if available, cf. section 2.3.1.1)
• Train number (if known) or train path catalogue number
• Traffic period (days and periods of travel)
• Traffic type/train category
• Departure point of the requested train path including departure time; if not the same as the train run, plus the departure station including departure time
• Destination point of the requested train path including arrival time; if not the same as the train run, plus the destination station including arrival time
• Border crossings, including requested handover time(s)
• Routing (at least 1 operating point per transit country for international services)
• Intermediate stops, including details of time required (with additional information about, for example, change of system, removal of a wagon group, increase/decrease in motive power, change of locomotive crew, etc.)
• Train characteristics:
  o Formation, diesel/electric locomotive(s) (including type), wagon/coach type
  o Gross weight
  o Train length including locomotives
  o Loading gauge for intermodal train paths
  o Train and brake sequence (with braked weight percentage)
  o Top speed
• Further information on nationally requested train paths for cross-border train journeys: from train … (incl. train relation “from/to”)/for train … (incl. train relation “from/to”)
• Additional information for train paths for light engine trains: from train … (incl. train relation)/for train … (incl. train relation)
• ETCS
• SMS-RU

Ancillary services in accordance with the List of Infrastructure Services
• Mandatory information in accordance with the specifications in the ordering tools or order forms:
  • Applicant’s name
  • Accounting code (if available, cf. section 2.3.1.1)
  • Name of the RU instructed to carry out the rail movement (if already known, cf. section 4.1.4)
  • Train number (if known)
  • Traffic data
  • Operating point
  • Arrival time at operating point
  • Departure time from operating point
  • Composition (motive power unit[s], diesel/electric, number of wagons/coaches, type, length in metres)
  • Special platform requirements (details of platform number or loading platform including time period from … to …)
  • The following applies to the stabling of motive power units: details of siding number and type of motive power unit

Special regulations for test runs
For test runs that are not performed in accordance with the existing specifications, the special regulations of SBB Infrastructure (I-30023), BLS Netz AG or SOB Infrastructure and the implementing provisions for test runs according to R 300.6 section 6.1 of the train service regulations apply. The central points of contact are shown in the list of addresses.

4.2.6. Charges to train path request and orders
The details supplied when requesting or ordering train paths (see section 4.2.5) are binding. Any subsequent change to these details must be made using the ordering tool and must be in the form of a cancellation and a new order. However, excluded are changes that have no impact on the train path allocation and therefore do not require cancellation and reordering.

Train paths may not be sold nor transferred to another company (Art. 9a para. 5 EBG). The contract under which a RU is instructed to carry out the rail movement on behalf of another company does not count as trading in train paths.

The conditions shown in the relevant corridor information documents (www.corridor-rhine-alpine.eu/www.rfc2.eu) apply to catalogued freight traffic corridor train paths Rhine-Alpine or North Sea-Mediterranean).

4.3. Deadlines

4.3.1. Annual timetable
Path assignment is normally coordinated with the timetabling process for passenger services. The BAV specifies the deadlines for the submission of train path requests, the allocation procedure and the timetabling procedure. The following deadlines apply specifically to the 2021 timetable:

- 14.04.2020 Application deadline for normal path allocation
- 26.06.2020 Deadline for ordering ancillary services
- 06.07.2020 Provisional path allocation by trasse.ch
- 17.08.2020 Deadline for definitive train path orders
- 24.08.2020 Definitive train path allocation (incl. ancillary services) by trasse.ch
- 13.12.2020 The timetable changes

The dates for the provisional allocation of train paths may vary in the event of outstanding conflicts (see also section 4.2.2.2).

4.3.2. Current timetable
Art. 11 para. 3 NZV states that the final deadline for train path requests is:

- 17:00 on the day before execution of single, irregular movements by RUs which have already booked other train paths on a route within the same timetable period;
- 30 days before the train is first due to run in all other cases.

4.3.2.1. Exceptions
For measuring trips, test runs and trips on special vehicles (e. g. Diplory) the minimum order deadline is five (5) working days.

Order deadlines for special consignments requiring operational infrastructure measures

- Exceptional consignments requiring operational infrastructure measures: 5 working days
- Exceptional consignments requiring operational infrastructure measures and involving lateral loading gauge excess (Lü-S): 10 working days
Registering for the consignment to be transported (registering for the task to be completed) is only possible if the exceptional consignments requiring operational infrastructure measures have been ordered in advance. The latest possible registration is 120 minutes before train departure. Short-term changes (e.g. shifting of loads, no transport plan) can only be processed for exceptional consignments which do not require operational infrastructure measures.

