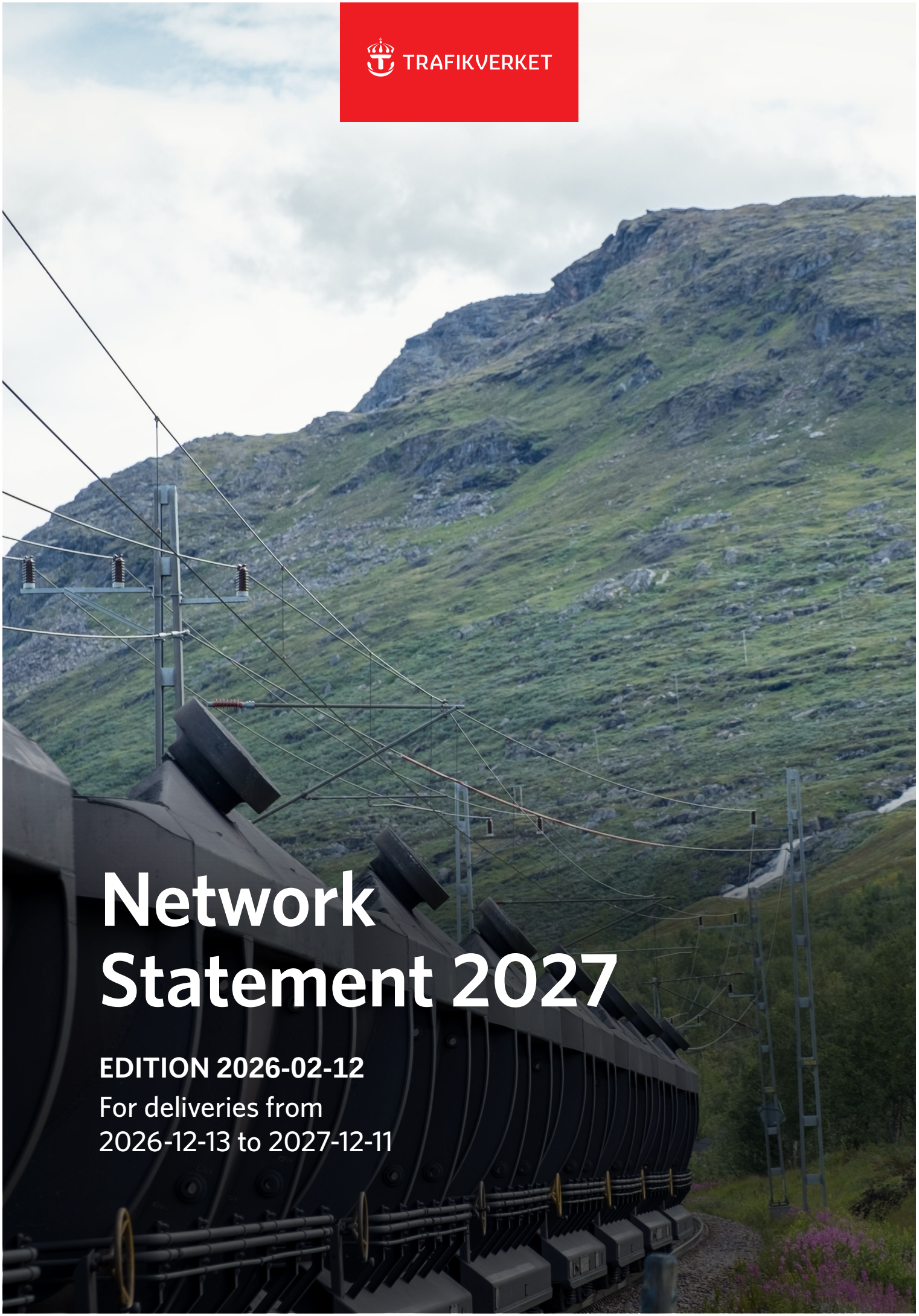
TRAFIKVERKET



Network Statement 2027

EDITION 2026-02-12

For deliveries from
2026-12-13 to 2027-12-11

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Network Statement 2027

Updates

The Network Statement will be updated with the amendments published on the Swedish Transport Administration's website .

Update	Implemented
Original edition	2025-12-05
Amendment 1	2026-02-12

Annexes included in the network statement

Annex 1 A – Contacts

Annex 1 B – Charges for services

Annex 2 A – Barrier-free length and platforms

Annex 2 B – Track standard data

Annex 2 C – Highest permitted speed per line

Annex 2 D – Gradients per line

Annex 2 E – Other availability impacts

Annex 3 A – Governing documents

Annex 4 A – Monitoring of operational points

Annex 4 B – Priority criteria

Annex 4 C – Traffic calendar

Annex 4 D – Construction conditions

Annex 4 E – Bottleneck plans

Annex 4 F – Capacity plans

Annex 5 B – Delay and cancellation codes

Annex 5 C – Calculation examples for electricity costs

Annex 6 A – Information to be provided before train’s departure

Annex 6 B – Routines for evacuation and clearance

Annex 6 C – Safety in track area

Annex 7 A – Available tracks for holding

Annex 8 A – Handling rules for accidents and incidents

Annex 8 B – Handling during settlement of claims

Glossary

Abbreviations

BAP: Engineering Work Plan

COTIF: Convention concerning International Carriage by Rail

EEA: European Economic Area

EC: European Community

ERTMS: European Rail Traffic Management System

ETCS: European Train Control System

EU: European Union

GSM-R: Global System for Mobile Communication – Railway

HPS: highest permitted speed

NJDB: National railway database

OSS: One-Stop Shop

PaP: Pre-Arranged Paths (International corridor)

RNE: RailNetEurope

STAX: maximum load per axle

STVM: maximum vehicle weight per metre

TAF/TAP – TSI: The EU regulations Telematic Applications for Freight (TAF TSI) and Telematic Applications for Passenger services (TAP TSI), which aim to harmonise communication between actors in the rail industry in Europe.

TDOK: The Swedish Transport Administration's governance documents

TCR: Temporary Capacity Restrictions

TSI: technical specification for interoperability

TTJ: Traffic rules of the Swedish Transport Administrations for railway

Definitions

The definitions applied in this document are taken from the concepts within The Swedish Transport Administration, The Swedish Transport Administration´s TDOK 2015:0309, Directive 2012/34/EU (SERA-directive) and the Railway Market Act (2022:365).

The references are provided at the end of the section.

Access services: Services that are included in either the minimum package category of access services (train paths) or in the service category basic services.

Agreed train path: An allocated train path which has been established in an agreement.

Allocated train path: Train path that has been reserved for a specific transportation task in the annual timetable.

Amendment - deviation notification: Notification from the Swedish Transport Administration relating to the changing or supplementation of information in the network statement.

Applicant: A railway undertaking or other natural person or legal entity with a public-service or commercial interest in procuring infrastructure capacity.

Blocked line operation: traffic activity for movement of railway vehicle in any direction on a blocked line section monitored by signaller. The blocked line operation also includes the railway vehicle's blocked line operation to and from the adjacent station.

Capacity plan: Plan describing the possible traffic on an infrastructure that has temporary limitations or capacity restrictions. Applicants must follow the capacity plan when applying for capacity.

Carrier: The railway undertaking with which the passenger or consignor has entered into the transport contract or a number of consecutive railway undertakings which, under the agreement, have liability.

Clearance: Actions taken, when necessary, after a rescue action for the purpose of clearing obstacles and restoring tracks for service.

Codified line: Consists of lines and stations that are codified. A line is codified based on the codification class for the load allowed to be transported without restriction.

Codified transport: A codified transport is intermodal and requires that the track for the transport is codified according to decided levels and that the units in question are codified according to IRS 50596-6 (formerly UIC 596-6). If the planned route has the same codification class as, or than, the load transported, the codified transport can be conveyed.

Contracting party: Those who buy the right to operate on the railway and provide services to travellers and freight buyers.

Cumulative delay: Delays according to the timetable at the first measurement point, or an additional delay between two sequential measurement points in the Swedish Transport Administration's railway network.

Delay charge: A charge for deviation from the use of the infrastructure that is established in the timetable and track access agreement.

Designated temporary capacity restrictions: Temporary capacity restrictions that have been announced in the Network Statement and which are planning prerequisites.

Established annual timetable: Allocated capacity for applications for capacity and services received by the last day for annual timetable application.

Exceptional load: Transportations that deviated from the requirements or conditions in Chapter 2 but which may only be operated in accordance with conditions determined by the Swedish Transport Administration.

Gross tonne kilometre: The gross tonne kilometre of a train is calculated as the trains gross weight times the distance the train has travelled in kilometres.

Infrastructure capacity: the potential to schedule train paths requested for an element of infrastructure for a certain period

Intermodal unit: A unit that can be conveyed by more than one mode of transport. Can consist of containers, swap bodies and trailers.

Maximum load per axle (STAX): A measurement of how much load each wheel axle may exert onto the track, expressed in tonnes.

Maximum vehicle weight per metre (STVM): The weight of the vehicle divided by the length of the vehicle, expressed in tonnes per metre.

Operational period: Weekday after another weekday, the operating period starts at 00:00 and lasts until kl. 24:00 the same day. Day that is

not weekday, the operating period starts at 00:00 and runs until 24:00 next weekday. Weekdays are days that are not Saturday, Sunday, public holidays, Midsummer's Eve, Christmas Eve or New Year's Eve.

Operational point: Common term for station, station part, line location, stop and halt. Each operational point has an established name specified in the route description (*linjeboken*).

Passengers: People travelling with a vehicle on a train journey, blocked line operation or shunting, excluding the personnel on duty.

Production plan: Summary of all planned services and capacity and how they are planned to be produced. The plan is available both as a preliminary version and a published or established version.

Railway system: Railway infrastructure and railway vehicles, as well as operation and administration of the infrastructure and vehicles.

Reason code: A code that explains the cause of the deviation from the use of the infrastructure that is established in the timetable and track access agreement.

Recovery: Measures taken when necessary, once clearance is completed, for the purpose of preserving the railway undertaking's vehicles or property.

Rescue: Actions performed by the State rescue services in accordance with the Civil Protection Act (2003:778).

Station: An area of the track demarcated from the line that can be monitored by dispatchers in more detail than is required for the line.

Swedish Transport Administration's railway network: The state-owned railway infrastructure and service facilities managed by the Swedish Transport Administration.

Temporary capacity restrictions: Early planned measure that affects available capacity in the infrastructure. The restriction implies closed tracks or restrictions on speed, axle load, train lengths, traction or the free space for a limited time period.

Timetable: Plan indicating the train journey's designation, line, times and other necessary information.

Track access agreement (TRAV): An agreement between the Swedish Transport Administration and a railway undertaking, or an entity that has the right to organise railway traffic, relating to the conditions for use of the

train paths that have been allocated or may be allocated after ad hoc application on the Swedish Transport Administration's railway network.

Traffic operator: The railway company that operates rail services for a traffic organiser.

Traffic organiser: Other persons or legal entities with a public-service or commercial interest in applying for infrastructure capacity, but does not intend to carry out the applied for traffic themselves.

Train route: Specific production solution of a train path, i.e. how a train path is intended to be produced.

Transport conditions: The specific conditions that apply to the transportation of exceptional loads.

Transport permit: Permit to transport exceptional loads with extensive conditions

Other English terms that are used internationally can be found in the RNE's Network Statement Glossary, available at www.rne.eu.

Railway lines

The following list contains the terms used in English for Swedish railway lines.

Swedish	English
Arlandabanan	Arlandabanan
Bergsslagsbanan	Bergslagen Line
Blekinge kustbana	Blekinge Coast Line
Bohusbanan	Bohus Line
Botniabanan	Bothnia Line
Citybanan	Stockholm City Line
Citytunneln	Malmö City Tunnel

Dalabanan	Dalarna Line
Godsstråket genom Skåne	Freight Line through Skåne
Hamnbanan	Gothenburg Port Line
Haparandabanan	Haparanda Line
Inlandsbanan	Inlandsbanan
Jönköpingsbanan	Jönköping Line
Kontinentalbanan	Continental Line
Kust-till-Kust-banan	Coast to Coast Line
Lommabanan	Lomma Line
Malmbanan	Iron Ore Line
Marieholmsbanan	Marieholm Line
Markarydsbanan	Markaryd Line
Mittbanan	Central Line
Mälarbanan	Mälar Line
Norge/Vänerbanan	Norway/Vänern Line
Norra stambanan	Northern Main Line
Nynäsbanan	Nynäs Line
Ostkustbanan	East Coast Line
Rååbanan	Råå Line
Stambanan genom övre Norrland	Mail Line through Upper Norrland
Skånebanan	Skåne Line
Svealandsbanan	Svealand Line
Söderåsbanan	Söderåsen Line

Södra stambanan	Southern Main Line
Viskadalsbanan	Viskadalen Line
Värmlandsbanan	Värmland Line
Värstabanan	Värsta Line
Västkustbanan	West Coast Line
Västra stambanan	Western Main Line
Ådalsbanan	Ådalen Line
Älvsborgsbanan	Älvsborg Line
Øresund Line	Öresundsbanan
Øresund Link	Öresundsförbindelsen

Laws, regulations and legislative history

The following is a list of national laws, regulations and legislative history as well as EU regulations and EU directives to which this document refers. To reach all legal acts, please refer to riksdagen.se and eur-lex.europa.eu. The official name of Swedish legislation is stated in italics.

- Regulation (EU) No 913/2010 of the European Parliament and of the Council of 22 September 2010 concerning a European rail network for competitive freight. Text with EEA relevance.
- Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area. Text with EEA relevance.
- Commission Implementing Regulation (EU) 2017/2177 of 22 November 2017 on access to service facilities and rail-related services. Text with EEA relevance.
- Commission Implementing Regulation (EU) 2018/545 of 4 April 2018 establishing practical arrangements for the railway vehicle authorisation and railway vehicle type authorisation process pursuant to Directive (EU) 2016/797 of the European Parliament and of the Council. Text with EEA relevance.

- Commission Implementing Regulation (EU) 2019/773 of 16 May 2019 on the technical specification for interoperability relating to the operation and traffic management subsystem of the rail system within the European Union and repealing Decision 2012/757/EU. Text with EEA relevance.
- Commission Regulation (EU) No 1169/2010 of 10 December 2010 on a common safety method for assessing conformity with the requirements for obtaining a railway safety authorisation. Text with EEA relevance.
- Commission Delegated Regulation (EU) 2018/762 of 8 March 2018 establishing common safety methods on safety management system requirements pursuant to Directive (EU) 2016/798 of the European Parliament and of the Council and repealing Commission Regulations (EU) No 1158/2010 and (EU) No 1169/2010. Text with EEA relevance.
- Regulation (EU) 2021/782 of the European Parliament and of the Council of 29 April 2021 on rail passengers' rights and obligations (recast). Text with EEA relevance.
- The Railway Traffic Act (2018:181) Uniform Rules concerning the Contract of International Carriage of Passengers by Rail (CIV) (Appendix A to COTIF)
- Uniform Rules concerning the Contract of International Carriage of Goods by Rail (CIM) (Appendix B to COTIF)
- Uniform Rules concerning the Contract of Use of Infrastructure in International Rail Traffic (CUI) (Appendix E to COTIF)

- The Ordinance (2010:185) with Instructions for The Swedish Transport Administration *(Förordning (2010:185) med instruktion för Trafikverket)*
- The Railway Market Act (2022:365) (*Järnvägsmarknadslag (2022:365))*
- The Railway Safety Act (2022:367) *(Järnvägssäkerhetslag (2022:367))*
- The Railway Market Ordinance (2022:416) *(Järnvägsmarknadsförordning (2022:416))*
- The Railway Safety Ordinance (2022:418) *(Järnvägssäkerhetsförordning (2022:418))*
- Public Access to Information and Secrecy Act (2009:400) *(Offentlighets- och sekretesslag (2009:400))*

- The Act (2015:953) on the rights of public transport passengers *(Lag (2015:953) om kollektivtrafikresenärers rättigheter)*
- The Act (2006:263) on carriage of dangerous goods *(Lag (2006:263) om transport av farligt gods)*
- The Ordinance (2006:311) on carriage of dangerous goods *(Förordning (2006:311) om transport av farligt gods)*
- The Act (2011:725) on the certification of train drivers *(Lag (2011:725) om behörighet för lokförare)*
- The Regulation (2011:728) of competence for train drivers *(Förordning (2011:728) om behörighet för lokförare)*
- The Swedish Goverments proposal 2021/22:83 The forth Railway Package *(Regeringens proposition 2021/22:83 Fjärde järnvägspaketet)*

- The Swedish Transport Agency's regulations for access to railway infrastructure and services (TSFS 2022:32) *(Transportstyrelsens föreskrifter om tillträde till järnvägsinfrastruktur och tjänster (TSFS 2022:32))*
- The Swedish Transport Agency's on other safety regulations for movements with railway vehicles and for work in the railway infrastructure (TSFS 2019:51) *(Transportstyrelsens föreskrifter om övriga säkerhetsbestämmelser för rörelser med järnvägsfordon och för arbeten i järnvägsinfrastrukturen (TSFS 2019:51)*

1 General Information

1.1 Introduction

The Swedish Transport Administration (Trafikverket) is a government authority accountable to the Swedish Government. The Swedish Transport Administration (Trafikverket) is subordinate to The Ministry of Rural Affairs and Infrastructure, which is responsible for railway matters.

According to ordinance (2018:185) with instructions for the Swedish Transport Administration, the agency shall be the infrastructure manager for the railway network that belongs to the state and to act as the service provider for such facilities related to services belonging to the state and linked to the railway network, unless otherwise decided. The Swedish Transport Administration is responsible for the overall long-term infrastructure planning and for the construction, operation and maintenance of state roads and railways.

The Railway Market Act (2022:365) and the Railway Market Ordinance (2022:416) set out provisions on the management and use of railway infrastructure and the provision of services to railway undertakings.

When producing a network statement, allocating capacity, charging fees, etc., the Swedish Transport Administration applies the legislation that generally applies to infrastructure managers and service facility operators.

The Swedish Transport Agency is the supervising authority for railway and therefore of the Swedish Transport Administration's infrastructure management.

1.2 Purpose of the Network Statement

Anybody intending to apply for capacity on the railway network that the Swedish Transport Administration manages shall get necessary information regarding the conditions to be met in the network statement.

The network statement presents the services that the Swedish Transport Administration offers, with information regarding where they are accessible, how the allocation of services functions, which charges apply, and the conditions that apply for gaining access to the services.

1.3 Legal aspects

1.3.1 Legal framework

Several EU regulations for railway operation have been implemented in Sweden via the Railway Market Act (2022:365). In accordance with this legislation, an infrastructure manager shall, amongst other things, produce and make a network statement public. This document constitutes the Swedish Transport Administration's network statement.

Swedish and international railway operations are governed not only by national legislation but also by certain directly applicable EU legislation. For example, the timetable for the allocation process is regulated by an EU regulation.

Regulations on national and international level is available at riksdagen.se, eurolex.europa.eu and transportstyrelsen.se.

1.3.2 Legal status and liability

The network statement is part of the track access agreement to be signed concerning the terms of the use of the allocated infrastructure capacity.

The Swedish Transport Administration is responsible for the information in the network statement in accordance with what is prescribed by law.

1.3.2.1 General remarks

The Swedish Transport Administration publishes the network statement for the purpose of ensuring transparency, predictability and non-discriminatory access to the services that it provides. The statement is developed in consultation with involved parties and actors that have previously applied for capacity or registered their interest in participating. How to participate in the process is describes on the Swedish Transport Administration's website https://bransch.trafikverket.se/kontaktregister-inbjudan-samrad-jnb.

1.3.3 Appeals procedure

As the supervisory agency, the Swedish Transport Agency may examine whether the Swedish Transport Administration's network statement has been produced in accordance with the applicable regulations.

1.4 Structure of the Network Statement

The Network Statement follow the common structure adopted by the European infrastructure managers who are members of RailNetEurope (see 1.7.2). Applicants can therefore find information on the same subject in the same place in each infrastructure manager's network statement.

The Network Statement is thus structured in 8 Sections and its annexes:

- Chapter 1 gives general information about the Network Statement and contacts.
- Chapter 2 describes the main technical and functional characteristics of the railway network.
- Chapter 3 defines legal requirements and access conditions to the railway network.
- Chapter 4 sets the procedure for the allocation of the train paths.
- Chapter 5 describes the train path services, charges and the technical and functional characteristics where the services are provided.
- Chapter 6 contains operational rules.
- Chapter 7 sets out the service facilities, the services offered, the corresponding conditions and charges, and the technical and functional features under which the services are made available.
- Chapter 8 contains the Swedish Transport Administration's general terms and conditions.

1.5 Validity period, updating and publishing

1.5.1 Validity period

The information in the network statement relates to the time period for Annual Timetable 2027:

- From 13 December 2026 at 00.01
- To 11 December 2027 at 23.59

1.5.2 Updating

If a published network statement has to be changed, consultation shall be held in good time unless there is an acute safety reason, a change in the

law or some other binding international or national statute. If the deviation is not burdensome for any applicant, this can be notified without consultation. Anyone who wishes to participate in the consultations on changes to the Network Statement will be invited to do so by registering in the Swedish Transport Administration's registry, at https://bransch.trafikverket.se/for-dig-i-branschen/jarnvag/jarnvagsnatsbeskrivningen-jnb/trafikverkets-kontaktregister-for-inbjudan-till-samrad-av-jnb/. The invitation is sent via e-mail approximately one week before the consultation period starts and the consultation documents are made publicly available on the Swedish Transport Administration's website. Amendments are incorporated into the network statement on a regular basis and are published on the Swedish Transport Administration's website.

Annex 1 A - Contacts, is updated continually without the issuance of an amendment.

1.5.3 Publishing

The network statement, including amendments (deviation notifications), is published on the Swedish Transport Administration's website https://bransch.trafikverket.se/en/Network-Statement. The regulations on safety that are to be found on the above website are published in the version that are included in the general conditions of contract stipulated in Annex 3 A of the Network Statement.

The network statement is published in Swedish and English. In the event of discrepancies between the Swedish and English version of the network statement, the Swedish text takes precedence.

The Swedish Transport Administration also publish the network statement on RailNetEurope's Network and Corridor Portal, where other European infrastructure managers also publish their network statements, nci-online.rne.eu.

The Swedish Transport Administration's website also publishes network statements produced by other Swedish infrastructure managers who request this. The Swedish Transport Administration is not responsible for the content matter in these statements.

The Swedish Transport provides a compilation of service providers related to rail transport who are required to prepare a service facility description. The compilation is available on www.trafikverket.se/ and contains links to the service facility operators which have supplied information to the Swedish Transport Administration. The Swedish Transport

Administration is not responsible for the content matter in these statements.

1.6 Contacts

See Annex 1 A, Contacts.

1.7 Cooperation between European IMs

1.7.1 Rail Freight Corridors

In accordance with Regulation (EU) No. 913/2010 concerning a European rail network for competitive freight, a rail freight corridor has been established from Narvik-Luleå, Umeå-Hallberg, Hallberg-Charlottenberg, Stockholm/Oslo via Malmö-Trelleborg/Peberholm, Hamburg and Innsbruck to Palermo in Italy, called Scandinavian-Mediterranean Rail Freight Corridor (ScanMed RFC).

The rail freight corridor is described in the Corridor Information Document, CID, which is updated annually.

For more information www.scanmedfreight.eu.

1.7.1.1 Corridor One-Stop Shop

Each rail freight corridor has its own Corridor One Stop Shop (C-OSS), which is responsible for allocation of the corridors pre-arranged border-crossing train paths. Observe that there is a difference between ScanMed RFC Corridor One Stop Shop (C-OSS) and national One Stop Shop (OSS) referred to in Section 1.7.2.1.

C-OSS provides for cross-border traffic in the corridor:

- pre-arranged train paths (PaPs)
- reserve capacity (RC) for ad hoc applications.

1.7.2 RailNetEurope

RailNetEurope (RNE) is a non-profit organisation where a majority of the European railway Infrastructure Managers and Allocation Bodies (IMs/ABs) are members and whose objective is to facilitate international traffic on the European railway network.

The task of RNE is to simplify, harmonise and optimise the international railway sector, including by producing common process descriptions and guidelines for it.

More information is available on RNE:s website http://rne.eu/.

1.7.2.1 National One-Stop Shop

A network of One Stop Shops (OSS) represents the Infrastructure Managers in international traffic. An applicant that applies for international capacity only needs to contact one of these OSS, via an application in Path Coordination System. If the application is for a pre-arranged train path in ScanMed RFC requests are addressed directly to the C-OSS.