4.3.2.2. Catalogued corridor train paths for freight traffic

4.4. Allocation process

4.4.1. Coordination process

4.4.1.1. Principles
Ban on improper orders of empty slots
As a basic principle, any party making a request can determine its desired train path freely and without any restrictions. It must therefore be able to purchase the train paths required to implement its production plans or expected customer orders in good time even if it has not yet concluded any contracts with its end customers at this point in time. However, orders submitted with the sole intention of impeding a competitor and/or securing a better starting position in the path allocation process in respect of competing path orders (particularly to circumvent the applicable order of priority) are not permitted. If trasse.ch suspects empty orders of this kind that represent an abuse of rights and lack an underlying business plan, it may request that the ordering party provide additional information and documentation to demonstrate the credibility of the actual or planned traffic. If this documentation or information is not submitted in the requisite quality or at all, the path request may be completely or partially rejected.

Multiple orders for the same transport task
If it is suspected that multiple orders are being placed for traffic runs with the same transport task (e.g. in the case of ongoing tenders), trasse.ch will request information on the background to the order (customer, business plan). trasse.ch thereby takes applicants’ need for confidentiality vis-à-vis competitors into account as far as possible.

In the case of multiple orders that are communicated transparently to the applicants involved, trasse.ch aims to superimpose both requests in identical train paths. If this succeeds, the train path will be allocated to the applicant who can provide evidence of transport. If none of the applicants can provide evidence of transport by the allocation deadline, they will all receive a conditional allocation.

If the applicants involved insist on confidentiality vis-à-vis their competitors, or if the attempt to combine the various requests on a single train path fails, all requests involved, without limitation, remain in the normal process.

Obligation to participate in the coordination process
trasse.ch aims to approve as many train path requests as possible. If it receives requests for simultaneous, mutually incompatible train paths, it will instigate coordination procedures based on the NZV-BAV and (in the same vein) Art. 46 of EU Directive 2012/34. The ordering parties affected are obliged to participate in these procedures, in particular by taking part in conflict resolution negotiations and submitting the information and documentation requested by trasse.ch. If an ordering party fails to comply with its participation obligation either in whole or in part and, in so doing,
hinders or prevents the performance of the coordination procedure, then it shall bear the adverse consequences. This may extend to its path request being partially or completely rejected. Ancillary services
There is a distinction between ancillary services that are essential for the provision of a basic service and ancillary services with no direct connection to a basic service. In the case of conflicts where no mutually acceptable solution can be reached, a higher degree of flexibility is expected from those ordering ancillary services with no direct connection to a basic service.

Catalogued corridor train paths for freight traffic

4.4.1.2. Annual timetable
As part of the coordination procedure, ordering parties will, where possible, be offered alternative paths that differ from those originally requested. In the interests of optimising the use of infrastructural capacity, trasse.ch may request that each ordering party be flexible, for both passenger and freight traffic, so that additional path requests can be implemented. However, the connections along an agreed public transport and freight transport chain must be guaranteed. In the case of high-frequency passenger traffic, this applies to connections between trains running at a frequency of up to and including every half hour. In the case of trains that increase frequency from half-hourly services, the degree of flexibility expected goes above and beyond guaranteeing connections.

If in the coordination process no agreement can be reached in the coordination process, train paths will be allocated based on the terms of the EBG, the NZV and the NZV-BAV according to the following procedures:

1. Train path allocation conflict resolution on the basis of the network usage plan (NNP)
Train paths are allocated on the basis of the NNP. However, no rights or obligations can be derived from the NNP for individual transport companies, since the plan only safeguards capacity for particular types of traffic and not for individual companies.

2. Prioritisation
If it is not possible to offer applicants any alternatives, even with the expected flexibility, or if no mutually acceptable solution to the order conflict can be reached, trasse.ch will perform the allocation in accordance with the legal requirements, giving priority to the requests which do not restrict the number and quality of train paths safeguarded in the NNP for either its own or other types of traffic.