The OSS that is contacted works closely with the relevant infrastructure managers, and:

- offers the applicant support and information for the entire product and service chain of infrastructure managers
- offers information for the applicant to have access to the infrastructure of each individual infrastructure manager within RNE
- provides train services for the entire international path; application/coordination with other infrastructure managers can only be done via RNE's Path Coordination System.

A list of the OSS contact persons is available at: http://www.rne.eu/organisation/oss-c-oss/.

The Swedish Transport Administration's OSS can be reached via e-mail: oss@trafikverket.se. See also Annex 1 A.

2 Infrastructure

2.1 Introduction

This chapter describes the Swedish Transport Administration's available infrastructure for the annual timetable 2027 and is a prerequisite for the application process for the allocation of capacity for each service.

An outline of technical information is available in the form of maps in the network statement's map service, called 'the map service' below. A link to the map service is available on the Swedish Transport Administration's website in connection to the current network statement. The map service does not show connection dates for new railway infrastructure. Observe that any infrastructure taken into service or decommissioned during the year may thus be displayed in the map service as applicable for the whole year. In the event of contradictory information in the map service and network statement, the information in the network statement takes precedence.

Information in Annex 2 A and 7 A is retrieved from the Swedish Transport Administration's infrastructure register. The sheets in the appendices reflect the contents of the infrastructure register on the date shown in each sheet. Changes made after the specified date are reported in the sheet *Planned changes* in each annex.

Certain sections are given with the station name in brackets. In these cases, the relevant information applies only as far as the boundary of the station.

2.2 Extent of network

2.2.1 Limits

The Swedish Transport Administration's railway network including the limits where the railway borders with other countries' railway network is shown in the map service.

The Swedish Transport Administration's railway network is delimited by the following boundary points:

- Riksgränsen, km 1,542+573: Norway, infrastructure manager Bane Nor SF
- Haparanda södra, km 86+014: Finland, infrastructure manager Trafikledsverket/Väylävirasto

- Storlien, border, km 751+825: Norway infrastructure manager Bane Nor SF
- Charlottenberg, border, km 438+820: Norway, infrastructure manager Bane Nor SF
- Kornsjö, border, km 63+575: Norway, infrastructure manager Bane Nor SF
- Lernacken, km 281+810: Öresundsbron/Denmark, infrastructure manager Øresundsbro Konsortiet.

2.2.2 Connected railway networks

Major connected infrastructure within the borders of Sweden:

- Inlandsbanan (administered by Inlandsbanan AB)
- Öresundsbron (administered by Øresundsbro Konsortiet)
- Arlandabanan (administered by A-train AB).

There are several connecting railway networks that are not described in the network statement, including municipal tracks, industrial tracks, heritage railways, harbour tracks, freight and intermodal terminals and other private railways within Sweden. In the national railway database, which is available on the Swedish Transport Administration's website, you can get a complete picture of Sweden's railways and how they connect to each other, see https://njdbwebb.trafikverket.se.

2.3 Network description

The description of the railway network is presented on a general level, with the aid of the map service. Basic data for the map service is also presented in Annex 2 B. The current railway network is also shown at NJDB on the web, which is available on the Swedish Transport Administration's website, see https://njdbwebb.trafikverket.se. Information about the railway network can also be downloaded from Lastkajen, which is also available on the Swedish Transport Administration's website, see https://lastkajen2-p.ea.trafikverket.se/login.

For more information about the division of line sections and routes, refer to TDOK 2015:0096. In NJDB on the web at the Swedish Transport Administration's website, you can see how the railway network is divided into line sections and routes.

2.3.1 Track typologies

Types of tracks are defined as single-track, double-track, multiple track or tracks under construction, and are presented on a general level in the map service.

2.3.2 Track gauges

The track gauge of the Swedish Transport Administration's railway network is 1,435 mm. At the station Västervik there are connected narrow-gauge tracks at halt Jenny in direction to Verkebäck. The track gauge is 891 mm and the line is a three-rail-track along the normal main track in 4 km.

2.3.3 Stations and nodes

Detailed information about major operational points can be found in the basic data for the route description (linjeboken) section E, "Trafikplatsinstruktioner" is available on the web at the Swedish Transport Administration. It also contains descriptions of local traffic conditions for the operational points and simple track sketches. The operational points are searchable in the map service, which also can be used to measure the distances between points. Track lengths at operational points are presented in Annex 2 A.

2.3.4 Reference profile (loading gauge)

The reference profile defines the maximum height and width for railway vehicles and their loads. The dimensions of the reference profiles apply under certain specific conditions and are related to calculation rules for determining the maximum permitted load and vehicle size, see also Appendix 7 in *TRVINFRA-00398 Banutformning* available on the Swedish Transport Administration's website.

The entire railway network can be operated by vehicles that fulfil the requirements for the dynamic calculation method with Dynamic reference profile Sea or the static calculation method with Static reference profile A. On the routes listed in Table 2.1 there are places with non-standard overhead contact line height. The non-standard overhead contact line height is not deemed to justify any restrictions for current traffic, except on section 641 between Mölnlycke and Rävlanda. There, the vehicle types ER1 and X40 are not deemed to be able to operate since it would involve imminent risk of electric shock (arcing).

Dynamic reference profile SEc is an extended profile introduced on new lines. For the time being, vehicles dimensioned according to dynamic reference profile SEc can only be operated on certain lines as exceptional transport, see Section 5.4.2. Vehicles with associated cargo that are neither approved according to the static calculation method with Static reference profile A nor according to the dynamic calculation method with dynamic reference profile SEa may only be transported as exceptional transports, with the exception of codified transports.

The kinematic European profiles G1, G2, GA and GB as well as the national profile NO1 fit into the dynamic reference profile SEa. The kinematic European profile GC fits into the Swedish dynamic reference profile SEc. See below for current measurements for each Swedish reference profile.

Figure 2.1 Static reference profile A

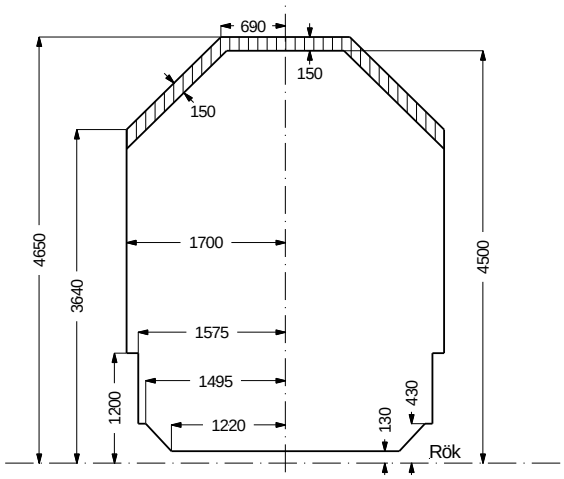


Figure 2.2 Dynamic reference profile SEa

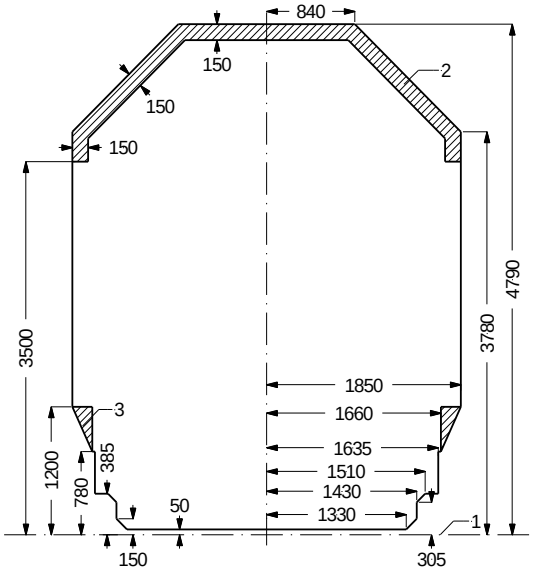
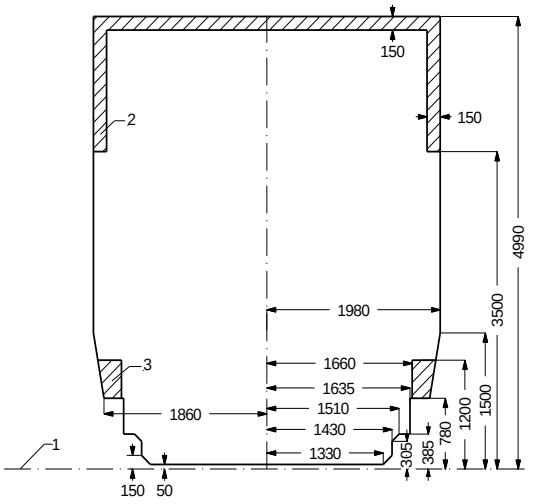


Figure 2.3 Dynamic reference profile SEc



Upper boundary lines (dimensions in mm):

1: Top of rail

2: Zone within which voltage-carrying parts must not be placed.

3: Vehicles that are to be allowed to use tracks adjacent to loading docks may not use this area.

Table 2.1 Routes with non-standard overhead contact line height

Route number and geographic area	Affected location or section	UNE	Track
111 (Peuravaara–-Riksgränsen	Kopparåsen–Vassijaure	E	
401 Stockholms central	Stockholm central	N1	Track 1

405 (Tomteboda)–Värtan, (Karlberg)–(Värtan)	Stockholm Norra–Värtan	E	
410 (Älvsjö)–Södertälje hamn	Utsikten–Dånviken	U	
410 (Älvsjö)–Södertälje hamn	Utsikten–Dånviken	N	
476 Västerhaninge–(Älvsjö)	Handen–Skogås	N	
601 Partille–Göteborgs central, Göteborgs central–Göteborg Marieholm, Göteborgs central–Göteborg Kville	Göteborg	N	Track 71
601 Partille–Göteborgs central, Göteborgs central–Göteborg Marieholm, Göteborgs central–Göteborg Kville	Göteborg	U	Track 72
601 Partille–Göteborgs central, Göteborgs central–Göteborg Marieholm, Göteborgs central–Göteborg Kville	Göteborg	N3	Track 73
601 Partille–Göteborgs central, Göteborgs central–Göteborg Marieholm, Göteborgs central–Göteborg Kville	Göteborg	U3	Track 74
625 (Göteborg Kville)–Stenungssund	Säve–Stora Höga	E	
636 (Skälebol)–(Kornsjö-gränsen)	Dals Rostock–Ed	E	
641 (Almedal)–(Borås central)	Mölnlycke–Rävlanda	E	
651 Uddevalla central–(Öxnered)	Uddevalla–Öxnered	E	

2.3.5 Weight limits (carrying capacity)

The carrying capacity of a railway line indicates the lines weight limits, and is specified by maximum load per axle (STAX) and maximum weight per metre (STVM), taking into account the geometry of the vehicle. Depending on the vehicle type, different maximum line speeds may apply to the corresponding line category. The national standard. The national standard SS-EN 15528:2021 *Järnvägar – Linjekategorier för hantering av samverkan mellan lastgränser för fordon och infrastruktur* applies to the Swedish Transport Administration's railway infrastructure. See also

TDOK 2014:0078 *Linjekategorier – hantering av samverkan mellan järnvägsfordons axellaster och infrastruktur* which complements the national standard.

The line categories are defined by a load model based on reference carriages, see Section 4.2 in TDOK 2014:0078.

Railway vehicles (freight carriages, locomotives, motor coaches, passenger carriages and special vehicles) are categorised with line categories, see Chapter 3 in TDOK 2014:0078.

Permitted axle load in each line category for 6-axle freight carriages is normally lower than for 4-axle freight carriages. Permitted axle load in each line category for 6-axle locomotives is normally lower than for 4-axle locomotives.

The map service presents each lines line category on a comprehensive level, see also Annex 2 B. The line category apply to normal main track. The line category of deviating main track and sidings at an operational point may differ from that of the normal main track.

Line category D2 (STAX 22.5 tonnes and STVM 6.4 tonnes/m) is most common in the Swedish Transport Administration's railway infrastructure.

In accordance with Section 5.4.2, vehicles that exceed the line's line category or exceed line category D2 must be operated as exceptional transports.

2.3.6 Line gradients

Annex 2 D provides information about the steepest gradients for each line. For lines with gradients between 1.0 and 1.5 percent are specified if the gradient is longer than 500 meter. Gradients of 1.5 percent or more are specified if the gradient exceeds 100 meter.

2.3.7 Maximum line speed

Annex 2 C contains information about maximum permitted speed per line section. The highest permitted speed per line describes the speed that applies for a certain section of the line, but this does not necessarily mean that the stated speed applies for the entire line.

For detailed information about speeds, refer to the basic data in the route description (linjeboken), section D, on the Swedish Transport Administration's website http://www.trafikverket.se/Linjeboken.

2.3.8 Maximum train length

Normal maximum train length on the Swedish Transport Administration's network is 630 meters. Longer trains may be allowed. The train lengths that are permitted for each train are determined in the process for allocation of capacity.

2.3.9 Power supply

A large part of the railway network is electrified. The map service indicates which lines are electrified. The trains receive their power supply through a catenary that produces a voltage of 15 kV, 16 2/3 Hz.

For detailed information on the preconditions that apply for achieving good quality and compatibility between electric railway vehicles and the power supply system, reference is made to:

- TDOK 2014:0774: Elektriska krav på fordon med avseende på kompatibilitet med infrastrukturen och andra fordon (*Electrical requirements for vehicles with respect to compatibility with the infrastructure and other vehicles)*.
- TDOK 2014:0775: Krav på strömavtagare och interaktionen mellan strömavtagaren och kontaktledningen. (*Requirements for pantographs and interaction between the pantograph and the catenary)*.

In addition to the information in these documents, local restrictions may apply both on the line and at operational points. These are available in the route description that is published on the Swedish Transport Administration's website http://www.trafikverket.se/Linjeboken.

2.3.10 Signalling systems

See the sections on the traffic control and communications systems below.

The map service shows where the various traffic control systems are used.

2.3.11 Traffic control systems

The traffic control system is designed to monitor the trains' movements on the railway network in real time, in order to take any necessary measures in the event of disruptions.

The traffic is monitored and controlled operatively by the train dispatcher, through the manoeuvring of track switches and signals at the operational points. The different types of traffic control systems provide different grades of technical support to the train dispatcher, and certain systems

also contain technical protection for the traffic. There are traffic safety instructions for the different systems that specifies how traffic is to be operated in normal situations and in the event of disruptions.

The traffic control systems are described in TDOK 2015:0309.

2.3.12 Communication systems

The Swedish Transport Administration's radio system GSM-R follows European standards. The system has been specially adapted for the railway.

The map service shows which lines have access to the GSM-R network.

2.3.13 Train control systems

2.3.13.1 ATC system

The ATC system (Automatic Train Control) is currently the predominant standard of ATP (Automatic Train Protection) in Sweden. It is used on nearly all railways operating passenger traffic. The system monitors that the trains maintain the correct speeds and prevents trains from driving past stop signals if the train driver does not react accordingly. Train journeys that are undertaken on routes with ATC must in general have an active train protection system on-board. For further information see TDOK 2015:0309.

There are operational points which do not use ATC which are nevertheless a part of longer lines that do use ATC. These are Gävle godsbangård, Kil, Kisa, Luleå, Vetlanda, and Vimmerby.

The map service shows which lines have access to ATC.

2.3.13.2 ETCS

ETCS (European Train Control System) is a European standard for ATP (Automatic Train Protection). The European Rail Traffic Management System (ERTMS) is comprised of ETCS together with GSM-R, Eurobalises and Radio Block Centres. The system monitors that the trains maintain the correct speeds and prevents trains from driving past stop signals if the train driver does not react accordingly. Train journeys that are undertaken on routes with ETCS must in general have an active ETCS train protection system on-board. For further information see TDOK 2015:0309.

Traffic operations on lines equipped with ERTMS require that the on-board system has undergone approved integration with the trackside system of the line.

In order to operate on the Iron Ore Line (*Malmbanan*), Haparanda line, the Botnia line, and the Ådalen line, which are upgraded with the trackside systems BL3R2, the on-board system must meet the requirements of BL3.4 (Specification set no. 2, ETCS Baseline 3, Maintenance Release 1 and GSM-R Baseline 1), or a higher version of the system.

ETCS together with STM (Specific Transmission Module) replaces ATC equipment in the vehicles, and allows the vehicles to be operated throughout Swedish railway network, regardless of whether the infrastructure is constructed for ERTMS or the older ATC system.

For connection to the Swedish Transport Administration's infrastructure, the Swedish Transport Administration establishes a service that the vehicle owner's KM domain can connect to. In order to be able to connect to the service, an agreement is required between the vehicle owner's KM domain and the Swedish Transport Administration.

An agreement must be signed between the vehicle owner's KM domain and the Swedish Transport Administration. To sign an agreement, contact the Swedish Transport Administration according to the contact details below (see section Support).

2.3.13.2.1 Support

For agreement and support with practical and more detailed questions about the service for KMC online for vehicles and for validation of functionality – contact the Swedish Transport Administration via mobisir@trafikverket.se.

The map service shows which lines have access to ETCS.

2.3.13.2.2 Exemption from requirements for ETCS equipment

The Swedish Transport Administration has decided (TRV 2024/54166) on exemptions from requirements for ETCS train protection systems on board, according to Section 3.6 and 2.3.13.2, for the connection to the Inlandsbanan on the station part Gällivare central, within the station Gällivare, including switching within the same station part.

For the execution of journeys on the station part of Gällivare central with vehicles that do not have ETCS equipment, the ordinary rules apply for each journey together with the supplementary regulations. These

regulations appear in the Supporting documents for the route description for traffic control centre area Boden, section E *Trafikplatsinstruktioner*, which applies for station Gällivare. The exception from the requirement of ETCS equipment for operation at the station part Gällivare central also applies to blocked lined operation or switching, according to TTJ Module 9E *Spärrfärd* – Systems E2 and E3, section 5.18 *Spärrfärd utan tågskyddssystem*, respectively in Module 9E *Växling* – Systems E2 and E3, section 5.11 *Växling utan tågskyddssystem*.

2.3.13.2.3 Subscription

A subscription with a SIM card that supports GPRS and thus the Swedish Transport Administration's ETCS and KMS domains is required for operating the Swedish Transport Administration’s facilities. To obtain a subscription or ensure that an existing subscription has the correct status, see the Swedish Transport Administration’s website https://bransch.trafikverket.se/GSM-mobisir/.

2.3.13.2.4 Timetable

The Swedish Transport Administration intends to introduce KMC (Key Managment Centre) online to the Swedish Transport Administration’s trackside system and to other KMCs. The introduction will take place gradually, but from 2026 at the earliest, in connection with the commissioning of ERTMS trackside, when the amount of vehicles and keys are expected to increase.

2.3.14 Other technical facilities

2.3.14.1 Detectors

The Swedish Transport Administration infrastructure is equipped with different types of stationary detectors for technical control of railway vehicles in order to maintain safety and to protect the track against damage. In the event of an alarm, the Swedish Transport Administration has the right to take action in accordance with TDOK 2020:0074 *Detektorer. Hantering av larm samt åtgärder efter konstaterade skador*. The presence of detectors does not affect the railway undertaking’s liability.

Most detectors are monitoring overheating and unintentional brake application, but there are also wheel damage detectors with weighing functions, as well as facilities for acoustic detection of wheel bearing errors.

There are also RFID readers installed for passage detection of vehicles. The map service indicates where the detectors are located and the functions that they have. These data is also presented in Annex 2 B. See also Section 5.5.2 and 6.4.1.

2.4 Traffic restrictions

Temporary traffic restrictions may arise as a result of damage to the infrastructure, for example due to accidents, floods and landslip. Furthermore, restrictions on the weight of vehicles may be stipulated on certain lines as the result of external conditions, such as leaf slip. It is incumbent on railway undertakings to adapt the vehicle weight to the existing conditions, but the Swedish Transport Administration can always make decisions regarding general restrictions on the weight of vehicles for all railway undertakings within a particular geographical area. It applies when the restrictions of the railway undertakings themselves are deemed insufficient.

Traffic restrictions may also be imposed due to weather conditions, the condition of the infrastructure, and the nature of the traffic.

2.4.1 Specialised infrastructure

2.4.1.1 Routes reserved for passenger traffic

The following routes are reserved for passenger traffic, in accordance with the Railway Market Act (2022:365), Chapter 7, Section 2:

- (Kattarp)–Helsingborgs central [refers to the railway tunnel ”*Helsingborg*”]
- (Helsingborgs godsbangård)–(Landskrona östra)
- (Kävlinge)–(Lunds central)
- Malmö central–Hyllie–(Lernacken/Svågertorp) [refers to the railway tunnel *Citytunnel*.]

The following conditions apply for traffic on these lines:

- Excess loads are prohibited.
- The train combinations shall be composed in such a way that they can operate on these routes without problems caused by the gradient conditions.

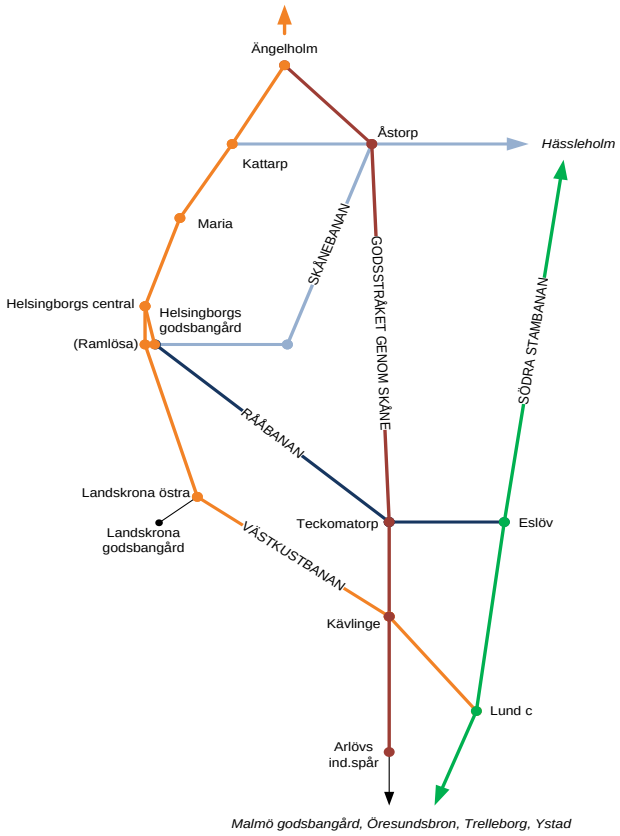
- All railway vehicles shall fulfil the technical requirements that apply for each line (reference profile, traction power and braking capacity).

The routes listed above are reserved for passenger traffic, which is in accordance with the law when there is alternative rail infrastructure. However, if the capacity is sufficient and the vehicles meet the technical requirements, other traffic can also be carried out on the routes. Re-routing of freight traffic via the routes reserved for passenger raffic requires written permission from the Swedish Transport Administration before the transport is carried out. Alternative railway infrastructure for freight traffic is listed below.

Alternative routes for freight traffic:

- Freight traffic between Helsingborgs godsbangård and Landskrona östra is operated via the Rååbanan to Teckomatorp, Godsstråket genom Skåne to Kävlinge and further on by Västkustbanan to Landskrona östra (see also the scheme below).
- Freight traffic between (Ängelholm) and Helsingborgs godsbangård is operated via Skånebanan, the route Ängelholm/Kattarp–Åstorp–Helsingborgs godsbangård. Long distance traffic operates via Godsstråket genom Skåne and further on by Skånebanan to Helsningborgs godsbangård (see also the scheme below).
- Alternative to the route (Kävlinge) – (Lunds central) include Godsstråket i Skåne (Kävlinge–Arlöv) and Södra stambanan, or in exceptional cases via Rååbanan–Skånebanan and Södra stambanan (see also the scheme below).
- Freight traffic on the route Malmö godsbangård–(Lernacken/Svågertorp), via Kontinentalbanan and Fosieby towards Öresundsbron or in direction to Ystad/Trelleborg.

Figure 2.4 Sketch Alternative lines in Skåne.



2.4.1.2 Routes reserved for regional and commuter trains

The following routes is reserved for regional and commuter trains, in accordance with the Railway Market Act (2022:365), Chapter 7, Section 2:

- Västlänken Göteborgs central–Almedal via Haga.

The following conditions apply for traffic on Västlänken:

- Overhanging loads are prohibited
- The train combinations shall be composed in such a way that they can operate on these routes with respect to gradient conditions and capacity
- All railway vehicles shall fulfil the technical requirements that apply for each line (reference profile, traction power and braking capacity.

Alternative route for other traffic:

- An alternative to the route Göteborgs central–Almedal via Haga is the route Göteborgs central–Almedal via Gubbero.

For exceptional traffic with other traffic via the reserved route above, written approval from the Swedish Transport Administration is required before the transport is carried out

2.4.1.3 Routes reserved for commuter trains

The following routes is reserved for commuter train, in accordance with the Railway Market Act (2022:365), Chapter 7, Section 2:

- The railway tunnel Citybanan (Stockholms södra)–(Tomteboda övre) via Stockholm City
- The inner tracks on the four-track routes Tomteboda övre–Skavstaby/Huvudsta, Spånga–Kallhäll and Årstaberg–Flemmingsberg is reserved for commuter traffic operating on Citybanan. Other train traffic may use any rest capacity.

The following conditions apply for traffic on Citybanan:

- Overhanging loads are prohibited.
- The train combinations shall be composed in such a way that they can operate on these routes with respect to gradient conditions and capacity.
- All railway vehicles shall fulfil the technical requirements that apply for each line (reference profile, traction power and braking capacity) and door configuration for train with passenger exchange at Stockholm Odenplan and Stockholm City, because the stations have separating glass walls with door lock between the platform and tracks.

Re-routing of freight traffic via the reserved route above requires written permission from the Swedish Transport Agency before the transport is carried out.

Alternative routes for freight traffic:

- An alternative to the route (Stockholm södra)-(Tomteboda övre) via Citybanan is the route (Stockholm södra)-(Tomteboda övre) via Stockholm central.

2.4.1.4 Routes reserved for freight traffic

The following route is reserved for freight traffic, in accordance with the Railway Market Act (2022:365), Chapter 7, Section 2:

- (Göteborg Kville)–Göteborg Skandiahamnen

The following conditions apply for traffic on this route:

- Passengers may not accompany

For exceptional traffic with passenger traffic via the reserved route above, written approval from the Swedish Transport Administration is required before the transport is carried out.

2.4.1.5 Railway lines where special condition apply

The Swedish Transport Administration may decide that a part of the railway network or other railway facility owned and managed by the state shall be closed down, in accordance with the Railway Market Ordinance (2022:416). This applies if it was either at least three years since the decision to cease maintenance (Chapter 6, Section 9) or if the part of the railway network or other railway facility that is closed is replaced elsewhere in the state railway network or in connection to state railway network (Chapter 6, Section 10).

The Swedish Transport Administration may also decide to cease maintenance on parts of the railway network or other railway facility owned and managed by the state if the traffic on this part of the network or facility is of only insignificant extent. See Table 2.2 below.

Table 2.2 Line or route where a decision of "discontinued maintenance" has been taken

Line number and geographic area	Route where maintenance has been discontinued
136 (Morjärv)–Karungi–(Haparanda södra)	(Morjärv)–Karungi–(Haparanda södra)
151 (Jörn)–-(Arvidsjaur)	(Jörn)–-(Arvidsjaur)
236 (Vallvik)–Stugsund	(Sandarne)–Stugsund
251 (Bollnäs)–Edsbyn–(Furudal)	(Bollnäs)–Edsbyn–(Furudal)
361 (Mora C)–Vika	(Lomsmyren)–Vika
453 (Grundbro)–Åkers Styckebruk	(Grundbro)–Åkers Styckebruk
623 (Munkedal)–Lysekil	(Munkedal)–Lysekil
964 (Östervärn)–Brågarp	(Östervärn)–Brågarp

There are sections where the condition of the facility may lead the Swedish Transport Administration to specifically review applications that involve a significant increase in traffic volume.

Table 2.3 Line sections and routes sensitive to increases in traffic

Line number and geographic area	Affected section
149 (Mellansel)–(Örnsköldsvik)	
152 (Hällnäs)–(Storuman)	
153 (Forsmo)–(Hoting)	
334 (Falun central)–Grycksbo	
340 (Fagersta)–(Ludvika)	
361 (Mora)–Lomsmyren	
364 (Kristinehamn)–(Nykroppa), (Daglösen)–Filipstad	(Kristinehamn)–(Storfors) and (Daglösen)–Filipstad
371 (Mora)–Märbäck	
376 (Repbäcken)–Malung	
391 (Grängesberg)–(Ställdalen)–(Frövi)	"Silverhöjdsspåret" (Grängesberg)–(Ställdalen)
393 Bofors–(Strömtorp)	
435 (Örbyhus)–Hallstavik	
452 (Folkesta)–(Nybybruk)	
552 (Gårdsjö)–(Håkantorp)	
563 (Kimstad)–Finspång	
591 (Kumla)–Närkes Kvarntorp	
621 (Uddevalla)–Strömstad	
661 (Kil)–Torsby	
662 (Mellerud)–Billingsfors	
666 (Alvhem)–Lilla Edet	
731 (Jönköpings godsbangård)–(Vaggeryd)	
732 (Nässjö)–(Värnamo)–(Landeryd)	(Forsheda)–(Landeryd)
733 Landeryd–(Furet)	Landeryd–(Torup)
735 (Torup)–Hyltebruk	
829 (Nässjö C)–Vetlanda	
831 (Nässjö C)–(Hultsfred)	(Eksjö)–(Hultsfred)
832 Hultsfred–Berga	
833 (Berga)–Oskarshamn	
841 (Bjärka-Säby)–(Hultsfred)	
845 (Bjärka-Säby)–Västervik	
872 (Vetlanda)–Kvillsfors	

873 (Kvillsfors)–(Pauliström)	
875 (Blomstermåla)–(Berga)	
876 (Kalmar S)–Blomstermåla	
877 (Mönsterås bruk)–Mönsterås–(Blomstermåla)	
952 (Kristianstad)–Åhus	

2.4.1.5.1 Conditions to operate on a line or route where maintenance has been discontinued or on a line or route with special conditions

If applications regarding capacity are received for routes that are not in use, or where maintenance has been discontinued, the Swedish Transport Administration performs an inspection to ascertain the standard of the line. The Swedish Transport Administration then notifies the applicant of the traffic conditions and any restrictions that will apply, if a decision is made to prepare the line for traffic.

The Swedish Transport Administration's inspection may, however, show that the line is in such a poor state of repair that the possibility of operating services on it cannot be considered. The Swedish Transport Administration will in such case not allocate any capacity to the route in question. In the inspection, consideration will also be given to whether or not, on the basis of a socio-economic assessment, it is possible to put the section into operation with respect to any need for maintenance before operations commence.

2.4.1.5.2 Line section or route with special conditions for traffic operations

Table 2.4 specifies the routes that are severely limited in terms of load per axle and speed. This can apply during the whole year, or certain parts of the year. The routes that, pursuant to the network statement's validity period, are closed to traffic due to extensive renovation are also described here.

Table 2.4 Line section or route with special conditions for traffic operations

Line number and geographic area	Affected section	Speed

552 Mariestad–Håkantorp	(Mariestad)–(Lugnås) km 40+800 – 50+193, (Tromlen)–Källby km 75+400 – 84+584, (Lidköping)–(Håkantorp) km 95+224 – 120+319.	80 km/h

2.4.2 Environmental restrictions

On the following section there are special conditions regarding noise (see the judgement from the Land and Environment Court of Appeal with journal number 2016-07-08, M11100-14)

- Östervärn–Fosieby–Lockarp–(Kontinentalbanan).

Diesel traffic give rise to particularly affecting noise. Such traffic may be permitted in certain cases, but an application for permission is required on every single occasion and the Swedish Transport Administration examines whether the traffic in question can be permitted with consideration for the environmental judgement.

Exception: The Swedish Transport Administration has decided (TRV 2025/80439) that the following transports are exempt the permit requirement:

- Transport operations carried out by the Swedish Transport Administration itself or contractors hired by the Swedish Transport Administration due to maintenance requirements of the Swedish Transport Administration´s track system. These transports may consist of work machinery or trains/block train operations hauled by diesel locomotives. The exception applies both to work conducted on Kontinentalbanan and to transports to other locations.
- Transports conducted from Sweden´s supply security.

2.4.3 Dangerous goods

For transportation of dangerous goods, provisions apply in accordance with Section 3.4.4. The following routes are not allowed to be used to transport dangerous goods:

- (Maria) – Helsingborgs central
- (Helsingborgs godsbangård) – (Landskrona östra)
- Malmö central – Hyllie – (Lernacken/Svågertorp)
- (Stockholms södra)–Stockholm City–(Tomteboda övre)

- Göteborgs central–Almedal via Haga.

In exceptional cases, a dispensation can be granted for temporary transport of dangerous goods, should there be an unavoidable need for such transport. For the tunnel Citytunneln, the County Administrative Board in Skåne County, after consultation with the Swedish Civil Defence and Resilience Agency (MCF), the Swedish Transport Administration and the municipality of Malmö, may issue such a dispensation (which may be combined with the conditions required for safety to be met).

For the above locations, there are alternative railway infrastructures for freight traffic with dangerous goods, see Section 2.4.1.

2.4.4 Tunnel restrictions

Besides the tunnel restrictions mentioned in Sections 2.4.1 and 2.4.3, the following applies:

- The railway tunnel Citytunneln (Malmö) may only be operated using electric trains for passenger traffic. The trains must be designed with emergency brake blocking, fire alarm (which, in the event of a detected fire, transmits an alarm to staff or train drivers) and internal communication systems that enable communication between onboard staff and train drivers. Freight trains, sleeper car trains and internal combustion engine-driven trains may only use the facility in exceptional cases and after a special dispensation
- The railway tunnel Citybanan may only be operated using rolling stock for passenger traffic, more specifically commuter trains of types that meet fire protection requirements in the applicable TSD:s. Other types of rolling stock for both passenger and freight traffic may only be operated in exceptional cases and only after an approved dispensation.
- The railway tunnel Västlänken may only be operated by electric trains for regional and commuter trains for passenger traffic. Re-routing of freight traffic via the reserved route requires written permission from the Swedish Transport Administration before the transport is carried out.

Table 2.5 Tunnels on the railway network that comply with the TSI relating to safety in railway tunnels

Line number and geographic area	Line number and geographic area	Tunnel	Date	Certi-ficate number	Applicable TSI
405 (Tomteboda) –Värtan, (Karlberg)– (Värtan)	Stockholm norra	Norra stations-tunneln	2018-10-11		
405 (Tomteboda) –Värtan, (Karlberg)– (Värtan)	Värtan	Ruddamms-tunneln	2018-04-16	1807/6/SG/2018/INF/SV/N-112/Cert-681	(EU) nr. 1303/2014
434 (Uppsala central)– (Gävle central)	Uppsala–Samnan	Railway tunnel under Gamla Uppsala (Old Uppsala)	2017-04-26	1807/6/SG/2017/INF/SV/R-059/Cert-531	2008/163/EG as amended by 2012/464/EU
451 (Södertälje hamn)– (Eskilstuna central)	Strängnäs–Härad	Railway tunnel (north tunnel) between Strängnäs and Härad	2018-06-26	1807/6/SG/2018/INF/SV/R-048/Cert-714	2008/163/EG as amended by 2012/464/EU
603 Göteborg Kville– Göteborg Skandia-hamnen	Pölsebo	Krokängs-tunneln			
601 Göteborg	Göteborgs central	Västlänken			

2.4.5 Bridge restrictions

Train traffic generally has priority over shipment with regard to movable bridges. The Swedish Transport Administration intends to coordinate its timetables with those of marine vessels as far as possible, in accordance with applicable agreements.

2.5 Availability of the infrastructure

The availability of the infrastructure is affected by the Swedish Transport Administration's needs for access to the railway facility in order to maintain and further develop it. Rules for this are described in Section 4.3 and Annex 2 E.

On parts of the railway network there is an increased risk of permanent reductions in speed or axle load. These parts are presented in Annex 2 E.

2.6 Infrastructure development

In order to see what sort of development is planned for the infrastructure, reference is made to the following documents:

- National Plan for Transports 2022–2033. Also the county plans comprising different forms of traffic for regional transport infrastructure (the county transport plans) for 2022–2033 may contain measures for the railway system. For more information, see the Swedish Transport Administration's website https://bransch.trafikverket.se/nationellplan.
- The Swedish Transport Administration's implementation plan of investments and reinvestments. It comprises the next six years and is updated annually, see the website https://bransch.trafikverket.se/genomforandeplan.

The feasibility of these initiatives is dependent on the financial resources allocated to the Swedish Transport Administration in the annual budget decision from the Swedish Parliament.

Information about major changes leading to a changed function in the infrastructure during the validity period of the Network Statement is presented on the Swedish Transport Administration's website https://www.trafikverket.se/projekt.

3 Access Conditions

3.1 Introduction

This chapter explains the terms and conditions that apply for access to the Swedish Transport Administration's services, and for train operation on its railway network. The terms and conditions are stipulated by statutes as well as agreements with the Swedish Transport Administration.

A railway undertaking or the party which has applied for or been granted infrastructure capacity or access to a service may refer disputes to the supervisory authority as to whether a decision made by an infrastructure manager, a service facility operator or a vertically integrated company is in accordance with Chapters 4-9, the Railway Market Act (2022:365), regulations that have been issued in connection with these chapters or such directly applicable EU acts as are referred to in Chapter 10, Section 1, second paragraph.

3.2 General access requirements

The Swedish Transport Administration's range of services is directed at railway undertakings and other applicants.

If some form of permit is required to apply for the use of a service, the requirement must be fulfilled by the last day of the application period.

For information concerning last date for application for capacity and transport permits, see Sections 4.2.2 and 4.5, Table 4.2.

3.2.1 Conditions for applying for capacity

An entity which, according to railway legislation, has the right to carry out or organise railway traffic can apply for train paths. For the operations of railway traffic, the law requires a permit, see section 3.2.3.

3.2.2 Conditions for access to the railway infrastructure

A railway undertaking that has its registered office within the EEA or in Switzerland has the right to operate freight traffic and passenger traffic on the Swedish railway network, including the Swedish Transport Administration's railway network. Other persons or legal entities who has its residence or registered office within the EEA or in Switzerland, with a public-service or commercial interest in infrastructure capacity and meets

the requirements of the Swedish Transport Administration with the support of Chapter 7 Section 9 of the Railway Market Act (2022:365), has the right to organise railway traffic on the Swedish Transport Administration's railway network.

With regard to passenger traffic, the government may issue regulations regarding limitations of the right to pick up and drop off passengers on the line between Stockholm central and Arlanda airport.

The government may issue regulations regarding who may operate or organize traffic on the rail infrastructure that is only intended to be used for urban or suburban traffic.

The government also issues regulations regarding who has the right to organise or operate traffic on the Swedish Transport Administration's railway network, in addition to what is specified by the information in this section of the network statement.

3.2.3 Licences

For companies wishing to operate traffic on the Swedish railway infrastructure, a permit is required in the form of:

- a licence (if traffic on the European Union's railway network) and a single safety certificate, or
- national safety permit

Railway undertakings that have their registered office or residence in Sweden apply for license at the Swedish Transport Agency, http://www.transportstyrelsen.se.

Application for national safety permit is made to the Swedish Transport Agency, https://transportstyrelsen.se/.

3.2.3.1 Review of permit

A permit holder is obligated to report to the Swedish Transport Agency changes in its operations that may lead to a review of the permit or the terms and conditions. Furthermore, the Swedish Transport Agency can, under certain conditions, revoke a permit.

3.2.3.2 Safety management system

Railway undertakings shall have a safety management system. Such a system consists of the organisation set up and the measures and

procedures established to ensure safe operation. The safety management system must be documented.

The safety management system must be designed so that the railway undertaking can handle the risks that the operation may give rise to. In the safety management system, the risks that arise in connection with activities conducted by others must also be taken into account.

3.2.3.3 Rescue cards for emergencies

According to the EU Commission's Regulation EU 1169/2010 and EU 2018/762, railway undertakings must provide information to the emergency services in the event that there is an accident or incident with passenger or motor vehicles that requires intervention from the emergency services.

In Sweden, the information is provided, among other things, through so-called rescue cards (insatskort) that contain a simpler technical description of the vehicle. The information should make it easier for the rescue service to carry out a rescue operation in an effective and safe manner.

Railway undertakings are responsible for delivery of rescue cards to the extent required by the EU regulations and are responsible for the correct content of the rescue card.

Rescue cards must be submitted if a completely new type of vehicle is to be put into service or if the vehicle is rebuilt, so that previous information in an already submitted rescue card is changed. On the Swedish Transport Administration´s webside, there is a guide that provides suggestions for suitable content and a template for the design of the rescue cards. The rescue cards must be sent to MCF at the address rib@mcf.se.

3.2.4 Single safety certificate

To carry out traffic on the European Union's rail network, the railway undertaking must have a single safety certificate.

The application for a single safety certificate must be submitted to the One Stop Shop (OSS). If the application refers to traffic in more countries than Sweden, the European Union Agency for Railways (ERA) will handle the matter.

If the railway undertaking is only to operate in Sweden, a safety certificate is issued by either the Swedish Transport Agency or the ERA. In such a

case, the applicant chooses which of the instances is to examine the application. In other cases, the safety certificate is issued by the ERA.

3.2.5 Insurance

A requirement for a licence to be granted is insurance or equivalent that covers the liability to pay damages that may arise as a result of the railway operations. The requirements may be modified according to the operations. In the licence, the supervisory agency shall specify how requirements are adapted and the activities for which the licence applies. If the railway undertaking does not have a license, the same requirements for insurance or equivalent applies for railway undertakings with single safety certificate.

Also, for railway undertakings with national safety permit, the same requirements apply for insurance or equivalent that covers the liability to pay damages that may arise as a result of the railway operations. The supervisory agency may adapt the requirements according to the nature and scope of the operations.

The insurance issued is examined by the Swedish Transport Agency in conjunction with the granting of a permit for railway undertakings, and is monitored via the Swedish Transport Agency supervision.

3.3 Contractual agreements

3.3.1 Framework agreements

A framework agreement is an agreement regarding the use of infrastructure that relates to a longer period than an annual timetable. Infrastructure managers can, in accordance with the Railway Market Act, conclude these types of agreements with railway undertakings or traffic organisers. Framework agreements cannot be enforced upon another applicant to the extent that the agreement specifies particular train paths or if the agreement is otherwise formulated so that it denies other applicants the right to use the infrastructure.

The Swedish Transport Administration currently does not enter any framework agreements.

3.3.2 Track access agreements with railway undertakings

In conjunction with the allocation of a train path, the Swedish Transport Administration and railway undertaking shall conclude the necessary administrative, technical and financial agreements for use of the train path. It is only after the Swedish Transport Administration and the railway undertaking have signed track access agreements that the railway undertaking is given the right to use allocated train paths. Railway traffic may not be operated before a track access agreement has been concluded, and in case the track access agreements terminates prematurely the railway undertaking also loses the right to use the allocated train paths. The agreement must be signed in connection with the allocation, which means no later than 10 working days after:

- allocation in established annual timetable
- allocation in supplemented established annual timetable for applicants who have not already signed a track access agreement for the year, or
- allocation in the ad hoc process for applicants who have not already signed a Track Access Agreement for the year.

The track access agreement specifies the conditions for the traffic, as well as which of the Swedish Transport Administration's governance documents the contracting party must follow. The terms and conditions also contain rules about the parties' responsibilities, consultation and information exchange.

The terms and conditions in a track access agreement do not need to be approved by bodies other than the contracting parties in order to be valid. In the event of disagreement concerning the terms and conditions in a track access agreement, however, the Swedish Transport Agency may, upon request of one of the parties, establish the terms and conditions for the traffic in question, to the extent necessary for the terms and conditions to fulfil the provisions of the railway legislation. The Swedish Transport Agency decision may be appealed to the Administrative Court.

Those services that are not regulated by the track access agreement require a special agreement.

In cases where a railway undertaking feel they need to be exempt from a rule in the Network Statement, a written application must be submitted to the Swedish Transport Administration. When the application is received, the Swedish Transport Administration assesses its complexity and notifies the applicant of the estimated processing time for the case. The basis for a

decision in such a case includes an assessment of the safety risks, the environmental impact and the capacity impact that may occur if the Swedish Transport Administration grants the exemption. The applicant must therefore count on a relatively long processing time in some cases.

For international train traffic, there is a model agreement that has been developed by RailNetEurope. It can be used in parts as a basis for drawing up track access agreements for international traffic.

Templates for track access agreements can be found on the Swedish Transport Administration's website.

3.3.3 Track Access Agreements with non-railway undertakings

The Swedish Transport Administration signs traffic organiser agreement with applicants other than railway undertakings. Such an agreement provides the traffic organiser with the right of disposition over allocated infrastructure capacity, but involves limited responsibility for damage in connection with the use of train paths.

Traffic organiser agreements require a traffic agreement between the Swedish Transport Administration and the railway company that the traffic organiser engages to utilise the allocated capacity.

In cases where a traffic organiser feel they need to be exempt from a rule in the Network Statement, a written application must be submitted to the Swedish Transport Administration. When the application is received, the Swedish Transport Administration assesses its complexity and notifies the applicant of the estimated processing time for the case. The basis for a decision in such a case includes an assessment of the safety risks, the environmental impact and the capacity impact that may occur if the Swedish Transport Administration grants the exemption. The applicant must therefore count on a relatively long processing time in some cases.

For international train traffic, there is a model agreement that has been developed by RailNetEurope. It can be used in parts as a basis for drawing up track access agreements for international traffic.

Templates for track access agreements can be found on the Swedish Transport Administration's website.

3.3.4 General terms and conditions

The Swedish Transport Administration's general terms and conditions are regulated by the Administration's track access agreement, see chapter 8.

Documents submitted to the Swedish Transport Administration are classed as official documents. The principal rule is that these are public. The Swedish Transport Administration may apply confidentiality to information contained in documentation if there are specific reasons to assume that the individual will incur damages if the information is revealed. For example, an entity that applies for capacity. In accordance with the Public Access to Information and Secrecy Act (2009:400), the Swedish Transport Administration may not, without further notice, publish or utilise information that the applicant provided regarding their business and operational affairs in connection with the application. The applicant should therefore specify in the application which information should be regarded as business and operational affairs, and why this information should be subject to confidentiality. If somebody requests a document, the Swedish Transport Administration makes the decision whether the document may be released or if it shall be subject to confidentiality. The applicant's understanding is therefore not decisive, but it may be significant for the assessment of confidentiality.

3.4 Specific access requirements

Traffic on the Swedish Transport Administration's infrastructure must be operated in accordance with the governing documents set out in Annex 3 A.

Railway undertakings must have the necessary supplementary provisions in their traffic safety instructions, in accordance with the Swedish Transport Agency's regulations.

Additional information is available on the Swedish Transport Agency website transportstyrelsen.se.

3.4.1 Rolling stock acceptance

The approval process described in EU Regulation 2018/545 on practical arrangements for railway vehicle authorisation shall be applied. In order for railway vehicle to be put into service it is necessary that they are approved. This also applies to modifications which affect safety.

There are exceptions to the requirement for approval. Policy documents for vehicle approval area are available on the Swedish Transport Agency's website transportstyrelsen.se.

3.4.1.1 Communication system GSM-R

GSM-R vehicle equipment that fulfils the requirements in TSI "Traffic Control Command and Signalling" as well as the EIRINE[1] -specifications must be installed in all vehicles where communication with the Swedish Transport Administration's traffic centre is essential.

The process of accessing the Swedish Transport Administrations GSM-R-network is described in Section 5.5.1.

The previous specific protection filter requirement for the radio module EDOR, according to document GSM-R Terminal filter Technical Specification (TRV 2014/71742),"Type 1 Passive downlink and uplink band pass filter" will be discontinued as of 2026-01-01, when the new established license conditions from Swedish Post and Telecom Authority (PTS) takes effect.

Protection requirements in accordance with the current standard, ETSI specification TS 102 933-1 V2.1.1 (2015-06), will remain in place for EDOR in the same manner as for CAB-radio. Also note that the previous specific protection filter requirement (according to TRV 2014/71742) for EDOR remains in effect for all vehicles operating in the Swedish railway system until 2025-12-31.

The following protection requirements apply to CAB-radio and EDOR (ETCS Data Only Radio):

- For CAB-radio

  The Swedish Transport Administration requires that protection for the CAB-radio's radio module is installed in the vehicles as follows:

  Fulfil at least the protection requirements that are stipulated in ETSI specification TS 102 933-1 V2.1.1 (2015-06) for radio modules in CAB-radio by an improved radio module, external protective filter or a combination of these. Without the above described protection for CAB-radio on-board, a vehicle is not allowed to operate on the Swedish railway system.

- For EDOR

  Swedish Transport Administration requires that protection for the EDOR radio module is installed in the vehicles as follows:

  Fulfil at least the protection requirements that are stipulated in specification TS 102 933-1 V2.1.1 (2015-06) for EDOR radio modules, by an improved radio module, external protective filter or

[1] EIRENE – European Integrated Railway Radio Enhanced Network

a combination of these. Without the above described protection for the EDOR radio module on-board, a vehicle is not allowed to operate on the Swedish railway system.