If the number of train path applications submitted for a particular type of traffic exceeds the provision in the NNP or if there are train path request order conflicts for which no mutually acceptable solution can be found, the following order of priority will be applied:

a. Order conflicts involving passenger services only
   1. Requests made on the basis of a framework agreement (Art. 12c para. 2 (a) NZV).
   2. Requests for high-frequency passenger services.
   3. Trains which yield a higher contribution margin for each train path request in question.

b. Order conflicts that do not exclusively involve train paths for passenger services.
1. Requests made on the basis of a framework agreement (Art. 12c para. 2 (a) NZV).
2. Freight trains for which, for technical reasons, in particular the critical clearance gauge, no alternatives can be offered. The onus of proof lies with the company submitting the application.
3. Requests made on the basis of agreed transport chains for freight transport for which a year-round request is made but no possible alternatives exist. This applies to trains for which a year-round request exists, where these trains are part of connection systems in domestic wagonload freight including the express network or postal and parcel services.
4. Requests for trains which run more than once during the timetable year, depending on how frequently they will run. The requests are divided into the following three categories, in decreasing order of priority:
   - Trains which operate on an average of ≥ 5 days per week each year,
   - Trains which operate on an average of ≥ 3 to < 5 days per week each year,
   - Trains which operate on an average of ≥ 1 to < 3 days per week each year.

The number of requested train path days is taken as a measurement variable. Within each category, the requests are considered to be of equal importance. If seasonal train services reach a yearly average of less than one day of operation per week, they are compared with the actual number of days of travel ordered per timetable year.

If the order of priority described in a or b does not produce a result and if the conflicts cannot be resolved, trasse.ch will conduct a bidding process.

In the case of order conflicts relating to free capacity (remaining capacity not safeguarded by the NNP), priority is given to high-frequency passenger services (Art. 9b para 4 EBG). If the order conflict cannot be resolved on this basis, trasse.ch will conduct a bidding process.

3. Bidding process
The object of the bidding process is the individual train path for which more than one allocation request has been submitted.

trasse.ch will simultaneously inform all applicants involved of its intention to conduct a bidding process. Applicants will be requested to submit a bid by a specified deadline (date and time). The period for the submission of the bid will be four (4) working days, unless those involved in the bidding process agree on a different time limit.

If a passenger services application is involved in the bidding process, the bid must at least be equal to the contribution margin defined in Art. 20 NZV for the passenger services application for the train path in respect of which the conflict has arisen.

The train path will be awarded to the highest bidder without any further negotiations. trasse.ch will ensure that the amount to be paid is a maximum of CHF 1000 more than the second-highest bid.

If two or more identical bids are submitted, the bidding process will be continued until one bid emerges as the winner.

4. Allocations of vacant capacities
Once the conflict of the ordinary timetable procedure has been resolved (this concerns all requests for the annual timetable received up to the second Monday in April), TVS can also allocate secured but vacant capacities for one type of transport to other types in the NNP.
Allocations for standard passenger services which require the vacant capacity of another type of transport need to be approved by the Swiss Federal Office of Transport (FOT) (Article 12, Paragraph 3 RailNAO). Within the meaning of this provision, passenger services are deemed to be standard if they are published in timetables and are scheduled to run between two places at the same times for at least ten (10) days a year.

4.4.1.3. Ancillary services

When placing an order, the applicant can state a preference for a particular siding number (when stabling motive power units: details of siding number and type of motive power unit essential). However, there is no entitlement to a specific siding.

A coordination process is also conducted in the event of conflicts which arise when ancillary services are ordered. If no agreement can be reached in the coordination process, ancillary services will be allocated according to the following procedure:

1. Orders for ancillary services that are essential for the provision of basic services are given priority over those that have no direct connection to basic services. In the case of orders for ancillary services with a direct connection to basic services, the ancillary services are given the same priority as the associated basic service.

2. Ancillary services which have no direct connection to a basic service are allocated in the following order:
   a. Ancillary services for/requirements, for which, for technical reasons, no alternatives can be offered.
   b. Ancillary services for requirements which are used repeatedly during the timetable year, depending on the frequency of the registered requirements. The assessment is carried out in a similar way to the procedure for train path conflicts in the annual timetable.

If the order of priority described above fails to resolve an order conflict and the ancillary service cannot therefore be allocated to an ordering party, trasse.ch will conduct a bidding process. The ancillary service will be allocated to whichever applicant submits the highest bid. The winner will pay a maximum of CHF 1000 more than the second-highest bid. trasse.ch will invoice the successful applicant directly. The bid price must also be paid even if the ancillary service allocated as a result of the bidding process is not used or is subsequently relinquished.

In the event of complex conflict situations involving multiple applicants and/or variable allocation possibilities, trasse.ch will determine the precise procedure and communicate this to the parties involved.

Freight traffic stationary-period conflicts

A train stationary period is the length of time from a train’s arrival until the start of its onward journey, during which time it occupies siding capacity in the operating points.

If no mutually agreed solution can be found in the event of stationary period conflicts, trasse.ch groups the stationary periods in the time window affected by such conflicts into 15-minute units based on the train path request.