3.4.2 Staff acceptance

For personnel who are to drive vehicles on the Swedish Transport Administration's track system, certain requirements must be fulfilled, as specified in the Railway Safety Act (2022:367), the Railway Safety Ordinance (2022:418), the Act on the certification of train drivers (2011:725), the regulation of competence for train drivers (2011:728), and regulations that apply with the support of these statutes.

The railway undertakings' fulfilment of these requirements is reviewed through the Swedish Transport Agency's permit examination, including the railway undertaking's provisions concerning training and certification requirements, health requirements and medical examinations for personnel with duties of importance to traffic safety.

It is the railway undertaking's responsibility to ensure that the provisions and conditions which determine whether or not a permit is granted are observed.

For access to a railway yard with emergency status plan, an ID06 authorisation card and training in emergency status plans, among other things, are required, see TDOK 2013:0657 *Order- and protection regulations for railway yards*.

Personnel who do not perform duties of importance to traffic safety, but who must work line side, shall be trained in and follow the Swedish Transport Administration's rules for working environment and safety for railway undertakings when performing activities line side, in accordance with the General Terms and Conditions.

3.4.3 Exceptional transport

An exceptional transport is a transport that deviates from the requirements or prerequisites specified in Chapter 2. These types of transports may be transported on the condition that the Swedish Transport Administration has issued transport conditions that describe the prerequisites and, where applicable, transport permit. See Section 5.4.2.

3.4.4 Dangerous goods

What is meant by dangerous goods, and the rules that apply for transportation on the railway are specified by:

- the Act on carriage of dangerous goods (2006:263),
- the Ordinance on carriage of dangerous goods (2006:311),
- The regulations of the Swedish Civil Defence and Resilience Agency (MCF), (RID-S), concerning the transportation of dangerous goods, mcf.se/en/.

Prior to the commencement of the journey, railway undertakings that intend to transport dangerous goods shall report this to the Swedish Transport Administration, see Annex 6 A.

Railway undertakings shall on request provide information, in accordance with the Swedish Civil Contingencies Agency's regulations, about the dangerous goods geographical location. If necessary, the railway undertaking is contacted via the emergency number used in case of an accident. For contact in case of an accident, see Annex 8 A, Section 1.3.

At blocked line operation and shunting, UN-number shall be provided if requested in case of an accident or pollution.

3.4.5 Test run

A test run is an inspection of vehicles or vehicle combinations and/or track systems. The inspection requires temporary changes to the infrastructure's technical operation and/or that the infrastructure is used in a way that differs from the ordinary routines.

In order to perform a test run with a vehicle, the approval of the Swedish Transport Agency is required for temporary use of the vehicle or vehicle combination. A valid train path adjusted to the test run is also required. The test run shall be performed in accordance with the conditions established by the Swedish Transport Administration, see Section 5.5.3.

3.5 Requirement for ETCS equipment

For routes and operational points equipped with ERTMS, the vehicles that are to perform the operations are required to have the ETCS train protection system, which must be used in accordance with the traffic rules during the test run within the traffic system. The routes that are equipped with the ERTMS level 2 (E2) and ERTMS level 3 (E3) traffic systems are shown in the map service.

3.5.1 Requirements for ERTMS cryptographic keys

In order to operate vehicles with the train protection system ETCS on the sections and operational points equipped with ERTMS, access is required to valid ERTMS cryptographic keys. These keys must be installed in the vehicles train protection system.

The railway undertaking is responsible for ensuring that vehicles used for each individual train path have the necessary and valid ERTMS cryptographic keys for the relevant ETCS-equipped sections.

If the ERTMS cryptographic key for use in the infrastructure managed by the Swedish Transport Administration is suspected to have been exposed, the railway undertaking must immediately notify the Swedish Transport Administration via e-mail at kmc@trafikverket.se. The message must state the ETCS ID on the relevant on-board equipment.

4 Capacity Allocation

4.1 Introduction

In this chapter, the Swedish Transport Administration's process for allocation of capacity for train paths and for services, in accordance with Section 5.3 and 7.3, as well as engineering works is described.

4.2 General description of the process

The process for allocation of capacity is divided into:

- Allocation process that produces an annual established timetable. This is divided in two phases. In phase 1, the applications for train paths that were received no later than the last day for applications, are handled which results in an established annual timetable. In phase 2, the established annual timetable is complemented with applications received after the last day for application, resulting in a supplemented established annual timetable. Capacity that has been allocated to an applicant in the established annual timetable, can be adjusted to coordinate with the late path request in phase 2 only if the applicant, who has been allocated the capacity, consents thereto.
- Process for revision of the annual timetable where train paths that are not adapted to temporary capacity restrictions in the established annual timetable, are adapted. See Section 4.8.2.1.
- Ad hoc process for updating the supplemented established timetable for new capacity requirements (e.g., the adjustment of allocated capacity or entirely new requirements).
- Successive planning. Based on the allocated train path, the Swedish Transport Administration can optimise train routes for the train path up to five days before the train departs or, when needs arise due to late changes, no later than 24 hours before the train departs. The optimization of train paths does not affect agreed times and locations. When publishing the production plan, the times and locations for a train are locked along the entire route.
- The Swedish Transport Administration also handles the allocation of rail-related services in parallel with application of train paths.

4.2.1 Capacity prerequisites

4.2.1.1 Planning conditions in the allocation process

To achieve efficient capacity utilisation, the Swedish Transport Administration applies the following planning conditions during the allocation process:

- designated temporary capacity restrictions, see Section 4.3.3
- construction conditions, see Annex 4 D
- bottleneck plans, see Section 4.2.1.3 and Annex 4 E
- capacity plans, see Section 4.3.4 and Annex 4 F.

4.2.1.2 Pre-arranged train paths for international corridors

No later than eleven months before traffic commencement of the timetable, the pre-arranged train paths (PaPs) for the Scandinavian-Mediterranean Rail Freight Corridor (ScanMed RFC) are published on the ScanMed RFCs website www.scanmedfreight.eu, and in the web application Path Coordination System (PCS).

The corridor's pre-arranged train paths is a product reserved for international freight traffic in the annual timetable. The train paths are produced by infrastructure managers in consultation with the corridor organization and are based on studies of the transport market. The capacity is directly applied to and allocated by the C-OSS.

Since these train paths have high priority and shall be protected from changes during the timetable process, it may be more advantageous for international freight traffic to apply for these.

Also, see Section 4.10.

4.2.1.3 Bottleneck plans

The Swedish Transport Administration can create bottleneck plans with the aim of achieving efficient capacity utilisation in traffic-intensive areas where the demand for capacity is expected to be higher than the available capacity. For the same purpose, Bottleneck plans can be created for sections that receive increased capacity utilisation in the event of temporary capacity restrictions that result in a very large traffic impact.

Bottleneck plans report the available capacity in a designated geographical area or along a railway line in the form of pre-planned train path channels.

The train path channels form the basis for the applicant's application for capacity and are used in the allocation process during the Swedish Transport Administration's construction of the annual timetable.

The bottleneck plan contains information on infrastructure and traffic structure as well as information on the number of train path channels. These describe how many trains that can operate on a route. The number of train path channels is determined based on infrastructure and traffic structure as well as requirements for punctuality and robustness in the traffic system.

Bottleneck plans can apply to the entire annual timetable period or part of it.

The Swedish Transport Administration has created a bottleneck plan for the annual timetable 2027 for the following areas:

- Herrljunga–Alingsås, Herrljunga–Borås–Göteborg and Herrljunga–Öxnered
- Söderhamns västra–Sundsvall–Umeå–Vännäs
- Bergslagsbanan Gävle–Frövi.

See Annex 4 E.

4.2.1.4 Capacity for services at operational points

The train path and the basic services *access to loading area, access to marshalling yards, tracks or track area for train formation* and *tracks for holding* require access to tracks at operational points. The same track can be used at different times for several different basic services at one operational point. An example of this is tracks included in the basic services *tracks or track area for the train formation* and *tracks for holding*. For tracks that can be used for several basic services the Swedish Transport Administration can, in the event of a conflict of interest between several applications in conjunction to the allocation process, state which services that have priority.

When allocating of the service *tracks for holding*, the Swedish Transport Administration will, when necessary, prioritise vehicle circulation with shorter turn-around times than 14 hours. Saturdays, Sundays, holidays, Midsummer's Eve, Christmas Eve and New Year's Eve count as zero hours.

The holding of freight traffic vehicles in connection with shunting being carried out in a marshalling yard or during holding in other railway yards, the time from an arriving train to a departing train shall not exceed 36

hours during the period Monday–Friday, and 60 hours during the period Friday–Monday. The time is calculated per vehicle, i.e., per separate wagon or separate engine.

In connection with the holding of freight traffic vehicles in a railway yard waiting for loading or unloading, the time shall not exceed 72 hours. Saturdays, Sundays, holidays, Midsummer's Eve, Christmas Eve and New Year's Eve count as zero hours. In order to determine the vehicles and the train paths, the railway undertakings shall in their applications to the Swedish Transport Administration state which turn-rounds they intend to use.

These rules of priority may be viewed as guidance for how the Swedish Transport Administration will allocate capacity. Assessments are always based on the general rules of procedure.

Access services are a prerequisite for the facilitation of additional services, regardless of whether or not the Swedish Transport Administration provides them. Additional services that the Swedish Transport Administration provide, and which assume capacity, are services relating to special transportations and dangerous goods.

The applicant must design their application in accordance with the planned vehicle's properties and state the vehicle length. The application must also show how the train path connects to the service.

The service *connection to electricity when holding railway vehicles*, Section 7.3.11, can be offered to those who simultaneously apply for tracks for holding.

In support of the application for track capacity in areas with high capacity utilisation, the Swedish Transport Administration reports on special capacity requirements. They show how the Swedish Transport Administration will plan the capacity in order to achieve efficient utilisation of the infrastructure. See Annex 4 D.

It is preferable for the applicant to participate actively in the process of allocation of access to service facilities at operational points where marshalling and train formation are to be carried out. The Swedish Transport Administration also invites those who provide these services. Participation is important in the event of conflicts of interest and capacity shortages, in order to facilitate solutions that are effective for all actors.

4.2.1.5 Guiding principles in the event of conflicts of interest at operational points

An application for the service *tracks for holding* without direct connection to a train path is always granted on certain conditions. If the application for holding tracks linked to a train path is then received and approved, the company granted conditional holding must move its vehicles (at least 14 days' notice is given).

During the allocation of the services *tracks to intermodal terminals* and *access to loading areas*, Section 7.3.3, applications that can be linked to unloading and loading of goods will be attributed a higher value than other use of the tracks (e.g., holding tracks) at these areas. Access required for only holding on tracks where the services are offered, will always be subject to conditions. A presumption is that no application that can be linked to loading or unloading for the services *access to loading area* or *tracks to intermodal terminal* have been received. The conditional holding is revoked if the service is applied for and allocated to another entity. In this case, the entity that was allocated the conditional capacity must hold its vehicles in another location (following a minimum 14 days' notice period). If the applicant does not move their vehicles by the specified deadline, the Swedish Transport Administration is entitled to have the vehicles moved at the applicant's expense.

During the allocation of tracks included in the marshalling yards in accordance with Section 7.3.4.3, applications that can be linked to the service *access to marshalling yards* will be valued higher than others will (e.g., holding), see Section 7.3.4.6.

Track for the holding of vehicles adjacent to a platform is normally only awarded for the embarkation and disembarkation of passengers, the replenishment of catering supplies and lighter operational maintenance.

Track for the holding of freight trains vehicles in connection to adjoining facilities, such as access to facilities within cargo terminals, is normally only awarded in direct association with the use of the relevant facility. Applicants must, upon request, be able to submit documentation to the Swedish Transport Administration showing a connection to the use of a service facility.

4.2.2 Application for capacity

An application for capacity for train paths and access to services is made via the e-services described below. Instructions for what must be included in an application for capacity for train paths is available on the Swedish

Transport Administration's website. Corresponding instructions are also available for applications for services.

An application requires a so called company code. Application and allocation is free of charge via https://uic.org/support-activities/it/rics.

An application for train path is required for transportation over operational point boundaries or between station parts within a station, see Section 5.3.

If an application applies to capacity on more than one infrastructure manager's railway network, it is sufficient to submit an application to just one of the infrastructure managers, who then coordinates the application with the other involved infrastructure managers. All international traffic must be applied for via PCS, see Section 4.2.2.1.

Timeline for the allocation process, see Section 4.5.

4.2.2.1 Application for capacity for international train paths

Capacity for international train paths, including the Swedish path, is applied for and allocated in the internet-based tool Path Coordination System (PCS), https://rne.eu/it/products/pcs/. PCS is a web application RNE provides for Infrastructure Managers (IMs), Allocation Bodies (ABs), Rail Freight Corridors (RFCs), Railway Undertakings (RUs) and traffic organiser. PCS handles the communication and coordination of applications for international train paths.

Access to PCS is free of charge. A user account can be requested via the RNE PCS Support: support.pcs@rne.eu. More information can be found on https://rne.eu/it/products/pcs/.

All international traffic must be applied for via PCS. However, late path requests and ad hoc applications for capacity for the Swedish part of an international train path can also be made via the e-service MPK Korttid. Services linked to the international train path is applied for in the national application system on the Swedish Transport Administration's website.

All pre-arranged paths (PaPs) in the Scandinavian-Mediterranean Rail Freight Corridor (ScanMed RFC) should be applied directly to the Corridor One-stop-shop (C-OSS). For more information: http://www.scanmedfreight.eu/. Also, see Section 4.10.

4.2.2.2 Application for capacity for national train paths and capacity for other services

The application for capacity for national train paths and capacity for other services is made via the e-services MPK Långtid and MPK Korttid. Authorisation is required for the application, see the Swedish Transport Administration's website.

Applications for the use of the brake testing facility at Skandiahamnen in Gothenburg, see instructions in the e-service on the Swedish Transport Administration's website.

The portals for applications (MPK Långtid and MPK Korttid) are based on the same principle, where a standard daily calendar is used as a basis for describing running days. However, in MPK Korttid there is an extension function where it is possible to describe running days even from a deviating traffic calendar in accordance with Annex 4 C. That calendar in turn translates the description into the daily calendar.

4.2.2.3 Withdrawal of application

The one who wants to withdraw an applied-for train path after the last day of application but before capacity has been allocated in the annual timetable, or who wants to decrease lengths, weight or number of vehicles for an applied-for train path, can send the request for reduced needs via the system MPK Långtid. The request can refer to all or some of the requested running days and the whole section or part of the section. For withdrawal of allocated capacity, see Section 4.8.1.

The one who wants to withdraw an applied-for service after the last day of application but before capacity has been allocated in the annual timetable, in accordance with Section 7.1, must inform the Swedish Transport Administration via trafikplanering.jarnvag@trafikverket.se.

4.2.3 Consultation

When the draft annual timetable is produced, the Swedish Transport Administration may contact the applicants informally. Capacity for international traffic, including border passages, is coordinated by the Swedish Transport Administration with infrastructure managers in the countries concerned before the proposal for annual timetable is published.

4.2.4 Proposal for annual timetable

Proposal for annual timetable includes allocation of capacity based on:

- all applications for train paths, national and international received by 13th of April 2026
- train paths which are adapted to the designated temporary capacity restrictions and any capacity plans
- the estimated need for reserve capacity for ad hoc applications pertaining to train paths and services, both national and international.

The Swedish Transport Administration also reports the following in connection with the proposal for annual timetable:

- allocation of capacity for received and processed applications for rail-related services
- the need for reserve capacity for transportation of work vehicles
- residual capacity.

4.2.4.1 The applicant's opinions on the proposal for annual timetable

The applicant's opinions regarding the proposal for annual timetable shall be submitted as comments. Opinions on capacity shall be submitted via the e-service for applications. Opinions that cannot be submitted via the e-service can instead be submitted via e-mail to trafikplanering.jarnvag@trafikverket.se.

Opinions can be

- general, meaning they can be general regarding a traffic layout
- specific, meaning they can be regarding specific needs for train paths and services that diverge from the application.

Examples:

- broken association
- divergent points of reference
- times of departure or times of arrival that diverge from the application
- running time.

The changes listed below shall not be regarded as comments on the proposal for annual timetable

- changes compared to the application

- new trains
- requests for altered points of reference
- requests for increased wagon weight, train length, or lower speed than applied for
- requests for change of vehicle type or train composition which means that suggested train route cannot be maintained
- requests for more or other running days than applied for
- requests regarding changed times from the application.

The above changes that are not considered as comments, shall be submitted as a late path request.

If the opinions regarding the proposal for annual timetable include the need for adjustments, the coordination stage of the process begins, see Section 4.5.4. If no adjustments are necessary, the annual timetable can be established.

4.3 Capacity allocation for Temporary Capacity Restrictions

4.3.1 Temporary Capacity Restrictions

The engineering works that are to be carried out are specified as temporary capacity restrictions. A temporary capacity restriction may consist of one or more engineering work objects. Engineering work objects contain restrictions (closed tracks, voltage-free area and speed reduction). Restrictions from the same engineering work object may be linked to different temporary capacity restrictions, as they may have different traffic impacts.

In Annex VII of the Directive 2012/34/EU defines the requirements for an internationally harmonised process for coordination and publication of known Temporary Capacity Restrictions (TCRs), including the consultation of applicants. There are different classifications of TCRs – taking into consideration the consecutive days of TCRs and its impact on traffic. These are:

Table 4.1 Classification of temporary capacity restrictions

Classification	Consecutive days	Impact on traffic (estimated traffic cancelled, re-routed or replaced by other modes of transport)
Major impact TCR	More than 30 consecutive days	More than 50 percent of the estimated traffic volume on a railway line per day
High impact TCR	More than 7 consecutive days	More than 30 percent of the estimated traffic volume on a railway line per day
Medium impact TCR	7 consecutive days or less	More than 50 percent of the estimated traffic volume on a railway line per day
Minor impact TCR		More than 10 percent of the estimated traffic volume on a railway line per day

More information about current temporary capacity restrictions is available on the Swedish Transport Administration's website.

4.3.2 Deadlines and information provided to applicants

The Swedish Transport Administration determines its need for capacity for engineering works for the upcoming annual timetable on two occasions. At the first occasion, temporary capacity restrictions are established with a major, high and medium impact on traffic. At the second occasion, temporary capacity restrictions with minor impact on traffic are established. Prior to the establishments, those concerned are consulted. For schedule, see table in Section 4.5.

Once the temporary capacity restrictions have been established, additional measures may be needed for various reasons to carry out additional capacity impacting measures or changes to an already established capacity restriction.

The Swedish Transport Administration conducts consultations for temporary capacity restrictions in accordance with the schedule in Section 4.5. Opinions shall be submitted to trafikplanering.jarnvag@trafikverket.se.

Once the temporary capacity restrictions have been established, additional capacity-affecting measures or changes to an already established capacity restrictions may be needed for various reasons. According to the regulations (Annex VII of the Directive 2012/34/EU), it may be relevant

- to restore safe train traffic
- if the need arises at a time that is beyond the Swedish Transport Administration's control
- if the time limits for the publication of temporary capacity restrictions set out in Annex VII are cost-effective or unnecessarily adverse to the lifespan or condition of the infrastructure
- if all the applicants concerned agree to it.

When such a situation arises, the Swedish Transport Administration immediately consults with the applicants concerned. In cases where train paths have been allocated, traffic will be adapted based on the new conditions.

Condition monitoring (rolling examination of the status) of the railway network is based upon measuring plans connected to the draft annual timetable.

See also Section 4.8.2.

4.3.3 Designated Temporary Capacity Restrictions

Designated temporary capacity restrictions form part of the conditions for the allocation process, including in terms of accessibility and speeds on the rail network. All applications for capacity for train paths or services must be adapted to designated temporary capacity restrictions, unless the Swedish Transport Administration has specified otherwise.

When a designated temporary capacity restriction causes traffic interruptions on the regular route between two stations, i.e. the route that the applicant wishes to operate the train on the majority of its operating days, then the applicant must apply for a re-route path in order to be able to run the train between these two stations when the the designated temporary capacity restriction is ongoing.

Designated temporary capacity restrictions are published on the Swedish Transport Administration's website in connection with the approval of temporary capacity restrictions with a major, high and medium impact on traffic.

In order for a temporary capacity restriction to be regarded as designated temporary capacity restriction it must result in traffic disruption.

4.3.4 Capacity plans

When temporary capacity restrictions continues for more than 30 consecutive days and affects more than 50 per cent of the estimated traffic volume, the Swedish Transport Administration draws up so-called capacity plans in consultation with applicants. In the capacity plans, the Swedish Transport Administration presents the preliminary distribution of the remaining capacity between the different types of train traffic in accordance with point 17 of Annex VII to the Directive 2012/34/EU.

The capacity plans are part of the planning conditions in the process for capacity allocation. After the deadline for submitting applications in the allocation process for the annual timetable, the Swedish Transport Administration can contact applicants whose application is considered to be incorrect or need to be supplemented to meet the requirements for the capacity plan. In these contacts, it is important that the applicants respond quickly to any queries, to not cause unnecessary delays in the allocation process. In cases where the response is not submitted within the timeframe, normally five working days, the Swedish Transport Administration can reject all or parts of the application for train paths that are affects the capacity plan. This can also happen when there are no conditions to grant an application even though it has been adapted to the capacity plan.

Any capacity plans are reported in Section 4.3.4.2 and are presented in their entirety in Annex 4 F and in connection with early dialogue before the upcoming annual timetable.

4.3.4.1 Criteria and train types for re-routing during TCR that have major impact on traffic

In the consultation process during the development of the capacity plan between the Swedish Transport Administration and known railway undertakings, train types are used to distribute the preliminary capacity on the route with temporary capacity restrictions. The train types have been developed on the basis of Annex 4 B, section 3.2 for freight traffic, section 3.3 for passenger traffic and section 3.4 for empty transports.

Which train types that are to be used during the allocation of preliminary capacity is based on the latest application and which priority category and code specified in the application for the current annual timetable.

The train types with associated priority category and code covered by Annex 4 B, Section 3.2, 3.3 and 3.4, are: commuter trains (SP, RP), regional trains (RX, RS, RL, RI, PO), long-distance trains (FX, FS, FL, FI, PO), freight trains (GS, GT, GR, GN, GF, GO), and service trains (TT, EL).

Consideration is also given to relevant factors in order to, as far as possible, meet the shifting needs of the railway undertakings and to minimise the negative consequences of the restriction, as well as the commercial and operative limitations of the applicants and the expected development of traffic.

In case of reduction of the traffic and in the cases where consensus regarding the allocation of preliminary capacity is not reached, the Swedish Transport Administration takes into consideration the following circumstances during the preliminary allocation of capacity:

- Supply
- Supply refers to how much traffic with different train types is operated on the location or route in question. The purpose is to ensure that the different types of traffic can be operated even when the capacity is reduced. This is done as an assessment based on experience on what the traffic normally looks like, supplemented with any other knowledge about the development of the traffic. The number of trains running is reduced to a combination of train types, which means that the transport needs that are normally met can also be maintained, albeit to a limited extent. It also means that the available capacity can be distributed differently over the hours of the day and weekdays. The distribution is consulted with potential applicants in connection with the capacity plan being developed.
- Difficulties to replace with other modes of transport
- Another component in the assessment of which train types are to be prepared for capacity in the event of limited availability is the possibilities of replacing a train type in another way. It can, for example, be the conditions for
- replacing train with bus or other type of traffic
- refer to another train
- re-route trains via other lines
- transfer freight transports to another type of traffic
- move forward or postpone transports
- Time sensitivity for different types of traffic

- A third component is the assessment of how time-sensitive the transports in the different train types are. Balances must be made against any travel time or transport time extension that arises if a train cannot run at the available capacity. Factors weighed into this are
- time sensitivity for passengers and the reasonableness of the travel time being extended if the train is replaced by a bus or that passengers are referred to another train
- the goods cannot arrive at all
- that the transport time for goods is extended and means that goods are destroyed or unusable
- that the transport does not reach an important connection for onward transport.

The priority between train types may vary over the day.

If the applications for the annual timetable, to which the capacity plan applies to, show that the applications exceed the preliminary distribution according to the capacity plan for the train types concerned, the resulting shortcoming is handled and regulated in the ordinary allocation process but within the same train type.

4.3.4.2 Current capacity plans

The Swedish Transport Administration has, prior to the annual timetable 2027, developed two capacity plans for capacity limitations that meet the criteria in point 17 of Annex VII to the Directive 2012/34/EU:

- Alingsås–Olskroken
- Malmbanan (the Iron Ore line).

See Annex 4 F.

4.3.5 Other temporary capacity restrictions' impact on the allocation process

Applications to the annual timetable and late path requests do not need to be adapted to temporary capacity restrictions that are not designated temporary capacity restrictions or are related to a capacity plan. Train paths that are not adapted to temporary capacity restrictions in the established annual timetable are instead adapted in the so-called revision process, see section 4.8.2.1.