If not all the requests within a grouping can be granted, trasse.ch will initiate a bidding process (Section 4.4.1.2, Point 3 applies analogously.) to determine which requests can be definitively granted. No stationary periods will be awarded to unsuccessful applicants nor for grouped requests for which no solutions can be found within a time window.
As regards requests which are not granted the stationary period applied for, applicants have the following choices:

a. Rejection of the application for the basic service (train path) including ancillary service (stationary period) by trasse.ch without cost implications;

b. Definitive granting of the basic service (train path) without any ancillary service (stationary period); at the same time, the applicant gives an undertaking to amend its order for the basic service (train path) and to make use of that basic service at a time when no conflict arises and at the latest 30 days before a timetable change.

If the relevant train path has not been adjusted by 30 days before a timetable change, it must be cancelled for the entire timetable year (cost implications in accordance with the List of Infrastructure Services). This ensures that new orders, amended orders, etc. can be processed in a non-discriminatory manner in the operating points affected in accordance with the “first come – first served” principle

**Solving motive power unit stabling conflicts**

As a basic principle, there is no entitlement to a specific siding. trasse.ch allocates the sidings so as to ensure that that part of the facility can be utilised to the maximum capacity possible.

Conflicts arise between orders for stabling capacity for motive power units if several orders have been submitted for the same siding at an operating point. The first step is for conflicts to be coordinated. This involves dividing the motive power units into three categories which are then processed sequentially:

1. Locomotives in productive use;
2. Reserve locomotives;
3. Locomotives undergoing repairs, and other stabling requirements not directly connected to basic services.

After coordination, sidings which are conflict-free will be allocated. Conflict-free means that a particular siding has only been ordered by one ordering party without this being disputed.

If this processing sequence fails to produce a conclusive result, trasse.ch will conduct a bidding process for the sidings affected by the conflict. Section 4.4.1.2, Point 3 applies analogously.
4.4.1.4. Current timetable

Summary of ordering procedures

<table>
<thead>
<tr>
<th>BV</th>
<th>Deadline</th>
<th>Train path allocation body</th>
<th>RNE</th>
<th>Type</th>
<th>Receipt of order and allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BV1</td>
<td>Annual timetable by application deadline</td>
<td>Annual timetable</td>
<td>Path request</td>
<td>Regular-service train path</td>
<td>Trasse.ch according to order of priority</td>
</tr>
<tr>
<td>BV2</td>
<td>Annual timetable after application deadline</td>
<td>Annual timetable</td>
<td>Late path request</td>
<td>Regular-service train path</td>
<td>Trasse.ch first come, first served</td>
</tr>
<tr>
<td>BV3</td>
<td>Annual timetable after definitive allocation</td>
<td>Interim timetable</td>
<td>Late path request Ad-hoc request</td>
<td>Regular-service train path</td>
<td>Trasse.ch first come, first served</td>
</tr>
<tr>
<td>BV4a</td>
<td>Annual timetable update (JUP)</td>
<td>Interim timetable</td>
<td>Ad-hoc request</td>
<td>Regular-service train path with extra feeder train if necessary</td>
<td>Trasse.ch /TVS first come, first served</td>
</tr>
<tr>
<td>BV4b</td>
<td>Short-notice orders, special trains</td>
<td>Interim timetable</td>
<td>Ad-hoc request</td>
<td>Special event train</td>
<td>IM first come, first served</td>
</tr>
<tr>
<td>BV5</td>
<td>Operational orders, special trains</td>
<td>Interim timetable</td>
<td>Ad-hoc request</td>
<td>Special train</td>
<td>IM first come, first served</td>
</tr>
</tbody>
</table>

**BV4 and BV4a**

On the BLS, SBB and SOB networks, train path orders (basic and ancillary services) for regular-service train paths in the current year must be submitted to the TVS and will then be processed on its behalf by the relevant IM. Once processed, the TVS will allocate the train path.

Allocations for standard passenger services which take up the vacant capacity of another traffic type need to be approved by the FOT (Article 12, Paragraph 3 RailNAO). Within the meaning of this provision, passenger services are deemed to be standard if they are published in timetables and are scheduled to run between two places at the same times for at least ten (10) days a year.

If a train path ordered for the interim timetable conflicts with previously allocated train paths, the TVS will, where possible, offer the applicant alternatives. If no adequate alternatives are available or if the applicant does not accept them, the TVS will judge how the conflict is to be resolved. Depending on the nature of the conflict, the TVS will invite the applicant concerned together with the IM to a conflict resolution meeting under its chairmanship. Train path orders for regular-service train paths within the current year will be allocated or, as the case may be, rejected, exclusively by the TVS. Orders following an offer of a train path must be received by the IM at least three (3) working days before the date on which the service is due to run.