For the ad hoc process, the supplemented established annual timetable comprises the prerequisites for accessibility and speed on the railway network. All applications for capacity for train paths or requirements for services in the ad hoc process shall be adapted to established planning of temporary capacity restrictions.

4.4 Impacts of Framework Agreements

The Swedish Transport Administration is not signing any framework agreements at present.

4.5 Path allocation process

Schedule for allocation of capacity

Table 4.2 Schedule for allocation of capacity

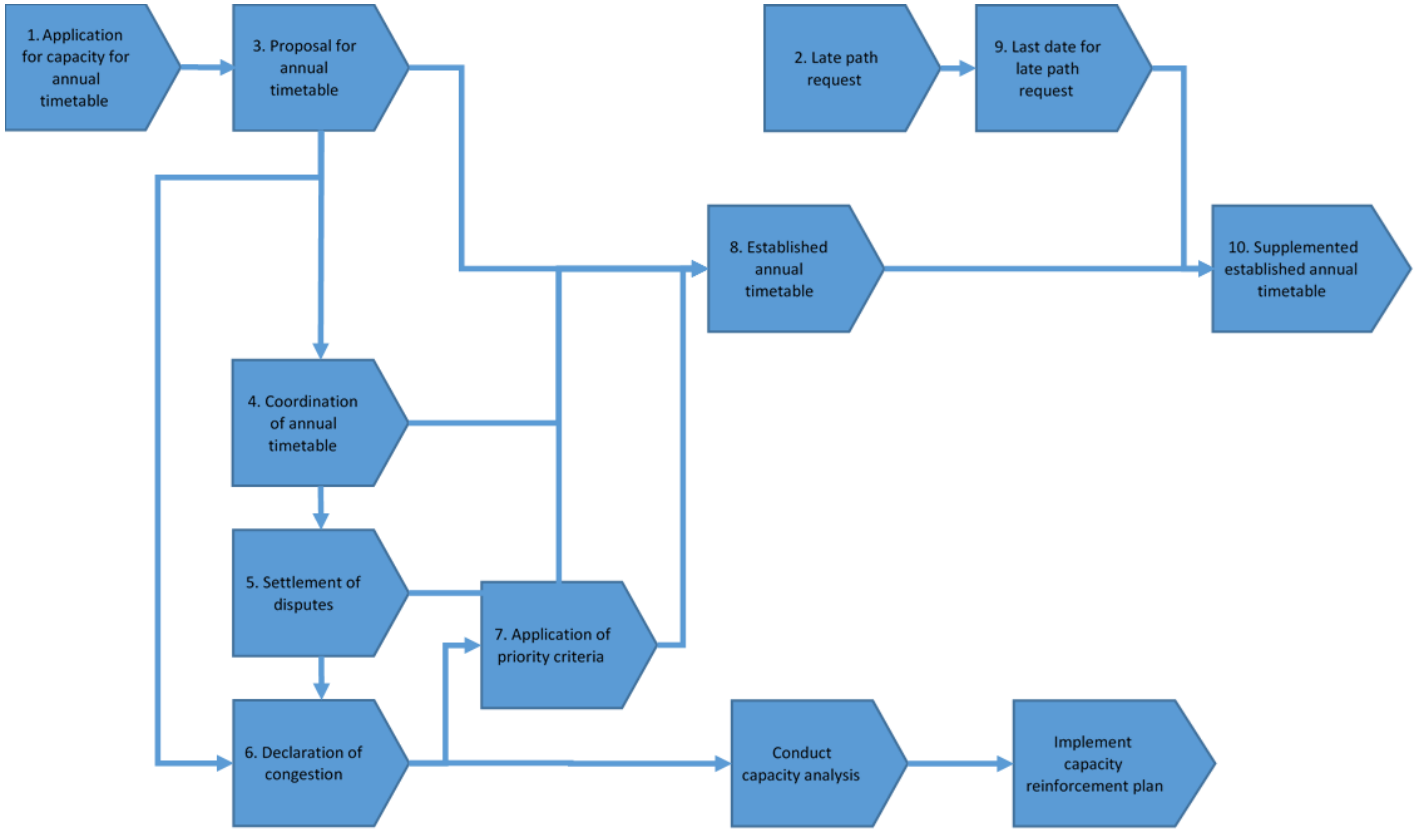
Reference to process map	Date	Activity
	2025-12-12	Establishment of Temporary Capacity Restrictions with major, high and medium impact on traffic, for annual timetable 2027.
	2025-01-12	Pre-arranged train paths (PaP) for ScanMed Rail Freight Corridor in the annual timetable 2027 are published.
	2025-01-29	Early dialogue: The Swedish Transport Administration invites railway undertakings and other potential applicants to a dialogue on conditions prior to future timetables. Early dialogue is part of the Swedish Transport Administration's proactive work and is intended to facilitate applications for the annual timetable 2026
	2025-02-13	First date of application to annual timetable 2027.
1	2025-04-13	Last date for application for train paths and

		services for annual timetable 2027.
2	2025-04-14	First date for late path request in the annual timetable 2027.
	2026-05-04–2026-06-15	Consultation period for Temporary Capacity Restrictions with minor impact for annual timetable 2027.
3	2026-07-06	Proposal for annual timetable 2027 is published.
	2026-07-07–2026-08-07	Period for opinions and coordination for train paths and services for annual timetable 2027.
	2026-08-07	Opinions on the proposal for annual timetable 2027 must have been submitted to the Swedish Transport Administration by 09.00 at the latest.
	2026-08-24	Establishment of Temporary Capacity Restrictions with minor impact for annual timetable 2027.
	2026-08-24	Establishment of international traffic applied by PCS. Applies also to national train paths applied for as feeders/outflows to ScanMed RFCs pre-arranged train path (PaP).
4	2026-08-07–2026-08-30	Continued period for coordination for annual timetable 2027.
5	2026-09-01	Last date of request for dispute resolution for train paths for annual timetable 2027.
	2026-09-14	Last date for when dispute resolution for annual timetable 2027 must be concluded.
6	2026-09-14	Last date for decision to declare the

		infrastructure congested.
7	2026-09-18	Last date for capacity allocation with application of priority criteria.
8	2026-09-22	Established annual timetable 2027 is published.
	2026-10-06	Last date for signing Track Access Agreement based on established annual timetable.
9	2026-10-19	Last date for late path request and services for annual timetable 2027.
	2026-10-21–2025-11-11	Consultation period for Temporary Capacity Restrictions with major, high and medium impact for annual timetable 2028.
10	2026-11-05	Last day for the Swedish Transport Administration to respond to late path requests. Supplemented established annual timetable 2027 is published.
	2026-11-05	The ad hoc process for annual timetable 2027 begins.
	2026-11-13	The last date for the submission of announcement information for passenger trains in annual timetable 2027.
	2026-11-19	Last date for signing Track Access Agreement based on supplemented established timetable. Only for applicants who only have applied for capacity by late path request.
	2026-12-04	Publication and establishment of Temporary Capacity Restrictions with major,

		high and medium impact for annual timetable 2028.
	2026-12-13	Annual timetable 2027 takes effect (traffic commencement).

Figure 4.1 Process map for allocation of capacity



4.5.1 Annual timetable path request

Applications for capacity for train paths and other services received no later than 2026-04-13 are managed in the allocation process and result in an established annual timetable.

4.5.2 Late path request for annual timetable

Additional requirements for services as well as applications for capacity for train paths received after 2025-04-13 shall be processed after the established annual timetable, in the order in which they are received and shall be approved on an ongoing basis. Capacity that has been allocated to

an applicant in the established annual timetable can be coordinated and adjusted only if the applicant, who has been allocated the capacity, consents thereto.

The result of the late path requests for train paths is published in the supplemented established annual timetable. The Swedish Transport Administration also reports applications for services.

4.5.3 Ad hoc path request

Applications for new capacity, cancellation or modification of existing capacity for train paths and services, received after the supplemented established annual timetable has been published, will be handled within the ad hoc process.

Submitted applications are processed in the order in which they are received. The processing time may vary depending on the complexity of the application.

If a change needs to be made to an application, the applicant shall recall the submitted application and replace it with a new one. The replacement application will then be given a new submission date.

To facilitate the processing of the application, the need must be clearly stated, for example system M, and any associations to basic services must be clear.

Applications for capacity in the ad hoc process are categorised as follows:

- Time for submitting application:
    - Ad hoc application: submitted as soon as possible after the need has become known to the applicant, but no later than 5 working days before the first departure.
    - Unplanned ad hoc application: submitted less than 5 working days before the train's first departure. The application needs to include the request for priority processing.
- Number of requested traffic days:
    - **Application for single needs**: a need with one (1) traffic day or a plan with a round trip.
    - **Application for recurring needs**: more than one traffic day with the same origin, destination and timetable.

Depending on categorisation, answers with be provided as follows:

Table 4.3 Time limits in the ad hoc process

	Ad hoc-application	Unplanned ad hoc (priority processing is required)
Single needs	Response within 5 working days	Response at the earliest opportunity, before traffic commences
Recurring needs	Response within 20 working days	Not applicable

Time limits for an ad hoc application when additional monitoring of stations is necessary is presented in Annex 4 A.

4.5.3.1 Prioritized processing for unplanned for ad hoc applications

If an unplanned ad hoc application is needed, the railway undertaking supplements its application in the application system with requests for priority processing, thereby requesting priority from first in, first out. The request for priority processing must describe in the free text field the reason for the exception, an account of the conditions and why it was not possible to plan at an earlier stage.

Priority processing is granted when it is possible for the Swedish Transport Administration to handle the application based on the current application status and load.

4.5.3.2 Offer

The Swedish Transport Administration can divide the need into several partial offers to the applicant. The applicant must accept or decline offers from the Swedish Transport Administration. If no answer is given within 24 hours from the time of the offer, the offer will expire. If the applicant has selected auto-accept as the response option for the application in the application portal, an offer will be sent out which the applicant automatically accepts.

For applications requesting priority processing, only auto-accept will be available as a response option.

4.5.4 Coordination process

The aim of the coordination process is to coordinate the needs of the applicants for capacity and services, in order to produce an established annual timetable without conflicts of interest. During the coordination, the Swedish Transport Administration may contact the applicants informally or invite them to the coordination meetings.

This step of the process is only managed if conflicts of interest exist. If all conflict of interest are resolved during this step, the annual timetable can be established.

4.5.5 Dispute resolution process

If a conflict of interest between incompatible applications about train paths is judged not to be resolved during the coordination, the applicants that are involved in the conflict can request dispute resolution at the latest at a given point in time, see figure 4.1. A request for dispute resolution must be submitted to the Swedish Transport Administration via e-mail to trafikplanering.jarnvag@trafikverket.se. Applicants who request dispute resolution must at the same time submit:

- a description of the conflict of interests,
- a description of the consequences for their own production
- a justification of why the solution suggested during the coordination was not accepted.

Applicant affected by the conflicft may suggest other solutions to the conflict of interests.

After the dispute resolution has been requested, the Swedish Transport Administration summons the parties involved to a dispute resolution consultation, where the Swedish Transport Administration, in consultation with affected applicants, tries to find solutions. If all conflicts of interests are resolved in this step, the annual timetable can be established. If a conflict of interests was not resolved, the Swedish Transport Administration shall declare the relevant part of the infrastructure to be “congested”, see Section 4.6.

4.5.6 Established annual timetable

The capacity allocated is specified in the established annual timetable, which is presented via the Swedish Transport Administration’s e-service.

The capacity is reported in the form of:

- allocated train paths, both national and international
- reserve capacity for ad hoc applications for train paths, both national and international.

In connection with the established annual timetable, the Swedish Transport Administration also reports

- capacity that has been reserved for temporary capacity restrictions
- reserve capacity for engineering works that cannot be booked in the allocation process
- reserve capacity for transportation of work vehicles
- remaining capacity
- allocated services in accordance with Section 7.1.

An application for a train path shall specify whether the train path was applied for on the behalf of the railway undertaking or traffic organiser. The entity that applied for the train path is the entity that it can be allocated to. In conjunction with the allocation of train paths, the applicant concludes a track access agreement with the Swedish Transport Administration.

An entity that has been allocated a train path may not transfer it to another party. An entity that has transferred a train path may be refused allocation of train paths during the current or next annual timetable. A train path shall not, however, be regarded as transferred if a traffic organiser engages a railway undertaking to operate the traffic.

An applicant may refer disputes to the Swedish Transport Agency regarding whether an infrastructure manager's decision concerning capacity allocation corresponds with the acts, or regulations stipulated with support of the acts.

4.5.7 Supplemented established annual timetable

Supplementary applications according to Section 4.5.2 begin to be processed after the publication of the established annual timetable. The established annual timetable is updated continuously based on late path requests. This results in a supplemented established annual timetable.

4.6 Congested infrastructure

If a conflict of interests between applicants was not resolved during coordination and dispute resolution, the Swedish Transport

Administration shall declare the relevant part of the infrastructure to be "congested". If it is clear that there will be a considerable capacity shortage on part of the infrastructure, the Swedish Transport Administration must declare that part congested prior to coordination.

The Swedish Transport Administration notifies the applicants concerned of the decision and publishes it on the Swedish Transport Administration's website.

The congestion decision shall contain information:

- about which part of the infrastructure the conflict of interest relates to, at which times the problems arise,
- the parties that are involved,
- the reasons why the conflict could not be resolved.

The decision to declare the infrastructure congested is a condition required for the Swedish Transport Administration to be able to unilaterally settle the conflict of interest.

If the infrastructure is declared congested, a capacity analysis and a capacity reinforcement plan shall be developed. See also Sections 4.6.2 and 4.6.3.

4.6.1 Allocation of capacity after congestion

When a part of the infrastructure has been declared congested, the Swedish Transport Administration allocate capacity through a decision on allocation of capacity with support of priority criteria. This applies both when the congestion has been made after dispute resolution and when the infrastructure has been declared congested before the coordination begins. For details regarding the priority criteria, see Annex 4 B.

In the cases where the priority criteria do not solve the conflict, i.e. when the socio-economic calculation for the solutions result in equal values, separation will be applied. This is described in Annex 4 B, Section 6.7.

The decision on allocation becomes part of the established annual timetable.

4.6.2 Capacity analysis

The Swedish Transport Administration publishes a capacity analysis on its website within six months of the infrastructure being declared congested.

The capacity analysis will be performed based on the decision concerning congested infrastructure.

The capacity analysis states:

- the cause of the congestion
- proposed methods to remedy the conflict of interest in the short-term (maximum one year) and medium-term (maximum six years).

4.6.3 Capacity reinforcement plan

The Swedish Transport Administration publishes a capacity reinforcement plan on its website within six months of the capacity analysis having been concluded.

The plan is developed after consultation with applicants of the congested infrastructure, and been a party to a completed dispute settlement. The plan states:

- the cause of the congestion
- the probable future traffic development
- possible obstacles to infrastructure development.

The capacity reinforcement plan must also contain a cost and benefits analysis for capacity reinforcement, based on the alternatives developed in the capacity analysis. The capacity reinforcement plan must show which measure(s) the Swedish Transport Administration intend to implement and a schedule for this work.

If there is an established capacity reinforcement plan for the congested infrastructure, and if this plan is to be implemented, no new capacity analysis or reinforcement plan is produced.

4.7 Exceptional transports and dangerous goods

An application for capacity is lodged in accordance with Section 4.2.2. For handling of transport conditions and transport permits, see Sections 3.4.3 and 5.4.2.

If a train path involves the transportation of dangerous goods, this must be communicated when applying for the train path. An application for a train path is lodged in accordance with Section 4.2.2. Transportation of dangerous goods must be reported in accordance with Section 3.4.4.

4.8 Rules after path allocation

4.8.1 Rules for path modification by the applicant

Applicants can apply for changes to already existing capacity, for example changes to operating days, timetable, advertised train number, transport conditions (add or remove) or change of operator.

The train path shall also be modified in the following situations:

- new or expanded traffic activity outside the scope of the running schedule
- the maximum train weight or length will be exceeded
- a train formation that diverts from the allocated or permitted level, and which impedes the performance of the railway system.

A train path that is modified or cancelled must be registered by the railway undertaking or traffic organiser via the Swedish Transport Administration's e-service for applications.

Information about reservation charges in Section 5.6.1.

The Swedish Transport Administration may, in cases where the requested changes are so extensive that the originally allocated train path is no longer identifiable, reject the request and require cancellation and submission of a new train path application.

4.8.1.1 Offer

The applicant must accept or decline offers from the Swedish Transport Administration. If no answer is given by the applicant within 24 hours from the time of the offer, the offer expires. If the applicant has chosen automatic approval in the application (Confirmation: "Aldrig/Never") an offer will be sent out which the applicant automatically accepts.

In the event of a change to the existing train path, the original capacity will be retained until the applicant accepts the offer.

4.8.2 Rules for path alteration by the infrastructure manager

4.8.2.1 Revision of the annual timetable

Train paths that are not adapted to temporary capacity restrictions in the established annual timetable are instead adapted in the so-called revision process. Meetings are held with railway undertakings and traffic organisers within the framework of this process. According to Annex VII to the Directive 2012/34/EU, the Swedish Transport Administration is obliged to deliver updated train paths no later than four months in advance for passenger trains and no later than one month in advance for freight trains. In order to be able to deliver the revised train paths to applicants in accordance with the time requirements that apply, adaptations to temporary capacity restrictions up to and including February 28th will be incorporated into the established annual timetable.

The Swedish Transport Administration

- sends message, to those concerned, that the train path is not available and may need to be adjusted
- provides solution proposals that include the train paths that have been announced not available
- receives documentation as a basis for solution proposals, if those concerned wish to provide such documentation
- base the proposed solutions on the published temporary capacity restrictions
- receives and handles received comments on proposed solutions, to the extent that those concerned wish to provide comments, and if possible, update the proposed solution based on this
- sends out an offer for changed train paths according to the decided solution proposal, no later than 4 months before the adapted train path is to operate, unless a written agreement on a shorter time has been reached with the applicants concerned or an exceptional situation according to Section 4.3.2 prevails.
- receives comments on a modified train path within 7 calendar days after the offer of the modified train path has been issued. The Swedish Transport Administration processes the received comments to the extent possible

Railway undertakings and traffic organisers affected by the revision undertake to

- inform about train paths that need to be adapted instead of being cancelled.
- receive offer about updated train path from the Swedish Transport Administration.

Offer about updated train path is sent with automatic approval, which means it cannot be responded to.

4.8.2.2 Unacceptable risks

The Swedish Transport Administration is entitled, after consultation, to withdraw allocated capacity or service if the Swedish Transport Administration deems the use of the capacity or service to be associated with unacceptable risks of personal injury or damages. A likelihood that extensive damage will occur, for example in extreme weather conditions, is such an unacceptable risk.

When the Swedish Transport Administration has resumed an allocated service, no contracting party of the Swedish Transport Administration is entitled to any compensation from the Swedish Transport Administration, other than what may result from the Swedish Transport Administration's operational management system in the form of delay charges.

4.8.3 Non-usage rules by the applicant

The Swedish Transport Administration is entitled to withdraw an allocated train path if the Swedish Transport Administration's contracting party uses the train path to an extent of less than 40 per cent of the allocated capacity for the train path during a calendar month.

This does not apply if the non-usage is a result of factors of a non-financial nature beyond the owner's control. The contracting party must then be given the opportunity to make a statement in this regard.

If allocated capacity is not used, this will be taken into consideration at later allocations of capacity, which means that a train path may be given a lower priority (Annex 4 B) or that the contracting party in question may be denied allocation.

4.8.4 Rules for cancellation by the applicant

If allocated capacity for train path or services will not be used, the railway undertaking or traffic organiser must immediately notify the Swedish Transport Administration of this by cancelling all or parts of the train path or service.

Train paths that are canceled must be registered by the railway undertaking or the traffic organiser via the Swedish Transport Administration's e-service for applications.

See information on reservation charges in Section 5.6.1.

4.9 Redesign of the International Timetabling Process (TTR)

Information about the ongoing project Redesign of the International Timetabling Process (TTR) is available on the Swedish Transport Administration's website and Rail Net Europe's website.

4.10 Capacity allocation principles for the RFCs

Information on capacity allocation in the rail freight corridor ScanMed is available in the RFS:s Corridor Information Document, CID, Chapter 4. CID is presented on ScanMed's website. An updated version of the document is available 11 months before the start of the annual timetable.

Information on ScanMed and the application system PCS is also available in Section 1.7, 4.2.1.2, 4.2.2.1 and 4.5.

5 Services and Charges

5.1 Introduction

Chapter 5 describes the services and charges within the minimum package of access services as well as the additional services and ancillary services associated with the train path on the Swedish Transport Administration's main network. All services are regulated in Annex II in Directive 2012/34/EU, as implemented via the Railway Market Act (2022:365).

The services are divided into the following categories:

- **Minimum package of access services (train paths)**
  The minimum package corresponds to the train path service, see Section 5.3. This includes the right to use the infrastructure capacity allocated and been agreed on in accordance with the definition of a train path. Traffic management and necessary information for use of the capacity etc., also comprise parts of the service.

- **Basic services**
  This category includes access to tracks in addition to what is encompassed by the minimum package, for example sidings and train formation, see Chapter 7. This also includes access to adjoining facilities in the form of loading areas, marshalling yards and access to the services provided there.

- **Additional services**
  These include services that the Swedish Transport Administration offers in connection with the minimum package of access services, for example, traction current and transport conditions for exceptional transports, see Section 5.4. For connection to electricity when holding railway vehicles, see Section 7.3.11.

- **Ancillary services**
  This category includes services such as extra information and access to GSM-R, see Section 5.5.

The chapter describes the services that the Swedish Transport Administration provides, as well as the requirements and conditions that must be fulfilled in order to use the services. The right to use allocated services may be limited fully or partially, and/or altered, for example due to traffic disruptions. The purpose is always to achieve safe and efficient use of the infrastructure.

Applicants who transport vehicles to a service facility in order to use any of the basic services described in Chapter 7 are responsible for the vehicle during the time of using the basic service and until the vehicle is used in

another basic service. This includes, amongst other things, the payment responsibility for using services which have not been allocated in accordance with Section 8.3.2.

The Swedish Transport Administration's website lists it-systems and e-services, both mandatory and voluntary, which are to support users of the railway services. It also describes how to gain access to them. The Swedish Transport Administration is not responsible for the equipment that is necessary for accessing the information between the Swedish Transport Administration and applicants, nor the applicant's receipt of delivery.

5.2 Charging principles

The Swedish Transport Administration imposes charges in accordance to Chapter 7, 8 and 9 of the Railway Market Act (2022:365).

5.2.1 Charge for use of the infrastructure

The Swedish Transport Administration shall establish charges for the use of the minimum access package at the cost that is directly incurred as a result of operation the train service, in accordance with Chapter 8, Section 3 of the Railway Market Act. The charges are to be competitively neutral and non-discriminatory, in accordance with Chapter 8, Section 1 of the same act.

The cost that is directly incurred as a result of operation the train service is the short-run marginal cost, pursuant to proposition 2021/22:83. This means that the charge, within the infrastructure manager's costs, will be set at the cost of an additional train when the rail infrastructure capacity and design is kept unchanged. This cost refers to maintenance (operation, upkeep, and reinvestments) of railway infrastructure.

The cost is estimated to be 0.0152 SEK per gross tone kilometre, plus 3.33 SEK per train kilometre in price level 2016. The estimates come from two research reports which was produced by the Swedish National Road and Transport Research Institute (VTI) in 2018[2]. The Swedish Transport Administration indexes the marginal cost once a year.

[2] CTS Working paper 2018:22, Marginalkostnader för reinvesteringar i järnvägsanläggningar: En delrapport inom SAMKOST 3, and CTS Working paper 2018:24, Marginalkostnader för järnvägsunderhåll: trafikens påverkan på olika anläggningar.

5.2.2 Charges for passage over the Öresund Link

In accordance with Chapter 8, section 7 of the Railway Market Act the infrastructure manager may, on the basis of the long-term cost of a specific infrastructure project that increases the efficiency of the railway system and which has been completed after 1988, impose higher charges than those pursuant to Chapter 8, section 3 and section 4 of the Railway Market Act, if the project would not have come about if the charges had been limited in the way that is implied by section 3 and section 4. Such a special charge is imposed for freight traffic on the railway network of the Øresundsbro Konsortiet and is paid to the Swedish Transport Administration.

5.2.3 Charging principles for reservation charge

The Swedish Transport Administration may, pursuant to Chapter 8, section 9 of the Railway Market Act, collect all or part of the charge for allocated capacity that has not been used, see Section 5.6.1.

The reservation charge for time period 7, in accordance with Table 5.4 in Section 5.6.1, applies under normal operating conditions.

The infrastructure capacity that has been allocated but which will not be used shall be cancelled, in some cases for a charge, in accordance with Section 5.6.1.

For train paths that have not been cancelled and completely lacks registered departure and arrival times in the Swedish Transport Administration's system, 100 percent of the train path charge and a cost of SEK 1,000 will be charged.

5.2.4 Charging principles for performance scheme

According to Chapter 7 section 28 of the Railway Market Act, a track access agreement shall contain provisions for a system of performance scheme with delay and cancellation charges that will apply under normal operating conditions, see Section 5.7. The delay or cancellation charge is to be paid by the party that causes deviations from the infrastructure usage that is established in the timetable and track access agreement. Delay and cancellation charges are to be designed so that both the infrastructure manager and the user of the infrastructure take reasonable measures to prevent disruptions to railway system operations and to improve the performance of the railway network, in accordance with Chapter 7, section 30 of the Railway Market Act.

5.2.5 Charging principles for services

Charges for the basic services provided by the Swedish Transport Administration are levied pursuant to Chapter 9, Section 6 of the Railway Market Act and shall, according to this paragraph, be set at prime cost for providing the service, including reasonable profit. The same applies to the additional services and ancillary services that the Swedish Transport Administration provides, if it is the sole provider of these services. The Swedish Transport Administration indexes the charges once a year.

5.2.6 Reduction of charges for certain traffic

In accordance with Chapter 8, Section 10 of the Railway Market Act, the Swedish Transport Administration does not levy any charges for the use of the minimum package of access services when it comes to non-profit museum associations that conduct museum traffic and where the train paths are applied for in the ad hoc process, see Section 4.5.3.

5.2.7 Charging principles for work vehicles

When rail vehicles are used in direct connection with the Swedish Transport Administration's contracted works on the Swedish Transport Administration's infrastructure, they are treated as work vehicles and charges are only imposed for electricity.

This implies that vehicles are not charged if they are operated for one or more of the following purpose:

- being transported to or from a work that is agreed with the Swedish Transport Administration
- transporting materials or other good to or from a work that is agreed with the Swedish Transport Administration
- carrying out a work in motion on behalf of the Swedish Transport Administration.

When applying for capacity, it must be clear which work the application applies to.

A prerequisite for the exemption from charges is that no other train path is operated at the same time, for example a freight transport for third parties.

Vehicles operating on behalf of an infrastructure manager other than the Swedish Transport Administration are not exempt from charges.

5.2.8 Emissions

The Swedish Transport Administration collects information on the amount of fuel consumed by order of the Swedish Energy Agency. Information regarding the number of consumed litres of liquid fuel and/or consumed cubic metres of gaseous fuel per vehicle category or individual vehicle must therefore be reported by railway undertaking or traffic organisers. The information is to be submitted no later than the 20th of the month following the month in which the services are used. The railway undertakings and traffic organisers must personally keep records and store the data necessary for reporting and inspection. Declaration is conducted via a web interface on the Swedish Transport Administration's website. Login authorisation is required.

5.2.9 VAT

The charges are subject to 25 percent VAT (value-added tax), except for the reservation and the delay charges where no VAT is levied.

5.2.10 Prices for international train paths

Charging Information System (CIS) offers calculation of prices for international train paths. Using the CIS system is free of charge and login does not require registration.

More information is available at https://rne.eu/it/products/cis/ or can be ordered via RNE CIS Support: support.cis@rne.eu.

5.3 Minimum access package and charges

The Swedish Transport Administration provides minimum packages of access services in the form of the service train path, which is divided into the following categories:

- train paths for freight traffic
- train paths for service trains
- train paths for passenger traffic.

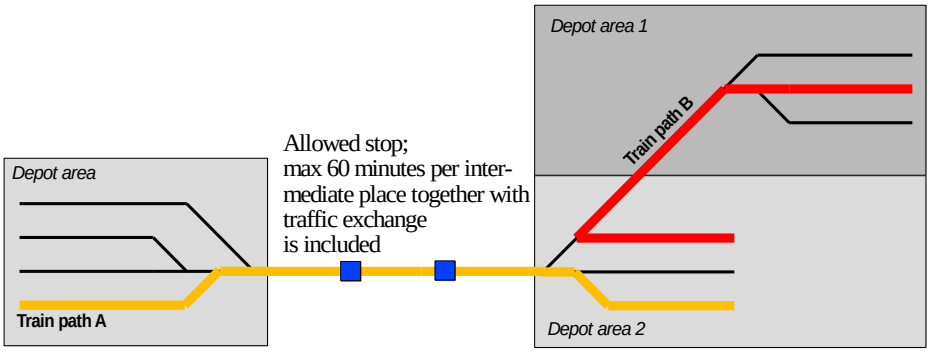
The service train path encompasses the entire transportation from one location to another, from when vehicle movement commences at the first station in the train path until the vehicle has stopped at the final station. Included in a train path is a stop of up to 60 minutes per intermediate location with traffic exchange. See figure 5.1, train path Option A. The maximum stop of up to 60 minutes also applies when turning between two

train paths at an operational point with traffic activity (at their common end and start station).

When a traffic activity at an intermediate location or turning between two train paths at an operational points is 60 minutes or more, an application for the service *track for holding* is required, see Section 7.3.5. Om the application for this service is missing, the Swedish Transport Administration reserves the right to allocate and charge for the service *track for holding*.

A train path application is also required for transportation over operational point boundaries, or between parts of a site. See figure 5.1, train path Option B.

Figure 5.1 Train path Option A – between stations
Train path Option B – between station parts



The following is included in the minimum access package:

- The infrastructure agreed for the operation of the train.
  The right to operate the vehicle on tracks and through track switches so that the allocated capacity can be used in accordance with the terms and conditions that were established in the annual timetable. The usage must be in line with the track access agreement, as well as permits, licences and regulations. If the traffic assignment requires access to platforms, this is also included.

- The right to use the Swedish Transport Administration's catenary on electrified lines.

- Traffic management which includes train dispatch, monitoring and management of traffic operations, as well as information about train movements. Also included in this context are prerequisites and conditions for traffic operation, such as running schedules and running orders as well as measurement values from the Swedish Transport Administration's detectors. Via the Swedish Transport Administration's traffic control and communication system, it is also possible to receive the operational information that is

necessary for use of the train path. See also Sections 2.3.10 – 2.3.14.

The Swedish Transport Administration's traffic management are done in accordance with applicable railway traffic regulations.

- Traffic information for applicants and traffic operators. Encompasses information before, as well as during and after use of the train path. This relates to the information (in addition to the point Traffic management above) necessary to operate or manage the railway traffic for which the capacity has been allocated. For detailed information, see Section 5.3.4.1.

For information about operational rules, see Chapter 6.

For information that shall be submitted prior to a train's departure, see Annex 6 A.

5.3.1 Train paths for freight traffic

Train path for freight traffic refers to transportation of freight or moving of empty freight wagons.

Train paths for freight traffic include access to the offer described in Section 5.3.

5.3.2 Train paths for service trains

Train path for service trains is intended for the transportation of traction vehicles or passenger traffic vehicles that are not in service. This may involve the transportation of vehicles for reasons of circulation, to a departure station or from an arrival station, or to and from a holding location, service facility or workshop.

Train paths for service trains include access to the offer described in Section 5.3.

5.3.3 Train paths for passenger traffic

Train path for passenger traffic refers to transportation of passengers.

Train path for passenger traffic includes access to the offer described in Section 5.3 as well as *traffic information for passengers*. This includes the information that is necessary for passengers to complete their train journey. For detailed information, see Section 5.3.4.2.

5.3.4 Traffic information

5.3.4.1 Traffic information for applicants and traffic operators

The information is supplied to applicants or traffic operators via a number of different channels. For more information, see the service description traffic information railway on the Swedish Transport Administration's website.

Where technically possible, the following information is included:

1. planned arrival and departure times at stations with traffic exchange
2. details of where the trains are located geographically in real time (where it is technically possible)
3. punctuality (presented in minutes in relation to the timetable)
4. relevant arrival or departure track at stations that are interchanges
5. estimations of arrival and departure times in the event of traffic disruptions leading to a delay of five minutes or more
6. presumed cause of delay for a delay of three minutes or more
7. traffic events, information regarding action (if any) to restore track and traffic, as well as forecasts for.

When traffic operations take place in the form of blocked line operation, only the services in items 1 and 7 are included. Blocked line operation only arises in cases where the technical requirements for train movement cannot be fulfilled.

5.3.4.2 Traffic information for passengers

The traffic information is based on planned information and is updated with information about traffic changes. The information aims to provide the passengers a complete and up-to-date traffic information about the current and the expected traffic situation.

Based on agreed train paths, the Swedish Transport Administration compiles announcement basis per train.The announcement information is used, for example, for announcements on stations, when publishing traffic information on the internet and via the Swedish Transport Administration's IT systems. The information must, when needed, be supplemented och changes by the applicant or traffic organiser.

The presentation in traffic information channels may vary, based on needs and technical possibilities.

The Swedish Transport Administration's announcement basis is based on agreed train path and information on the traffic situation. It includes:

1. advertised train number*
2. advertised start/end station*
3. intermediate stations, that are decisive for the journey*
4. applicant or train path owner
5. traffic operator*
6. announced arrival and departure times at stations that are interchanges*
7. current arrival or departure platform at stations that are interchanges
8. estimated arrival and departure time for trains delayed 5 minutes and more (related to timetable). If the cause for the delay is known, it will be given for delays of 10 minutes or more
9. aggregated information with cause and forecast of events that result in traffic impacts on several trains.

* Number 1, 2, 3, 5 and 6 may in some cases be changed by the applicant/traffic operator.

The applicant or traffic operator must announce cancelled trains and any replacement traffic, and is always responsible for supplementing the announcement with information on:

- deviation, booking, product information, service, train composition and other information
- instructions in the event of traffic disruption (e.g. cancellation and replacement traffic).

For a detailed description and more information, see documents on the Swedish Transport Administration's website.

5.3.4.3 Material from the applicant/traffic operator to the Swedish Transport Administration

In order to be able to give passengers general traffic information in advance regarding a planned event, the Swedish Transport Administration requires basic input from the applicant or traffic operator.

This information shall clearly describe changes and/or additions in terms of both traffic structure and any form of replacement traffic. This input must reach the Swedish Transport Administration no later than seven (7) days before the event is due to take place, see contact information in Annex 1 A, Section 5.4.

The applicant or traffic operator is always responsible for, within the framework of the Swedish Transport Administration's guidelines, updating and supplementing the announcement information in the Swedish Transport Administration's e-services.

All known changes and additional data must contain information per train path and station and be submitted via the Swedish Transport Administration's the e-service by the applicant or traffic operator.

The information that the applicant, train path holder or traffic operator cannot change via the Swedish Transport Administration's e-services must be provided in accordance with the contact details in Annex 1 A, Section 5.4.

Detailed descriptions about working with announcements is available on the Swedish Transport Administration's website.

5.3.4.4 Stops for replacement traffic

Some stations have a designated location for replacement traffic for trains. Within the Swedish Transport Administration's property, the Swedish Transport Administration is responsible for fixed reference signage to these stops where possible. At stations where all applicants or traffic operators do not use the same stops for replacement traffic, fixed signage cannot always be established.

It is normally the property owner who is responsible for permanent signage within their own property (both buildings and land). Outside the Swedish Transport Administration's property, the property owner is responsible for signage for replacement traffic. The framework agreement for the Swedish Transport Administration's sign standard is open to all responsible actors to use. This gives the opportunity to create an overall solution for signage and information flow.

Applicants or traffic operators must inform the Swedish Transport Administration of both temporary and permanent stops for replacement traffic for trains, at each railway station. The stop locations must be described with geographic location (stop location, street address or other clear identifier). If the stop has a designation, for example stop position A,

this must also be stated in the description. It must be stated which stop, which traffic structure, which applicant or traffic operator is intended, and, where applicable, which direction or destination the replacement traffic applies to. The information about stops for replacement traffic is used to update fixed signage and in the Swedish Transport Administration's announcement system if conditions exist to also deliver dynamic traffic information about the stops.

Changes to the stops are to be notified to the Swedish Transport Administration, support.jarnvag@trafikverket.se, at least 12 weeks before the change becomes effective so that the fixed signage can be changed. If there are several stops for replacement traffic at the same station, it must be stated which stop has changed, and when applicable, for which direction or destination the replacement traffic applies.

5.3.5 Charging system for minimum access package (train path)

For the service minimum access package (train path), in accordance to Section 5.3, the following charges are levied:

- Track charge (SEK per gross tonne kilometres), differentiated by mean axle load
- Train path charge (SEK per train kilometre)
- passage charge for freight traffic that pass the Öresund Link (SEK per passage)

In case of re-routing, track charge and train path charge are levied for the actual route used. Exceptions apply in cases where re-routing has taken place according to TDOK 2023:0120 Re-routing of train journeys within stations with station parts (*Omledning av tågfärd inom driftplats med driftplatsdelar*). In these cases, the planned route is the basis for the charge for the diverted route within the station.

5.3.5.1 Track charge

Marginal costs for maintenance and reinvestment in the track facility are levied as a track charge. The maintenance costs correlate with the gross weight and mean axle load of trains. The relationship is maintenance costs increase with the trains' mean weight per axle[3]. Therefore, the track charge

[3] CTS Working Paper 2016:21. The impact of axle loads on rail infrastructure maintenance costs

is charged per gross tonne kilometre and is differentiated by mean axle load.

In order to reflect this relationship, the track charge for freight traffic and service trains is divided into four levels and the track charge for passenger traffic into two levels. For freight trains weight varies more than for passenger trains, which justifies a greater number of levels.

The mean axle load is calculated as the gross weight of the entire train divided by the train's total number of axles. For freight trains, the mean axle load is calculated as:

$(\sum \text{service weight}_{\text{traction vehicle}} + \sum (\text{unladen weight}_{\text{freight wagons}} + \text{load weight}_{\text{freight wagons}})) / \sum \text{axles of the train}$

This formula implies that the service weight of each traction vehicle is added to the sum of the unladen weight and the load weight for each freight wagon. This provides the total weight of the train, which is then divided by the number of axles on the train. Thus all the vehicles that are part of the train will affect the charge.

In the corresponding manner, the mean axle load for passenger trains is calculated through the following formula:

$\sum \text{service weight}_{\text{traction vehicle, control car, passenger carriage}} / \sum \text{axles on the train}$

This means that the service weight stated for each traction vehicle, control car, and passenger carriage is added up to provide the total weight of the train, which is then divided by the number of axles on the train.

The gross weight is one part of the information to be provided by the applicant before the departure of the train. The number of axles is specified by the applicant for the train in question via the same IT system as the other reporting done in accordance with Annex 6 A.

If the applicant has not specified the total train weight or the number of axles in accordance with Annex 6 A, the mean axle load cannot be calculated. The track charge is determined based on the highest permitted load per axle (STAX) specified by the applicant in the train path request, see Chapter 4. The mean axle load, the STAX class, and the maximum number of tonnes for the STAX class in question are related to each other as shown in table 5.1 below.

Table 5.1 Track charge

	Mean axle load	STAX-class	Maximum number on tons for the STAX-class
Track charge freight traffic and service trains	≤ 10 tonnes	-	-
Track charge freight traffic and service trains	> 10 tonnes ≤ 17 tonnes	A	16
Track charge freight traffic and service trains	> 17 tonnes ≤ 25 tonnes	B, C, D, E	18; 20; 22.5; 25
Track charge freight traffic and service trains	>25 tonnes	F	30
Track charge passenger traffic	< 17 tonnes	A	16
Track charge passenger traffic	>17 tonnes	B, C, D	18; 20; 22.5

5.3.5.2 Train path charge

Marginal costs for maintenance and reinvestment in the electrical system, the signaling system and other parts of the system that are not track systems are levied as train path charge. The train path charge is based on train kilometres. Together with the track charge, the train path charge reflects the railway traffics marginal costs – the costs directly incurred as a result of operation train vehicles.

5.3.5.3 Passage charge for freight traffic crossing the Öresund Link

For freight traffic that cross the Öresund Link, a passage charge is levied. Neither track charge nor train path charge is levied for freight traffic on this section.

5.3.6 Charges for minimum access package (train path)

5.3.6.1 Track charge

Track charges are presented in Annex 1 B.

5.3.6.2 Train path charge

Train path charges are presented in Annex 1 B.

5.3.6.3 Passage charge for freight traffic crossing the Öresund Link

Passage charges are presented in Annex 1 B.

5.4 Additional services and charges

5.4.1 Provision of traction current

The Swedish Transport Administration procures electricity, and offers it to railway undertakings and traffic operators. In connection with the holding, electricity is provided via:

- catenary system providing traction current
- heating post
- catenary system when holding.

The charge for the service *connection to electricity when holding of rail vehicles* consists of two parts:

- the electricity consumption described in this section
- the connection to electricity described in Section 7.3.11.4.

An application for access to traction current is included in the application automatically for the services covering *train paths, access to marshalling yards*, and *track or track area for train formation*. The permission to use electricity is obtained when the track access agreement is signed with the Swedish Transport Administration.

The Swedish Transport Administration offers railway undertakings and traffic operators who buy traction current to choose whether they want to add guarantees of origin. The cost of guarantees of origin is added for each kilowatt-hour (kWh) ordered and used.

The guarantees of origin available to choose from are:

- Renewable (solar, wind, hydro and biofuel)
- CO2-free (nuclear)
- “Good Environmental Choice” (Bra Miljöval)

Orders are made via a form that is ordered from and sent back completed to elhandel@trafikverket.se. Further information can also be obtained via this address. The form must also be submitted to actively opt out of guarantees of origin. The order is binding for the coming year (year 1) and must be submitted no later than December 31st of the year before consumption. In the form, railway undertakings and traffic operators also state the ceiling price they are willing to pay. If the ceiling price is exceeded, the guarantees of origin are not procured, since the price for guarantees of origin are determined upon completed purchase. The order must also include a forecast for the following year (year 2). The forecast is not binding.

The guarantees of origin will be invoiced the year after the electricity consumption in connection with the annual settlement.

Railway undertakings and traffic operators who choose not to order guarantees of origin will receive a kilowatt-hour price according to the Swedish residual mix.

In accordance with Chapter 4 in the law (2011:1200) concerning electricity certificate, all consumers must in 2027 purchase certified electricity equivalent to 37,7 per cent of their consumption. The Swedish Transport Administration purchases and provides electrical certificate to the railway undertakings and traffic operators who consume traction current and electricity when using the service holding.

Annex 5 C provides examples for consumption, loss surcharge and example of calculations of the costs of traction current for vehicles with or without energy meters.

5.4.1.1 Charge for provision of traction current

The Swedish Transport Administration supplies traction current to the railway undertakings based on a prime cost of providing the service in accordance with Chapter 9, Section 6 of the Railway Market Act. The electricity cost is invoiced on to the end users. The prime cost includes the cost for electricity certificate and the Swedish Transport Administration's costs for managing the electricity purchases, such as charges paid to electricity exchanges, remuneration for the external portfolio managers who trade on the exchanges, and the Swedish Transport Administration's personnel costs for these activities.

The basis for the billing of electricity consumption is the actual consumption for vehicles with energy meters or is based on standardised templates. To calculate consumption using standardised templates, the

Swedish Transport Administration must be aware of the number and type of vehicles. This information is to be submitted to the Swedish Transport Administration through self-declaration.

The forecast price for traction current is published in the Swedish Transport Administration's electricity price report which can be found on the Swedish Transport Administration's website. The forecast price in the electricity price report should only be seen as information regarding the price level. The price that is charged depends on the current month's electricity supply.

The Swedish Transport Administration will not make any profit or loss from the supply of electricity. Therefore, following the year end, any volume difference that may arise between the declared amount of energy and the amount of energy that the Swedish Transport Administration has supplied to the net is adjusted. The difference is distributed between vehicles without energy meters per consumed kilowatt-hour (kWh).

Vehicles either have the Swedish Transport Administration's meter, their own meter or no meter. Railway undertakings that have vehicles that are equipped with their own energy meters and that are being operated for the first time in Sweden, shall declare that the on-board-based energy measuring systems fulfil the requirements in TSI 1302/2014 and report this in accordance with EN 50463-5 Railway applications – Energy measurement on board trains – Part 5: Conformity assessment.

5.4.1.2 Vehicles with the Swedish Transport Administration's energy meter

The Swedish Transport Administration's energy meter has time resolution and GPS, and it is therefore possible to read the time and place of electricity consumption. The Swedish Transport Administration will charge the railway undertakings that have the Swedish Transport Administration's energy meter hourly with the amount of the current electricity price including network charges for each electricity area.

For railway undertakings that have the Swedish Transport Administration's energy meter, all data is sent directly to the Swedish Transport Administration's settlement system. If measurement data is lacking, billing is handled in the same way as for vehicles without a meter.

Agreements regarding the use of the Swedish Transport Administration's energy meters are handled by Support Järnväg, see Annex 1 A, Section 4.

5.4.1.3 Vehicles with energy meters that meets requirement stated in TSI 1302/2014

Energy meters that meet requirement stated in TSI 1302/2014 meter has time resolution and GPS, and it is therefore possible to read the time and place of electricity consumption. The Swedish Transport Administration will charge the railway undertakings that have this kind of energy meter hourly with the amount of the current electricity price including network charges for each electricity area.

For railway undertakings that have energy meters compliant with TSD 1302/2014 and use the Swedish Transport Administration's data collection system, all measurement data is sent directly to the Swedish Transport Administration's billing system.

For railway undertakings that have energy meters compliant with TSD 1302/2014 and do not use the Swedish Transport Administrations's data collection system, an agreement must be made between the railway undertaking and the Swedish Transport Administration regarding how billing data should be transferred to the Swedish Transport Administration. Contact Support Järnväg, see Annex 1A.

The Swedish Transport Administration offers access to a data collection system in accordance with TSI 1301/2014, for billing data from energy meters that comply with TSI 1302/2014. Agreements on the use of the Swedish Transport Administration's data collection system are handled by Support Järnväg, see Annex 1 A.

If measurement data is lacking, billing is handled in the same way as for vehicles without an energy meter.

5.4.1.4 Vehicles with other energy meters

Railway undertakings that have vehicles with their own energy meter shall report the electricity consumption through self-declaration, monthly with data on the energy consumed per vehicle. They are charged the amount of the mean price after the time-resolved volume and cost have been deducted, see electricity price report. They will not be charged an electricity price for each electricity area since the energy meters do not provide information about the time and place of consumption. Declaration is conducted via a web interface on the Swedish Transport Administration's website. Login authorisation is required.

Information regarding the number of kilowatt-hours consumed according to meter indication per vehicle type is due to be submitted no later than

the 20th of the month following the month in which the services have been used. The railway undertakings and traffic organisers must personally keep records and store the data necessary for reporting and inspection.

5.4.1.5 Vehicles without meters

Railway undertakings that have no energy meters installed must submit monthly reports of the transport work[4] completed per vehicle type in gross tonne-kilometres, in accordance with Annex 5 C, Table 1. The calculated amount of energy is used as the basis for the charge.

Information regarding the number of gross tonne-kilometres completed per vehicle type as a basis for the standardised calculation is due to be submitted no later than the 20th of the month following the month in which the services have been used. The railway undertakings and traffic organisers must personally keep records and store the data necessary for reporting and inspection. Declaration is conducted via a web interface on the Swedish Transport Administration's website. Login authorisation is required.

5.4.2 Transport conditions and transport permits for exceptional transports

An exceptional transport is a transport that deviates from the requirements or prerequisites specified in Chapter 2.

Transport conditions and transport permit applies when the vehicles or the transports satisfy one or more of the criteria in the list:

- are not approved in accordance with the static calculation method Static reference profile A or in accordance with the dynamic calculation method Dynamic reference profile SEa, with the exception of codified transports, see Section 5.4.2.3
- exceed code P/C 371 in accordance with UIC 596-6 (see Section 5.4.2.3 for codified transports)
- utilise the European reference profile GC
- utilise dynamic reference profile SEc
- exceed valid line category
- exceed line category D2 (STAX 22.5 tonnes and/or STVM 6.4 tonnes/metre)

[4] Transport work refers to the movement of passengers or goods performed by a transport service.

- has inner wheelbase greater than 17.5 metres
- has outer wheelbase less than 4.5 metres
- has buffer overhang of at least 2.5 metres from outer axle tree for a bogie wagon or at least 3.5 metres for 2-axle wagon (does not apply to RIV/TEN marked carriages)
- is particularly power consuming, i.e. a vehicle weight of more than 2 400 tonnes and have more three or more locomotives (with raised pantograph).