**BV4b and BV5**

For reasons of time, train path orders for special trains will be processed, allocated and, as appropriate, rejected by the IM’s operational services. This applies to orders for special trains and applications for train paths which are submitted later than 8.00 a.m. on the day before the train movement is to be carried out (Saturday/Sunday weekends and public holidays as per the NeTS...
calendar do not count as working days or as days in advance of the train movement being carried out). The latest possible deadline for receipt of an order is 90 minutes before the train is due to depart. However, IMs reserve the right to take as much time as they need to process orders that are more complex than usual. IMs will inform the TVS of any orders they reject. The TVS will check retrospectively whether the order was processed correctly and whether the rejection decision was made without discrimination and well-founded.

4.4.2. **Arbitration in the event of a dispute over train path allocation**

The RailCom is responsible for dealing with complaints about track access. If it is suspected that track access is being prevented or granted in a discriminatory manner, the RailCom is also authorised to instigate investigations.

The procedure for disputes about catalogued corridor train paths is set out in the provisions of the relevant freight traffic corridors (www.corridor-rhine-alpine.eu, www.rfc2.eu)

4.4.3. **Congested routes**

If the TVS is unable to consider applications for train path allocations due to insufficient capacity on a route, or if it is reliably foreseeable that this will be the case, it will declare the route in question to be congested. The TVS, together with the affected IM(s), will carry out a capacity analysis so as to ascertain what has caused the bottleneck which has led to the route being congested. Depending on the cause and the duration of the capacity shortfall, the TVS will arrange possible short- to medium-term remedies. Furthermore, the TVS may withdraw train paths and allocate them to another applicant if the train path on the congested route is being used to a lesser extent than the published network access conditions may stipulate (Art. 12 Para. 4 NZV).

The statements above apply both to line sections and nodal points as well as to basic and ancillary services.

Any existing overload declarations together with the corresponding capacity analyses will be published on the TVS website (key words “News/Data Library”).

4.4.4. **Framework Agreements on capacity allocation**

Applicants and IM may conclude framework agreements in accordance with Art. 12b NZV. Currently, IMs are not offering any framework agreements.

4.5. **Train path allocation in the event of temporary capacity restrictions**

The infrastructure managers will plan maintenance and upgrade work as part of the network timetable production process. In principle, the applicants will be informed at the earliest possible moment. The applicants' interests will be incorporated into this planning process and taken into account as far as possible.

Not all temporary capacity restrictions are included in the NNP, since these are sometimes only planned after the deadline for ordering train paths has passed. Art. 11b NZV specifies the deadlines by which the IMs must publish temporary capacity restrictions for construction work to be undertaken. Art. 10 NZV-BAV governs the procedure which applies in the event that the number of train paths for each type of traffic safeguarded in the NNP for the standard hour can no longer be implemented during the capacity restriction.

In the event of temporary capacity restrictions which are not taken into account in the NNP, efforts will be made to reach an amicable solution with the applicants concerned.
If no mutually acceptable solution can be found, the train paths will, as far as possible, be allocated to the types of traffic on the basis of the NNP. This means that, in a first step and for the duration of the capacity restriction, train path requests which exceed the safeguarded scope for each traffic type in the time without the capacity restriction and place demands on the remaining capacity will not be considered.

If the restricted capacity is still insufficient for the allocation of train paths in accordance with the NNP specifications, the infrastructure manager can, for the duration of the capacity restriction only, adjust the planned number of train paths and their quality for each type of traffic for the affected route and for the diversion routes considered. Train paths will be allocated in accordance with the provisions of section 4.4.1.2 of this NWS.

If, at the time of the train path allocation in the annual timetable process in accordance with section 4.3.1, temporary capacity restrictions have been announced, but it has not yet been possible to make definitive plans for the specific impact on the individual train paths, applicants will be allocated train paths subject to appropriate conditions.

Applicants will be notified in writing of planned maintenance and upgrade work affecting train paths which have already been allocated.

4.6. Non-usage of definitively allocated train paths

If definitively allocated train paths are cancelled, this must be done using the corresponding ordering tool. The precise requirements and conditions for the non-usage of definitively allocated train paths (basic and ancillary services) can be found in the relevant provisions (in particular the list of services) of the infrastructure managers. Different provisions may apply to the congested routes as per section 4.4.3 for both definitively and provisionally allocated train paths.

Non-usage of train paths for cross-border services must be coordinated with the relevant non-Swiss partner railway company. When cancelling, the agreements made with partner companies must be quoted in the ordering tool under “Details” (e.g. “Project is not being implemented” or “Train paths on the non-Swiss routes have been cancelled by the partner applicant”).

The provisions applicable to freight traffic corridors take precedence over national provisions in the event of non-usage of allocated catalogued corridor train paths Rhine-Alpine or North Sea-Mediterranean the national provisions (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.7. Special consignments and dangerous goods

4.7.1. Special consignments

The order deadlines can be found in section 4.3.2.1. When ordering train paths, applicants must, at the same time, provide the exceptional consignment permit number.

4.7.2. Dangerous goods

The provisions for the carriage of dangerous goods can be found in section 2.6. The order must include the RID risk category for the freight to be transported.

4.8. Special measures to be taken in the event of disruption

4.8.1. Basic principle

In the event of disruptions to operations, Art.14 NZV shall apply.
4.8.2. **Rules for the return to normal operating conditions**
If operations are disrupted, IMs are obliged to inform RUs. To remedy the disruption and maintain public services, the IMs and RUs are obliged to assist each other by providing information, staff and resources.

4.8.3. **Planned restrictions on the railway infrastructure**
Section 4.5. applies.

4.8.4. **Unforeseeable restrictions on the railway infrastructure**
If the disruption is likely to cause the line to be closed for several days, the IM, after consulting those RUs which are affected, will draw up an emergency timetable and publish it. If the line closure is expected to last longer than three (3) days, TVS will calculate that share of overall freight traffic on the closed line and on the diversion route(s) that is attributable to the RU.

It will allocate train paths on the diversion route to each RU based on their share of overall traffic on the line and the diversion route affected by the closure. In doing so, it may revoke passenger and freight traffic train paths that it has already allocated if this helps to optimise capacity utilisation.

4.9. **Allocation of capacity for service facilities**
The TVS allocates basic services (Art. 21 NZV) and ancillary services (Art. 22 NZV). However, services according to Art. 23 NZV do not fall within the TVS’s sphere of responsibility and can be purchased from the relevant providers at freely negotiable prices.

For further details, see sections 4.2–4.4.
5. Services

5.1. Introduction
The EU member states offer services according to Annex 2 of Directive 2012/34/EU in the form of a minimum access package, additional services and ancillary services. In contrast, the services, basic services and ancillary services defined in the Rail Network Access Ordinance are used in Switzerland.

For this reason, the contents of this chapter are not directly comparable with those of Network Statements from other countries. Further information can be found in the joint List of Services of the infrastructure managers.

This chapter largely dispenses with the citing of legal texts. Instead, a link to the corresponding article ensures access to up-to-date and complete definitions at all times.

5.2. Basic services (in accordance with RailNAO)
The basic services are based on the provisions of Article 21 RailNAO.

They comprise train path use (at the quality specified), including train operating services, power supply ex catenary, safe and punctual operations, including the telecommunication and IT services required for these operations, use of tracks by trains in unchanged formation for freight operations and, for passenger services, the provision of a platform and access to public facilities.

5.3. Access to service facilities and supply of services

5.3.1. Access to service facilities
The access conditions described in this section refer to the locations of service facilities given in section 3.6.

5.3.1.1. Passenger stations
According to RailNAO, the use of a platform in stations of arrival or departure and access to public facilities for passengers constitute a basic service.

5.3.1.2. Cargo handling and terminals for combined traffic
The use of loading sidings and facilities is an ancillary service according to RailNAO. Additional information on available facilities and services can be obtained from netzzugang@bls.ch.

Information about the intermodal traffic terminals can be downloaded from the website of TVS (keyword Services/Freight Corridors “Intermodal Traffic Terminals”).

5.3.1.3. Marshalling yards
The services provided at marshalling yards fall under ancillary services and services. For information on the services offered at marshalling yards, visit the OneStopShop or see chapter 2.3 of the List of Services.

5.3.1.4. Sidings and systems for preparation, supply and disposal
The stabling of wagons and the use of any preliminary braking systems present, the provision of water and power to passenger trains (pre-heating/pre-cooling), and the disposal of waste, sewage and used water are ancillary services according to RailNAO. Further information can be found under section 2.4 of the List of Services.
5.3.1.5. Maintenance facilities
BLS Netz AG do not operate their own maintenance facilities.

5.3.1.6. Wayside train monitoring facilities
The types of train monitoring systems used on the BLS track network, as described in section 3.6.6, serve to monitor the status of a train during its journey and do not constitute an actual service that can be obtained.