In the map service http://jnbkarta.trafikverket.se/?year=2027, the line category of each section is presented at an overall level, see also Section 2.3.5 and Annex 2 B. The line category applies to normal main tracks. Deviating main tracks and side tracks at a traffic junction may have a different line category than the normal main track. Link to the map service is available on the Swedish Transport Administration's website in connection with the current network statement.

Exceptional loads may be transported on the condition that the Swedish Transport Administration has received an application for and made a decision concerning (in the following order):

1. transport conditions
2. capacity, customised to transport conditions (see Section 4.7)
3. transport permit (for transports with extensive conditions).

Address details for questions regarding transport conditions and permits for exceptional transports, see Annex 1 A, Section 5.7.

During the operation of an exceptional transport, the railway undertaking or traffic operator is always responsible for the transport:

- has valid transport condition
- has valid transport permit, when required
- is operated in the section(s) decided in accordance with the transport condition.

5.4.2.1 Transport conditions

A transport condition described the circumstances under which a vehicle may be operated. It might be, for example, that the vehicle may only be operated on certain tracks, or that it shall be driven with limited speed on a specific line.

Application of transport conditions shall contain all routes where the transport is to be operated on. Exceptions can, however, be made for transport conditions for vehicles with only 12 axles or more, and is decided by a conditions officer at the Swedish Transport Administration.

Applications concerning transport conditions for exceptional transports shall be submitted via an IT system available on the Swedish Transport Administration's website.

The lines (routes) in the transport conditions are continually monitored in terms of accessibility. In the event of changes, the Swedish Transport Administration notifies the traffic operator via e-mail that there is a new version of the transport condition.

Transport conditions are only processed daytime during non-holiday Monday-Friday. The processing time is normally 5 working days but for heavy vehicles, 10 working days will be added. During weeks 26 – 33, and during Christmas and New Year the processing time may be longer. Extraordinarily profile and/or line category exceeding transports may require even longer processing time.

A decision regarding transport conditions cannot be delegated to another traffic operator. However, the railway undertaking/traffic organiser can specify one or two alternative providers of the transport. These have the opportunity to apply for transport permit for exceptional transports in the transport condition.

A decision regarding transport conditions may have either a specific end date or an indefinite end date. If the circumstances upon which a decision regarding transport conditions change, the decision may be revoked immediately. If restrictions for exceptional transport mean that the train cannot be operated in accordance with the previously established train path, the train path will be, if possible, replanned by the Swedish Transport Administration and adapted to the current condition. In cases where it is not possible to change the current train path, the Swedish Transport Administration will inform that a new application is needed. Where applicable, it is the railway undertaking that is responsible for the transport having valid transport permit before departure.

5.4.2.2 Transport permit

Exceptional transports with extensive conditions require extraordinary measures such as protection, supplementary inspection prior or after, or actions to the infrastructure. These transports require transport permit, which is a confirmation that the applicant may transport an exceptional

transport. An application for a transport permit shall contain information about the valid decision regarding transport conditions, and information about the capacity that has been agreed for the exceptional transport. The railway undertaking is responsible for ensuring that the transport has valid transport permits before departure.

Application for transport permit for exceptional transports shall be made via the IT system available on the Swedish Transport Administration's website.

Transport permits are only processed daytime during non-holiday Monday-Friday. The processing time is up to 12 working days for transports that require a transport permit. The processing time for transformer transports that require a transport permit is more than 12 working days.

If there is a change in the circumstances upon which a decision regarding a transport permit is based, the decision may be revoked immediately.

Exceptional transports that require transport permit:

- exceptional, substantial – exceeds reference profile and line's maximum axle load and/or weight per metre, and requires temporary extraordinary measures in the facilities in connection with the operation of the vehicle.

Exceptional transports that can be operated without transport permit:

- exceptional, non-heavy – exceeds the reference profile, but does not exceed the line's maximum load per axle and/or weight per metre
- exceptional, heavy – exceeds line's maximum axle load and/or weight per metre, and possibly the reference profile as well
- power consuming transports.

Exceptional transports that do not require extraordinary measures may be operated without transport conditions if the capacity, that has been applied for and allocated, is adapted to the transport condition.

5.4.2.3 Codified transports

The Swedish Transport Administration provides the opportunity to convey codified transports under the conditions specified in IRS 50596-6 (formerly UIC 596-6). This applies to the codification up to P/C 422. Codified routes are visible in the map service on the Swedish Transport Administration's website. If the route's codification are the same or higher

than the units codification, the codified transport in question can be conveyed.

It is not permitted to operate both codified transport and exceptional transport in the same train path, or to switch between these types of transport.

In the event of re-routing initiated by the Swedish Transport Administration, a new train route shall be created and a codified transport will be handled as an exceptional transport. When the train path for a codified transport cannot be used in its entirety, the Swedish Transport Administration provides a nationwide transport condition for a new train path. The transport shall thereafter be managed as an exceptional transport in accordance with the usual routines.

5.4.2.4 Charges for exceptional transport services

The Swedish Transport Administration imposes a processing charge for applications regarding transport conditions and transport permits for exceptional loads.

Table 5.2 Charges for exceptional transport services

Service	Charge
Application for transport conditions for exceptional load, processing	SEK 1,000 per commenced hour
Application for transport permit for exceptional load, processing	SEK 375 per commenced half-hour
Coverage of routes in the transport conditions when the validity period exceeds one day: - transport conditions without weight conditions - transport conditions with weight conditions - transport conditions with comprehensive conditions	 1 SEK/kilometre and commenced month 1 SEK/kilometre and commenced month 1 SEK/kilometre and commenced month
Any measures taken in conjunction with the processing and the transportation	The Swedish Transport Administration's prime production cost

No charges specified in Table 5.2 is levied if the re-routing of codified transport is initiated by the Swedish Transport Administration in accordance with Section 5.4.2.3.

The charge for capacity is levied in accordance with Section 5.2.

If extraordinary measures are required for the conveyance of exceptional loads, the party that applied for the transport is responsible for any costs that may arise as a result of these measures.

5.5 Ancillary services and charges

5.5.1 Telecommunications network

GSM-R

Access to the Swedish Transport Administration's mobile network, GSM-R, see Sections 2.3.12 and 3.4.1.1, can be provided in two ways:

- The applicant signs a subscription agreement with the Swedish Transport Administration.
- If a railway undertaking/traffic operator has a GSM-R subscription agreement in another country's GSM-R network, that subscription can also be used to gain access to the Swedish Transport Administration network if an agreement (roaming agreement) has been concluded between the Administration and the other country's GSM-R network operator.

For more information, see the Swedish Transport Administration's website.

5.5.1.1 Charges, GSM-R

Communication between locomotive drivers and traffic control centre is free of charge. Other charges for access to GSM-R are levied under agreement with the Swedish Transport Administration. The charge is based on prime costs and is consistent with Chapter 9, Section 6 of the Railway Market Act (2022:365).

5.5.2 Technical inspection of rolling stock

Information is included for allocated train paths in the form of raw data from the Swedish Transport Administration's detection equipment along the line. See also Section 2.3.14 and 6.4.1.

5.5.2.1 Access to extended information via detectors

The Swedish Transport Administration can supply detector information with the help of RFID technique (Radio Frequency Identification) that is linked to the exact vehicle for which the information concerns. The vehicle

is identified via wireless data exchange between RFID reader and RFID tag attached to the vehicle.

The service provides the opportunity to identify the vehicles that operate on the railway network based on readings of RFID tags and axle pulses from axle counters.

The service provides the opportunity to access, search and sort the measurement values recorded in connection with the detector passages of the own vehicles via the Swedish Transport Administration's IT system. Via the Swedish Transport Administration's API Järnväg in the data exchange portal, data.trafikverket.se, measurement value reports are delivered for detector measurement values and train composition as well as information on detector status. Measured value reports from the acoustic detectors are also delivered via the Swedish Transport Administration's API Järnväg. For more information on the identification and positioning of railway vehicles (RFID), see the Swedish Transport Administration's website.

5.5.2.2 Charge for extended traffic information via detectors

The service *access to extended traffic information via detectors* is free of charge.

5.5.3 Test runs

Conditions for test runs of vehicles

Test runs of vehicles are offered in accordance with the conditions stated in Section 3.4.5.

The application shall be made in writing to the Swedish Transport Administration using the form "Application regarding conditions for test run" on the Swedish Transport Administration's website. The technical data for the vehicle or vehicle combination must be detailed in the application, as well as the actual journey and the vehicle functions that are to be tested. All documentation must have been received by the Swedish Transport Administration no later than one month before the test run.

Test runs may take place on the condition that the Swedish Transport Administration has received an application and made decisions regarding:

- conditions for test run
- capacity, adapted to the decision on conditions for test run.

The railway undertaking or traffic operator is responsible for the safety-oriented forms for those periods that are spent on tracks by the personnel who are involved in the test runs (Swedish Transport Administration personnel and contractors are exempted).

For contact details relating to applications for test runs, see Annex 1 A, Section 6.1.

5.5.3.1 Charge for conditions for test runs with vehicles

Table 5.3 Charge for conditions for test runs with vehicles

Service	Charge
Conditions for the test-driving of vehicles - processing	SEK 1 296.71 per commenced hour
Any measures taken in conjunction with processing and test-driving	The Swedish Transport Administration's prime production cost

The charge for capacity during the test-driving is levied in accordance with Section 5.3.5.

5.6 Financial incentives

5.6.1 Reservation charge

A reservation charge is imposed for allocated train paths when a railway undertaker or traffic organiser request a modification that results in a reduced need for capacity or that the capacity is cancelled altogether. The reservation charge is based on information regarding allocated capacity, the cause of the modification or cancellation and the registered time of the modification or cancellation. The reservation charge is only imposed for causes for which the railway undertaking is directly responsible and is registered with code "Järnvägsföretag" (J) (*railway undertaking*).

The modified or cancelled capacity is measured in relation to the capacity assigned via the agreement signed between the Swedish Transport Administration and the applicant, and capacity subsequently allocated in the ad hoc process.

Reservation charges are calculated based on the planned train path's modified or cancelled route.

For train paths that has not been cancelled and completely lacks registered departure and arrival times in the Swedish Transport Administration's system, charges are applicable according to Section 5.2.3.

Upon modification or cancellation of allocated capacity for train paths, the following reservation charges are imposed:

Table 5.4 Reservation charge

Period of time	Passenger traffic	Freight traffic
Time period 1: More than 60 days prior to the planned departure time at the departure station	SEK 0	SEK 0
Time period 2: Between 60 days and 49 days prior to the planned departure time at the departure station	SEK 0	SEK 0
Time period 3: Between 48 days and 31 days prior to the planned departure time at the departure station	20 % of the train path charge	10 % of the train path charge
Time period 4: Between 30 days and 15 days prior to the planned departure time at the departure station	20 % of the train path charge	10 % of the train path charge
Time period 5: Between 14 days and 5 days prior to the planned departure time at the departure station	40 % of the train path charge	20 % of the train path charge
Time period 6: Between 4 days and 1 day prior to the planned departure time at the departure station	40 % of the train path charge	20 % of the train path charge
Time period 7: Less than 24 hours prior to the planned departure time from the departure station *	SEK 500 + 50 % of the train path charge	SEK 500 + 50 % of the train path charge

* If it is less than 24 hours before the planned departure time at the departure station, it is permitted to cancel train paths up to and including the next following date. The possibility to cancel train paths afterwords

does not apply when the train path is operated on system M. In such cases, train paths must be cancelled immediately.

For train paths operating for more than one day, the cancellation period is extended to include the next following date for the cancelled route. In such cases, the cancellation period is calculated from the departure time from the first station on the cancelled route.

The following information must be provided when applying:
- Explanation for cancellation (applies to J-codes) or
- Explanation of acute cancellation and, where applicable, reference to the incident number in the Swedish Transport Administration's reporting system for deviations (applies to other codes).

Non-profit museum associations that conduct museum traffic do not have to pay reservation charge for capacity booked for in ad hoc, with the exception of cancellations less than 24 hours prior to the the planned departure time at the departure station, where a reservation charge of SEK 500 is charged.

Museum traffic that is booked and allocated in the annual timetable must pay both the fixed and the variable part of the reservation charge.

Service trains are not covered by the reservation charge.

5.7 Performance scheme

The Swedish Transport Administration employs a system of performance scheme with delay and cancellation charges in accordance with Chapter 7, Section 28 of the Railway Market Act (2022:365). The purpose is to prevent disruptions to railway system operations and to improve the railway network’s performance.

5.7.1 General principles

The delay and cancellation charges are based deviations from the agreed train path. The deviations consists of cumulative delays on traffic carried out and of modifications that result in reduced capacity or cancelled trains compared with the timetable.

The charge for cumulative delays is determined by cause or delay code and the amount of cumulative delays. The charge for modifications or cancelled trains is determined by the cause of the modification or cancellation as well as the time of registration. In a double-directed model, delay and cancellation charges are paid by both the Swedish Transport Administration and the traffic organisers. In a single-direction model,

delay and cancellation charges are only paid by the Swedish Transport Administration.

Being involved in causing deviation that results in delay charges means that:

- a train is late by 5 minutes or more compared to the timetable at the first measurement point
- a train will be delayed by 5 minutes or more on a journey between two measurement points which follow immediately after each other
- a train path is cancelled in whole or in part, or is modified in a way that results in reduced capacity.

The charges are based on:

- the amount of cumulative delays
- cause
- train path cancelled in whole or in part
- modifications that result in reduced capacity
- the registered time of the modification or cancellation.

The following does not burden either party:

- deviations due to consequential causes and accidents, incidents or external circumstances
- modified trains or cancelled trains as a consequence of the established engineering work plan (B), inadequate/incorrect planning (W), consequential causes (F), accidents/incidents and external circumstances (all O-codes).

The Swedish Transport Administration compiles the deviations and thereafter calculate the total outcome. With the Swedish Transport Administration's compilations as the basic starting point, delay and cancellation charges are levied on a monthly basis for cumulative delays and modified or cancelled trains.

Railway undertakings and traffic organisers cannot dispute the obligation to pay the delay or cancellation charge for a deviation unless a reassessment of the delay or cancellation code is requested in accordance with Section 5.7.6.

Delay and cancellation codes and the main principles for reporting of the codes is presented in Annex 5 B.

5.7.2 Delay charge for cumulative delays

The one causing the deviations that results in delays is obligated to pay a delay charge for each minute of delay, starting from the first minute of additional delay in cases where the delay exceeds five minutes.

5.7.2.1 Double-direction model

The charge applies to passenger traffic, freight traffic and service trains for the following delay codes:

Table 5.5 Delay charge, double-direction model

Liable for payment	Delay code	Charge
The Swedish Transport Administration	Operational management (D), infrastructure (I) and “Not reported”	SEK 75 per cumulative delay minute
Railway undertaking/traffic organiser	Railway undertaking (J)	SEK 75 per cumulative delay minute

5.7.2.2 Single-direction model

The Swedish Transport Administration pays a delay charge for deviations for passenger traffic and freight traffic with the delay code operational management (D) and infrastructure (I), and “not reported”, in accordance with the table below. The charge is based on the deviations that cause cumulative delays between two measurement points that follow directly after each other, or at the first measurement point at the departure station:

Table 5.6 Delay charge, single-direction model

Liable for payment	Time period	Passenger and freight traffic
The Swedish Transport Administration	30-59 cummulative delay minutes	SEK 6 000 per occasion
The Swedish Transport Administration	60 cumulative delay minutes or more	SEK 14 000 per occasion

Service trains are not included in the single-direction model with delay charges.

5.7.3 Cancellation charge for cancelled trains

5.7.3.1 Single-direction model

The cancellation charge is imposed for reasons for which the Swedish Transport Administration is directly responsible and which are registered with the cancellation code operational management (D), infrastructure (I) or Engineering works – adjusted/newly added (E).

The charge applies to allocated capacity that is modified or cancelled. The charge is based on information on allocated capacity, causes for modification or cancellation, and time of registration for modification or cancellation.

The modified or cancelled capacity is measured in relation to the agreement signed between the Swedish Transport Administration and the applicant, including any capacity to be allocated in the ad hoc process.

The cancellation charge for cancelled train apllies at the eaeliest from the date on which the established annual timetable is published in accordance with Section 4.5, table 4.2.

Upon modification or cancellation of any allocated capacity for train paths, the Swedish Transport Administration pays cancellation charges according to Table 5.7:

Table 5.7 Cancellation charge, single-direction model

Time period	Passenger and freight traffic
Between 125 days and 84 days prior to the planned departure time at the departure station	SEK 500 + SEK 10/ kilometre per cancelled train
Between 83 days and 15 days prior to the planned departure time at the departure station	SEK 750 + SEK 15/ kilometre per cancelled train
Between 14 days and 24 hours prior to the planned departure time at the departure station	SEK 750 + SEK 15/ kilometre per cancelled train
Less than 24 hours prior to planned departure time from the departure station	SEK 1,000 + SEK 10/kilometre per cancelled train

Cancellation charges are based on the route of the agreed train path that has been modified or cancelled.

If it is less than 24 hours before the planned departure time at the departure station, it is permitted to cancel train paths up to and including the next following date.

For train paths operating for more than one day, the cancellation period is extended to include the next following date for the cancelled route. In such cases, the cancellation period is calculated from the departure time from the first station on the cancelled route.

The possibility to cancel train paths urgently afterwords does not apply when the train path is operated on system M. In such cases, train paths must be cancelled immediately.

Museum associations that conduct museum traffic that has been booked and allocated in the ad hoc process are exempted from a cancellation charge for cancelled trains since they have not been charged a train path charge. When a train path that has been allocated in the long-term process gets cancelled, however, the museum associations shall be compensated with a cancellation charge for cancelled trains.

Service trains are not covered by the single-direction model for cancellation charges for cancelled trains.

5.7.4 Reporting of deviations

The Swedish Transport Administration shall provide a system for reporting and registering deviations from the use of the infrastructure that has been established in an annual timetable and in a track access agreement, and the causes of such deviations (Chapter 7, Section 7 of the Railway Market Act).

The Swedish Transport Administration's railway network has a large number of measurement points which automatically registers all deviations from the timetable. For cumulative delays that occur on a journey between two measurement points that follow directly after each other and which last for 3 minutes or more, a delay code is specified in the Swedish Transport Administration's reporting system for deviations no later than during the third day after the train's planned departure date and departure station. The basic principles for the reporting of delay and cause codes and the delay and cause codes themselves are presented in Annex 5 B.

The Swedish Transport Administration provides a system where railway undertakings and traffic organisers have access to real-time information on cumulative delays and their delay codes as well as cancellations. The Swedish Transport Administration also provides reports with compilations of deviations.

The cause code for cancelled train shall be proposed by the railway undertaking when applying for cancellation and the Swedish Transport Administration establishes the cause code in the Swedish Transport Administration's planning tool for capacity. The cause codes for cancelled trains are presented in Annex 5 B.

5.7.5 Exemption from performance scheme

The system of performance scheme with delay and cancellation charges is only applied under normal operating conditions, when the preconditions for a meaningful application exist. When the Swedish Transport Administration finds that the operating conditions are no longer normal, the Swedish Transport Administration can decide to temporarily discontinue with the application of the system. The Swedish Transport Administration shall take the opportunity to not apply the delay and cancellation charge model restrictively. The Swedish Transport Administration provides information on the Administration's website. When the operating conditions are once again normal, the Swedish Transport Administration will decide that application of the model can be resumed, after the parties concerned have been given the chance to express themselves.

Delay and cancellation charges are not paid for the use of the infrastructure that is established in the annual timetable and track access agreement and which come up during the time in which the system is not being applied. If the train path has started to be used during normal operating conditions, a delay charge shall be paid for cumulative delays and cancelled trains.

The Swedish Transport Administration decides to temporarily cease with application of the delay and cancellation charge system if the circumstances have disruption effects on the traffic at a national level. The Swedish Transport Administration's assessment is based on the following three conditions:

- the extent of the delays that are taking place in the rail traffic
- the picture of disruptions that have arisen which the Swedish Transport Administration's operation levels indicate
- the knowledge the Swedish Transport Administration has about external conditions that are of decisive importance for the possibilities to operate railway traffic.

The Swedish Transport Administration makes an overall assessment based on these three conditions. However, a decision to temporarily

discontinuing with the application of the system can be made on the basis that only one of these conditions prevails, if the disruption effect has an impact on the traffic at national level.

5.7.6 Request for renewed assessment of the Swedish Transport Administration's delay and cancellation coding

Railway undertakings and traffic organisers (hereinafter referred to as contracting parties) can send a written request for renewed assessment of the delay and cancellation code to the Swedish Transport Administration, if they believe that the Swedish Transport Administration entered an incorrect code.

Each request for renewed assessment must be carried out according to the procedure described on the Swedish Transport Administration's website. The application must be completed, including an adequate justification for the code change. The application can only be completed afterwards after request from The Swedish Transport Administration. The Swedish Transport Administration's contracting party must attach documentation to the application, if any, to support the proposal for a new code that is submitted, in accordance with the instructions on the Swedish Transport Administration's website.

The request must be submitted via e-service or the current form available on the Swedish Transport Administration's website.

5.7.6.1 Cumulative delays

Contracting parties can send a written request for renewed assessment of delay code (a request hereafter called BONO) to the Swedish Transport Administration, if they think that the Swedish Transport Administration has specified the wrong delay code for a cumulative delay. This applies on condition that the individual cumulative delay is 5 minutes or more.

The BONO must include proposal for new delay code on at least level 2 according to Annex 5 B.

The BONO must reach the Swedish Transport Administration no later than during the sixth calendar day after the train's planned departure date and departure station. The Swedish Transport Administration shall present its position at the latest during the ninth calendar day after the train's planned departure date and departure station.

In cases where the BONO has resulted in a new delay code, i.e. that the result of the BONO was a decision that was neither the delay code entered by the Swedish Transport Administration nor the code proposed by the contracting party, and if the contracting party does not accept the decided delay code, the contracting parties concerned of the changed code may send a written request for an additional renewed assessment (hereafter called BONO+) to the Swedish Transport Administration.

The BONO+ must include proposal for new delay code on at least level 2.

If it is possible for the contracting party to use the BONO+ after the end the BONO, this option must be used before any dispute resolution is initiated.

The BONO+ must reach the Swedish Transport Administration no later than during the twelfth calendar day after the train's planned departure date and departure station. The Swedish Transport Administration shall present its position at the latest during the 15th calendar day after the train's planned departure date and departure station.

If the contracting party still does not accept the delay code, the contracting party has the opportunity to initiate dispute resolution, see Section 5.7.6.3.

For the delay code Further investigation required (YUK), the contracting party shall, apart from the information mandatory for BONO and BONO+, also attach its available information about the case as well as assist and participate in the investigation of the actual cause of the event.

The process is described in Table 5.8:

Table 5.8 Description of process delay codes, BONO, BONO+ and Request dispute resolution

Calendar day	Process step	Event/activity
0	Train path commences	Train operates on the railway in accordance to the agreed train path.
0-3	Delay coding	Event that results in cumulative delay (≥ 3 minutes) occurs. Operational staff at the Swedish Transport Administration reports the initial delay code. The Swedish Transport Administration reviews reported delay codes, and make any

		necessary adjustments if needed.
4-6	Request BONO	The Swedish Transport Administration's contracting party can review the delay codes in the system "Här och Nu" and thereafter request renewed assessment of the delay code (BONO).
7-9	Processing of BONO	The Swedish Transport Administration investigates the BONO and decides whether to accept or reject, which serves as the basis for future invoicing and follow-up. The Swedish Transport Administration's contracting party can review the established delay code in a sent decision. If the contracting parties agree, the delay code is locked on the ninth calendar day. If the parties disagree on the delay code after the BONO process, it is possible for the parties to take the matter further to either BONO+ or dispute resolution.
10-12	Request BONO+	If the BONO has resulted in a new delay code and the parties disagree on the established delay code, it is possible for the contracting parties have the option to request an additional renewed assessment of the delay code (BONO+).
10–12	Request dispute resolution	If the parties still disagree on the established delay code after BONO, and the BONO+ process is not applicable, the contracting party has the option to initiate dispute resolution.

		The request for dispute resolution after the BONO must reach the Swedish Transport Administration at the latest during the twelfth calendar day after the train's planned departure date and departure station.
13–15	Processing of BONO+	The Swedish Transport Administration investigates the BONO+ and decides whether to accept or reject. The decision serves as a basis for follow-up and eventual adjustment of invoiced delay charges in cases where no dispute resolution is initiated. The Swedish Transport Administration's contracting parties can review the established delay code in a sent decision. If the parties agree, the delay code is established on the 15th calendar day after the train's planned departure date and departure station. If the parties still disagree on the delay code after the BONO+ process, it is possible for the parties to take the matter further to dispute resolution.
16–18	Request dispute resolution	The request for dispute resolution after the BONO+ must reach the Swedish Transport Administration at the latest during the 18th calendar day after the train's planned departure date and departure station.