5.3.1.7. Inland port facilities
More detailed information on the available services can be found on the website of Hafenbahn Schweiz AG.

5.3.1.8. Relief facilities
BLS Infrastructure’s fire-fighting and rescue trains provide additional services alongside their core tasks. For further information, contact netzzugang@bls.ch

5.3.1.9. Refuelling facilities

5.3.2. Supply of services in service facilities

5.3.2.1. Shunting
Shunting in service facilities is not described separately in this section. Applicants can obtain relevant information directly from the contact persons responsible for sections 5.3.1.1–5.3.1.9.

5.3.2.2. Other services
No data at present.

5.4. Ancillary services (in accordance with RailNAO)
Article 22 of RailNAO describes the ancillary services as follows (Note: At the time this version of the NWS was published, the definitive version of the NZV, applicable from 1 January 2021, was not yet known).

1 The infrastructure manager defines the prices of the following ancillary services without discrimination, insofar as these can be provided with the existing infrastructure and available personnel, and publishes these (Art. 10):
   a. Keeping paths available for optional trains;
   b. Track allocation in the event of a delay requested by the railway undertaking and not caused by scheduled traffic;
   c. Stabling of train compositions;
   d. Shunting routes;
   e. Provision of water and electricity to, and disposal of rubbish, sewage and waste water from, stationary passenger trains;
   f. Use of loading tracks and facilities;
   g. Shunting in marshalling yards;
   h. Keeping routes open outside of normal operating hours;
   i. Marshalling services if these are not provided in marshalling yards;
   j. Additional customer information services;
   k. Assistance for staff on board long-distance services to improve operations, in particular video surveillance on platforms.
The prices covered by paragraphs 1a-c and f are to be set as scarcity prices as a function of demand and investment value on a location-by-location basis. All other prices are to be set analogously in accordance with the principles laid out in Article 19. In addition, a pro rata element can be added for capital and amortisation costs in respect of assets used mainly in the provision of ancillary services.

Services defined in paragraph 1i can be purchased by the network user from other companies as well as from the infrastructure manager, at freely negotiable prices. In this case they are treated as miscellaneous services (as defined in Art. 23).

Ancillary services must be ordered. For information on the specific ancillary services that are offered locally, contact netzzugang@bls.ch. The prices of the ancillary services are published in the current List of Services.

5.4.1. Power supply
Further information on the ancillary service of stationary power supply can be found under section 2.6 of the List of Services.

5.4.2. Water supply
For more information on the supply of water, see section 2.5 of the List of Services.

5.4.3. Exceptional consignments and dangerous goods
Exceptional consignments require additional planning effort which is billed as an ancillary service. The relevant provisions are defined in section 2.14 of the List of Services.

5.5. Services (in accordance with RailNAO)
According to Article 23 RailNAO, the services may also be purchased by the railway undertaking at freely negotiable prices from undertakings other than the infrastructure manager. These do not fall under discrimination-free network access and comprise distribution services, luggage handling, fault intervention for non-critical defects, small-scale maintenance, large-scale maintenance, vehicle cleaning and telecommunications and information technology services that do not concern the train route itself.

5.5.1. Access to the telecommunications network
As part of a system task assigned by the federal government, SBB Infrastructure is responsible for planning, building and operating the GSM-R network in Switzerland and developing it further. For more information, please contact the relevant contact person shown in the list of addresses.

5.5.2. Provisions of additional information

5.5.3. Technical inspection of rolling stock
BLS Netz AG do not offer inspections of rolling stock.

5.5.4. Ticket sales channels

5.5.5. Specialized heavy maintenance services
BLS Netz AG do not operate their own facilities for vehicle maintenance.
5.5.6. Ordering regulations
Railway undertakings that have a network access agreement with BLS Netz AG will receive the necessary regulations and any amendments electronically, as well as in paper format upon request (for a fee). Not all regulations are available on paper. The contact points are indicated in the list of addresses.

Applicants and other interested parties may purchase regulations from the webshop of the Union of Public Transport (UPT).

5.5.7. Responsibility for movable equipment at stations
6. Charges

The EU member states offer services according to Annex 2 of Directive 2012/34/EU in the form of a minimum access package, additional services and ancillary services. In contrast, the services, basic services and ancillary services defined in the Rail Network Access Ordinance are used in Switzerland.

For this reason, the contents of this chapter are not directly comparable with those of Network Statements from other countries.

This chapter largely dispenses with the citing of legal texts. Instead, a link to the corresponding article ensures access to up-to-date and complete definitions at all times.

Detailed information on the fees described in this chapter in principle can be found in the List of Services of the infrastructure managers.

6.1. Charging principles

Art. 9c EBG defines the right to remuneration as follows:

1 The licensed railway undertaking is entitled to charge a fee for the use of its infrastructure.

2 The participating undertakings shall set out the detailed arrangements regarding access rights and fees in an agreement. If the participants fail to reach a consensus, a decision will be made by the SKE (Art. 40a).

3 The fee payable shall be determined without discrimination and must cover at least the usual marginal costs accrued in respect of a modern railway line; these marginal costs are defined for each line category by the BAV. It shall take into account, in particular, the different costs within the network, the environmental impact of the rolling stock and demand aspects. In the case of regular passenger services, the fee will comprise the marginal costs defined by the BAV for the relevant line category and the revenue share from the service defined by the franchising authority.

4 The BAV defines the basis for calculation of charges and arranges for their publication. In defining the basis for calculation, the BAV ensures that comparable routes are subject to uniform levels of train path pricing and that optimal use is made of rail capacity.

According to Art. 18 RailNAO, the charges for use of the infrastructure are called the “trainpath price”.

This is made up of the basic and ancillary services. The services that do not fall under network access make up a third price element.
6.1.1. **Basic services (in accordance with RailNAO)**
The basic services are divided into the **basic price**, the **contribution margin** and the **electricity price**.

6.1.1.1. **Basic price**
The basic price must cover marginal infrastructure costs.

Various incentives and product-related factors (e.g. wear, demand for a train path, quality of a train path, stopping surcharges, environmental impact, ETCS, traction equipment, cancellation fees) can result in a variable price per train. The provisions on all variable elements of the basic price are defined in Art. 19 and 19a ff RailNAO.

6.1.1.2. **Contribution margin**
The provisions on the contribution margin are set out in Art. 20 RailNAO.

6.1.1.3. **Electricity price**
Art. 20a RailNAO defines the provisions for the electricity price.

Further important provisions on the installation, registration and use of energy measurement systems for billing according to the actual power consumption can be found in section 2.7.14 of this NWS.

6.1.2. **Ancillary services (in accordance with RailNAO)**
The provisions on the ancillary services are defined in Art. 22 RailNAO.

The ancillary services include ordered and agreed services and services required at short notice that can be provided subject to the resources (staff and vehicles) and capacity (installations) being available.

They include route setting for shunting runs, shunting in marshalling yards according to Appendix 3 to RailNAO-FOT, the stabling of rail vehicles, static water and power supplies, use of the route outside published opening times, etc.

6.1.3. **Services (in accordance with RailNAO)**
Services can be provided to the railway undertakings by operators other than the infrastructure manager.
These include handling luggage or cleaning vehicles, for example. The provisions on these services are defined in Art. 23 RailNAO.

6.2. Charging system

Invoices will be issued by the IMs after prior approval by the TVS. Services are allocated using the accounting code.

**Basic rule train category (passenger or freight train)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Passenger services</th>
<th>Freight services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>1) Mostly passenger wagons or 2) Historic rolling stock (P/F) not used commercially</td>
<td>1) Mostly freight wagons</td>
</tr>
<tr>
<td>Train category/train number</td>
<td>Empty stock train-chartered train</td>
<td>Freight train</td>
</tr>
<tr>
<td>Data acquisition</td>
<td>FOS</td>
<td>CIS-Infra</td>
</tr>
<tr>
<td>RID</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

1) Mostly = number of meters
2) Definition of historic rolling stock as per BAV guideline "Acceptance of Historic Railway Vehicles" (in German) section 3

Trains with RID must run as freight trains recorded in CIS-Infra.

6.3. Tariffs

The currently valid prices of basic and ancillary services are shown in the List of Services.

6.4. Financial penalties and incentives

6.4.1. Non-usage/cancellation fees and charges

If a train path is cancelled, the procedure set out in section 1.3 of the List of Services shall apply.

6.4.2. Reduction fee for framework agreements

There is no information on discounts for framework agreements at this time.

6.4.3. ETCS discounts

Section 1.2.4 of the List of Services defines the situations in which a discount may be offered for installed ETCS vehicle equipment.

6.5. Use of standard values

Missing or incorrect data as per Annex 2.9 to the NWS may result in use of the standard values defined in the List of Services when calculating the basic price by wear and/or the power consumption.

6.6. Changes to charges

We reserve the right to make changes to the statutory services and charges. The applicable prices are defined in the Infrastructure List of Services, which shall be updated in accordance with the legal framework where necessary.

6.7. Billing agreements

See List of Services, section 4.2 Invoicing.