See Contacts, Annex 1 A, Section 8.1.

5.7.6.2 Cancelled train

The Swedish Transport Administration's contracting party can send a written request for renewed assessment of cancellation codes (hereafter called BRIO) to the Swedish Transport Administration if the party thinks that the Swedish Transport Administration has specified an incorrect cancellation code for modified or cancelled trains.

The BRIO must include proposal for new cancellation code on level 1.

The Swedish Transport Administration's contracting party must attach information to the BRIO, if any exists, in order to support the proposal for new cancellation code presented.

A request regarding codes for cancelled trains shall reach the Swedish Transport Administration no later than during the 60th calendar day from the train's planned departure date from the departure station.

See Contacts, Annex 1 A, Section 8.2.

5.7.6.3 Dispute resolution

The Swedish Transport Administration's contracting party has the option to initiate dispute resolution, if there is continued disagreements regarding the Swedish Transport Administration's coding after the BONO, BONO+ or BRIO has ended.

The dispute resolution function makes all decisions in the dispute resolution process.

The request for dispute resolution after the BONO must reach the Swedish Transport Administration at the latest during the twelfth calendar day after the train's planned departure date and departure station.

The request for dispute resolution after the BONO+ must reach the Swedish Transport Administration at the latest during the 18th calendar day after the train's planned departure date and departure station.

The request for dispute resolution after the BRIO must reach the Swedish Transport Administration at the latest during the 30th calendar day after the calendar day on which the train path started.

The Swedish Transport Administration's contracting party can attach information to the dispute resolution in order to support its request. Due to the limited processing time available for dispute resolution, it is expected that extensive documentation is either summarised or that the documentation specifies what is relevant to the dispute in question.

The dispute resolution function decides based on available information and based on the investigation.

Decision in the matter will be sent to the parties no later than ten working days after the request for dispute resolution has been received.

If the request for dispute resolution is received on a day that is not a working day, it is considered received as working day 0.

The process for the dispute resolution is described in Table 5.9:

Table 5.9 Process dispute resolution

Calendar day	Event/activity
0	Request for dispute resolution is received from the contracting party and is registered. The contracting party attach eventual new information to the request for dispute resolution.
1-10	The dispute is examined. Decision in the matter will be sent to the parties no later than during the tenth working day after the request for dispute resolution has beed received. The decision serves as a basis for follow-up and eventual adjustment of invoiced delay and cancellation charges.

See Contacts, Annex 1 A, Section 8.3.

5.8 Changes to charges

The charges apply, as a general rule, throughout the entire annual timetable and any changes are done with at least three months' notice. No changes are planned for future charges.

5.9 Billing arrangements

The Swedish Transport Administration will issue invoices for all charges. The party responsible for payment is the company that signs an agreement for allocated service. The charges will be billed monthly.

All charges shall be invoiced on the basis of the information and documents submitted and on the basis of the documents from the Swedish Transport Administration. If the applicant fails to submit the above-mentioned information to the Swedish Transport Administration within the time limit specified in the Network Statement, the Swedish Transport

Administration has the right to issue an invoice on the basis of the allocated services.

Invoices must be paid within 30 days of the invoice date, otherwise penalty interest will be imposed in accordance with the Interest Act. Invoice is mainly offered in electronic form[5]. The railway undertakings or traffic organisers are responsible for the printing out of electronic documents on paper, or the conversion of documents into the format of their choice. In order to minimize credit risks, the Swedish Transport Administration reserves the right in certain cases to demand a financial guarantee. Applicants can meet the requirement either by payment in advance or through a contractual arrangement, whereby a financial institution such as a bank undertakes to ensure that such payments are paid when due. The demand for a financial guarantee may be made on companies that have defaulted on a payment or that have not carried out their payments to the Swedish Transport Administration in a satisfactory manner. If the Swedish Transport Administration waives the requirement of a financial guarantee, it may instead stipulate other payment terms than 30 days from date of invoice.

If the applicant chooses to fulfil the requirement for a financial guarantee through a contractual arrangement with a financial institution, the guarantee shall enter into force no later than ten days before the month in which the railway undertaking commences the train operation whose infrastructure charges it intends to cover.

The Swedish Transport Administration's contracting party is not entitled to withhold payment of charges and does not have right of set-off against receivables relating to charges.

The Swedish Transport Administration will not repay charges owing to conflicting circumstances that are attributable to unused capacity.

If a railway undertaking or a traffic organiser makes late payments on two or more occasions during a single timetable period, the Swedish Transport Administration is entitled to stop delivery of services or terminate the parties' track access agreement with immediate effect.

For suppliers' invoices issued to the Swedish Transport Administration, the payment condition is to be 30 days, unless otherwise agreed.

[5] Electronic connection primarily occurs through a Peppol ID, which is a unique electronic address. Peppol is an open network with standardized formats for various types of electronic documents. The older Svefaktura format is being phased out, but it will not stop functioning.

6 Operations

6.1 Introduction

This chapter describes rules that apply in operation and disturbance in planned operations.

6.2 Operational rules

6.2.1 Regulations on electrical safety

The overall requirements for electrical safety can be found in the National Electrical Safety Board's regulations ELSÄK-FS 2022:1, 2022:2 and 2022:3. More information is available at the National Electrical Safety Board's website https://www.elsakerhetsverket.se/.

See also Annex 6 C Safety in track area.

In order to reduce the risks of unauthorised persons climbing on vehicles and suffering electrical accidents, there are rules regarding how vehicles may be parked under a live overhead contact wire (catenary). The rules are found in the Swedish Transport Administration's regulation TDOK 2014:0415 *Electricity safety regulations for stations*.

Bridging is a problem that exists on the railway network. Bridging is when a rail vehicle's raised pantograph transfers the voltage to a section of catenary where work is in progress (TDOK 2015:0309 *Traffic regulations for railways, definition E-skydd Module 1*). In order to prevent bridging, E-protection (*E-skydd*) and/or A-protection (*A-skydd*) is organised in accordance with TDOK 2015:0309, Module 12 and 14.

6.2.2 Information before and after traffic

6.2.2.1 Information from the Swedish Transport Administration to railway undertakings, before and during the operation of traffic

Railway undertakings that operate on the railway network shall use and follow the documents specified in the General Terms and Conditions and in Annex 3 A. The Swedish Transport Administration is responsible for the documentation and that they are available on its website.

The railway undertaking shall compile a route description with a description of the lines that are to be operated on, based on information that the Swedish Transport Administration provides. The route description shall contain information about the conditions for traffic operation. The conditions clarify any limitations and rules that apply both on the line and at operational points. Guidance information for the route description is available at trafikverket.se/Linjeboken.

6.2.2.2 Information from the railway undertaking to the Swedish Transport Administration during the operation of traffic

The railway undertaking shall notify traffic centre at the Swedish Transport Administration of deviations they cause of 3 minutes or more in relation to train paths, as well as deviations in the use of other allocated services. In conjunction with this notification, the railway undertaking shall also submit a forecast that says if and when the deviation can be remedied.

6.2.3 Other rules

6.2.3.1 The Driver's Order System

The Driver's Order System (körordersystem) is used by the Swedish Transport Administration to convey safety orders to drivers. Gaining access to the system requires a track access agreement with the Swedish Transport Administration.

There are two ways for a driver to log in and obtain safety orders:

- Manually via the website
- Via web service, computer-to-computer (refers only to train orders)

The following conditions apply to the use of the web service to withdraw train order:

- The Swedish Transport Administration is responsible for the correctness of the information upon delivery.
- The Swedish Transport Administration is not responsible for errors that occur in data transport or conversion of the message to and from the railway undertakings' computer systems.
- Railway undertakings using the service have the legal and practical responsibility to:

- obtain any necessary permits from the Swedish Transport Agency
- convey orders to drivers in unchanged form and with unchanged content
- in a secure way, save and archive the following information about withdrawn train orders: driver's name, date, time and train order ID for at least one year. The undertaking must, upon request, pass this information on to the Swedish Transport Agency or the Swedish Transport Administration within 24 hours.

Instructions for applying for authorization to the driving order system can be found on the Swedish Transport Administration's website: https://bransch.trafikverket.se/tjanster/system-och-verktyg/trafik/operativ-jarnvagsdrift/kororordersystem/.

6.2.3.1.1 Train order

The driver shall have a valid train order for the routes that are to be operated. The driver normally receives the train order via the driver's order system. If the driver's order system is not accessible, or if for any other reason the driver does not have a valid train order, the driver shall report this to the train dispatcher for the station where the train is standing, in order to obtain the information contained in the train order by other means. Link to withdraw train orders: https://ea01.trafikverket.se/Kororder-web.

6.2.3.1.2 Reserve order

In the event of a longer operation interruption, the Swedish Transport Administration's National Operational Management (NOL) decides on when the backup routine for train driver's order will apply. The reserve order is available on the reserve order website. In case the reserve order website is not available, the NOL has the opportunity to provide links to an external storage where the railway undertakings have access to their reserve orders. The railway undertakings are responsible for distributing information to their staff. Link to the reserve order website: https://ea01.trafikverket.se/Kororder-web-reservorder.

6.2.3.2 Operative train information

Prior to the use of train paths, see Section 5.3, and no later than in connection with the train's departure, the railway undertaking shall report information concerning vehicles, etc. to the Swedish Transport

Administration. This is done by machine via the Swedish Transport Administration's service or Common Interface, or manually via a web application The information that is to be submitted is specified in Annex 6 A.

In connection with operations, the database is also used for the Swedish Transport Administration's information about the traffic to railway undertakings or traffic organisers.

The information reported to the Swedish Transport Administration by a railway undertaking or traffic organiser is only available to the Administration and contracting parties, with the exception of traffic information that benefits passengers and the public. The information is also available to market actors who are developing traffic information services for passengers and the public.

6.2.3.3 Operative language

Swedish must be used for all safety related communication between train crews and the Swedish Transport Administration's traffic management staff. This applies to the railway network managed by the Swedish Transport Administration. Predetermined messages and forms are available in Swedish. The Swedish Transport Administration provides information as required by TSI (EU) 2019/773 (operation and traffic management). Information is available at the Swedish Transport Agency's website.

6.3 Operational measures

6.3.1 Principles

Guidelines for operational traffic management are issued prior to the creation of every timetable. Capacity allocation in face of unforeseen events, such as railway accidents or other damage to the infrastructure, are determined by the Swedish Transport Administration on a case-by-case basis. In order to minimise the consequences and restore the capacity on the affected part of the railway network as soon as possible, there are specific procedures for the management of accidents. The operational traffic management at the Swedish Transport Administration shall, in each case of a disturbance, in collaboration with the railway undertaking concerned, identify and work out optimal measures in order to minimise the consequences for passengers and freight carriers, in accordance with Section 8.5.1.

6.3.1.1 Evacuation of passengers and clearance of railway vehicles

In the event of disturbance in rail traffic, where the state emergency service or other public operator is not responsible according to the constitution, the Swedish Transport Administration is responsible for initiating evacuation and/or clearance in accordance with Section 8.5.1. Both the Swedish Transport Administration and the railway company concerned must then work to ensure that evacuation and/or clearance can be started within the following deadlines:

Evacuation started:

- within 60 minutes in metropolitan areas
- within 120 minutes in all other parts of the country.

Started evacuation is defined as when the first passenger must leave the train unplanned at a different location than the platform.

Clearance started:

- within 120 minutes in metropolitan area
- within 180 minutes in all other parts of the country.

Clearing started is defined as when the start permit is granted to start a blocked line operation with special emergency vehicle, or shunting (clearance within station) to the vehicle in need of assistance.

6.3.1.2 Recovery

In the event of accident, the state emergency service is responsible for rescue and the railway undertaker is responsible for recovery. The railway undertakers are required to report to the Swedish Transport Administration their own available resources for recovery, or to sign a recovery agreement with some other entity. See chapter 8, Section 8.3.3 Recovery resources prior to use.

6.3.2 Operation regulation

Trains that depart and operate in accordance with their running schedule are given priority to their planned position. The reason is to prevent the disturbance of trains operating on time by trains that are delayed or early in relation to their running schedules. Exceptions from the rules concerning prioritisation of on-time trains can be made if special reasons exist, such as serious traffic disruptions, agreed deviations from the

running schedule, or if the traffic situation clearly calls for another action. The rule shall not apply in cases where it would lead to unreasonable consequences for the traffic as a whole. It is always the goal of the Swedish Transport Administration to remove traffic disturbances as smoothly as possible and restore the traffic to the production plan.

If the consequences of a disruption are particularly severe for certain trains, an applicant can submit a request for these trains to be given priority over other (on-time) trains operated by the same applicant. Several applicants can also reach an agreement with one another whereby certain trains operating on time that belong to the same applicant are given a lower priority than individual trains of particular importance that belong to another applicant. These types of agreements must be reported to the Swedish Transport Administration in accordance with ordinary operational contacts.

A request for altered operational priority shall specify which trains are deemed particularly sensitive to disruptions, and the motives for this (for example, traffic information, connecting transportation, tight vehicle circulation). It must also be specified which trains the applicant is prepared to give up priority for. The request must be sent to the Swedish Transport Administration no later than in conjunction with the application for capacity. This is so that the request may be taken into consideration when the guidelines for prioritisation in traffic management are developed.

6.3.2.1 Re-routing of train journeys via other station part

In Traffic rules of the Swedish Transport Administration for railway, TTJ (TDOK 2015:0309), there are rules that allow an opportunity to, in certain cases and under certain conditions, lead a train journey over a station part that is not in the train journey's timetable. However, such a re-routing is only permitted at the locations defined in TDOK 2023:0120 Re-routing of train journey within stations with station parts (*Omledning av tågfärd inom driftplats med driftplatsdelar*), and on the condition that the railway undertaking has given its consent (among other things based on a completed check of route compatibility).

6.3.3 Disturbances

Information about international disturbances that affect railway traffic in Sweden is distributed in joint and predetermined forums, in which the Swedish Transport Administration and railway undertakings concerned consult on how a disturbance should be handled. One such example is the

strategic customer meeting that the Swedish Transport Administration and the railway undertakings concerned hold in the event of major disruptions. Among other things, the parties draw up an action plan for how the disturbance is to be handled.

More information on handling of international disruptions can be found in the "International Contingency Management Handbook" on RailNetEurope's website: rne.eu.

6.3.3.1 Disruption plans

In order to minimise the negative impact on passengers and freight transport clients in connection with train disruptions within the current operating period, the Swedish Transport Administration is working on pre-defined disruption plans for selected areas/parts of the line. Disruption plans are prepared in cooperation with the railway undertakings and traffic organisers concerned, and revised at least once a year in conjunction with the new timetable. Each individual plan describes which traffic-related plan measures it could be necessary to take with a link to both passenger management and traffic information.

The railways undertaking and traffic organisers are expected to be involved in the production of disruption plans. For operative disruptions within an operating period, work in connection with disruption management is based on these agreed disruption plans.

6.3.3.2 Weather- and season-related contingency plans

In order to minimise season-related disruptions, the Swedish Transport Administration works together with entrepreneurs and railway undertakings to implement preventive measures. These are described in the Swedish Transport Administration's weather- and season-related contingency plans. All season-related contingency plans follow an annual calendar containing specific weeks for preparation and activation in accordance with the table below.

Table 6.1 Weather- and season-related contingency plans

	Spring contingency (week no.)	Summer contingency (week no.)	Autumn contingency (week no.)	Winter contingency (week no.)
BEFORE – national draft season-related contingency plan ready	5	16	29	40
Season-related contingency plan				
- Comple-mentary additions by parties concerned, both internal and external	6-9	17-20	30-33	41-44
- Establishment of the contingency plan	10	21	34	45
DURING – Activation period, season-related contingency plans	12-22	23-35	36-46	47-11
AFTER – national draft follow-up report ready	23	36	47	12
Follow-up season-related contingency plan				
- Complementary additions by parties concerned, both internal and external	24-25	37-38	48-50	13-14
- Establishment follow-up report	26	39	51	15

The Swedish Transport Administration's weather- and season-related contingency plans are presented on the Swedish Transport Administration's website.

6.3.3.3 Clearance and emergency situations

The established routine for how evacuation and clearance situations are to be handled can be found in Annex 6 B. The railway undertaking and the Swedish Transport Administration shall find a solution to the problem through dialogue. If this is not possible, the Swedish Transport Administration has the authority to decide how the situation should be handled.

When clearance has been completed, the railway undertaking is responsible for the recovery of its own vehicles from the location specified by the Swedish Transport Administration. In order to minimise traffic disruptions, it is important that this is done as quickly as possible. If the vehicles are not towed within a reasonable time, the Swedish Transport

Administration will tow the railway undertaking's vehicles and property. See Chapter 8, Section 8.5.7 Compensation for clearance.

The Swedish Transport Administration and the railway undertaking can reach an agreement that recovery may begin before clearance has been completed.

6.3.3.4 Clearance with damaged pantograph

Prior to clearance, the railway undertaking shall temporarily earth its vehicles and ensure that necessary measures are taken. If the railway undertaking is using another model of pantograph or other vehicle, other than those stated in Annex 6 A, the railway undertaking shall submit photographs and other information to the Swedish Transport Administration.

During clearance, the Swedish Transport Administration will fasten down or dismantle the railway undertaking's pantographs. In emergency situations, the Swedish Transport Administration can remove pantographs by whatever means the situation demands. The Swedish Transport Administration is not responsible for damage to pantographs unless it can be proven that the damage was caused by incorrect actions.

If the railway undertaking's vehicles or pantograph model are not present in Annex 6 A, or are otherwise different from the descriptions provided, the Swedish Transport Administration may request that the railway undertaking immediately send personnel of its own to the accident side. These personnel shall perform the temporary connection to earth and fastening down or dismantling of the pantographs.

6.3.3.5 Management of accidents

The procedures for management, reporting and coordination in the event of accidents and incidents, as well as deviations that give rise to risks for accidents involving railway traffic are specified in the general terms and conditions in Chapter 8.

6.3.3.6 Crisis situations

In crises and heightened state of alert, the Swedish Transport Administration has the right to make official decisions in its capacity as an authority, instead of simply a supplier of services. The decisions are made based on social gains and function in society. The Swedish Transport Administration will inform those concerned when a crisis situation applies.

The operational contact paths that apply during normal conditions shall also be used as far as possible during a crisis.

6.4 Tools for train information and monitoring

6.4.1 Technical inspection of rolling stock

When vehicles pass detector equipment, the measurement value is registered in real time. The process in case of an alarm is described in TDOK 2020:0074.

See also Section 2.3.14 and 5.5.2.

6.4.2 Train path information for international trains

Train Information System (TIS) shows train path information for international trains. Access to TIS is free of charge. A user account can be requested via the RNE TIS Support: support.tis@rne.eu. More information can be found on https://rne.eu/it/products/tis/.

7 Service Facilities

7.1 Introduction

This chapter describes the basic services as well as additional and ancillary services (in accordance with Chapter 9, Section 1 and 4 of the Railway Market Act) that are linked to the service facilities managed by the Swedish Transport Administration, in accordance with Directive 2012/34/EU and Regulation 2017/2177/EU. The service facilities and services described in this chapter include:

- passenger stations
- freight terminals
- marshalling yards and train formation facilities
- storage sidings
- maintenance facilities
- other technical facilities
- maritime and inland port facilities
- relief facilities
- refuelling facilities
- connection to electricity when holding railway vehicles.

Facilities for services include installations, ground, buildings and equipment that have been partially or completely erected to allow the provision of the services described in this chapter.

The services that are related to train path are described in Chapter 5.

7.2 Service facility overview

According to EU Regulation 2017/2177, service facility operators for services related to railway transport shall establish a service facility description. What a service facility description should include is described in Article 4 of the regulation.

The service facility operators shall provide their service facility description to the infrastructure manager to which their facility is connected, or if the infrastructure manager is exempt from the requirement to publish a network statement, to the largest infrastructure manager. In cases where this is the Swedish Transport Administration in the role as infrastructure

manager, service facility operators must provide the relevant link or publication-ready information to the Swedish Transport Administration.

The Swedish Transport Agency supervises the service facility descriptions and service facility operators. The Swedish Transport Administration provides the space on its website for publishing of links to the service facility descriptions.

The Swedish Transport Administration updates the website continuously with the links to the service facility descriptions that have been submitted from those who fulfil the criteria as a service facility operator in accordance with the Railway Market Act (2022:365). In order for the links to be published, the form available on the Swedish Transport Administration's website must be fully completed.

The list of links and more information on providers of services related to railway transports is available on https://bransch.trafikverket.se/anlaggningsbeskrivning.

Rail Facilities Portal (RFP) is a common European web portal where service facility operators can publish their service facility descriptions. It is free of charge to use RFP, and it does not require any registration to use. More information is available at http://railfacilitiesportal.eu.

7.3 Service facilities managed by the Swedish Transport Administration

The following sections include information on the Swedish Transport Administration's service facilities, including description of services, charges, access conditions and allocation of service. For access to other suppliers' services facilities, see section 7.2.

7.3.1 Common provisions

The information in this section includes common provisions applicable for all services in Chapter 7. In case other rules apply, they are stated under each service.

7.3.1.1 Charges for services

For information on charges for services and charging principles, see Section 5.2.

7.3.1.2 Allocation of services

Information on the application process and allocation of services are described in detail in Chapter 4. For information on application and allocation of services at stations and guiding principles in conflicts of interest, see Section 4.2.1.4 and 4.2.1.5. Deviations from the allocated service and cancellation of services are described in Section 8.3.2.

According to the Railway Markets Act (2022:365), the Swedish Transport Administration must, through cooperation with other service facility operators, ensure non-discriminatory access for through traffic that is required to reach another services facility.

7.3.1.3 Access conditions

For access to the Swedish Transport Administration's services and facilities, the conditions in Chapter 3 need to be met. For technical requirements, such as weight limits and maximum train lengths, see Section 2.3.

7.3.2 Passenger stations

7.3.2.1 General information

The Swedish Transport Administration's services at passenger stations are described below.

7.3.2.2 Services

The basic services that the Swedish Transport Administration offers in these facilities are *tracks adjacent to platforms* and *access to platforms*.

7.3.2.2.1 Tracks adjacent to platforms

The Swedish Transport Administration provides *tracks adjacent to platforms* as part of the service *train path*, or in the form of the service *tracks for holding*. See Section 5.3 and 7.3.5.2.

7.3.2.2.2 Access to platforms

The Swedish Transport Administration manages, in some locations, a number of platforms and in many cases platform connections, such as footbridges and tunnels. They have different types of equipment, such as weather shields, benches, elevators, escalators, platform roofs and general lighting.

The service includes access to platforms for passenger exchange. In connection with the use of train paths for passenger traffic, or paths for service trains in special cases, the service is included in the train path. See Section 5.3. In other cases, the service is applied for in connection with other applications for capacity.

7.3.2.2.3 Access to station buildings and public areas for passengers

The Swedish Transport Administration provides, in some locations, access to public areas for passengers on platforms.

7.3.2.3 Service facility description

Operational points with the possibility of passenger exchange are shown in the map service and in Annex 2 B. More detailed information, on platform height, tracks with the possibility of passenger exchange and useful information on platform length, is available in Annex 2 A, tab Platforms. See also tab Planned changes.

7.3.2.4 Charges

7.3.2.4.1 Track adjacent to platforms

The charge for the service is included in the service *train path* and the service *tracks for holding*.

7.3.2.4.2 Access to platform

The charge for the service is included in the service *train path*.

7.3.2.5 Access conditions

See common provisions, Section 7.3.1.

7.3.2.6 Allocation of service

See common provisions, Section 7.3.1.

7.3.3 Freight terminals

7.3.3.1 General information

Services in connection to terminals and loading areas are listed in the following section. These refers to a delimited area that is connected to the railway network, and which is intended for the loading and unloading of goods and pallets, or reloading from railway to other forms of transport.

The Swedish Transport Administration provides a number of areas for the loading and unloading of goods. Available loading areas for freight at the Swedish Transport Administration's facilities are presented in the map service, Annex 2 B, as well as in Annex 7 A. Read more about the service *access to loading area* under Section 7.3.3.2.

A loading area is a simpler and smaller facility that generally consists of a loading track or siding with an adjacent loading area. Adjoining the loading area there may be a storage area. The Swedish Transport Administration owns a number of loading areas. Other owners of loading areas are local authorities, ports and private actors.

The Swedish Transport Administration's loading areas are primarily used for loading and unloading of timber, stone and gravel and for other wagonload traffic. Container and trailer traffic should primarily be conducted at intermodal terminals and ports, not at loading areas.

There are some limitations with regard to the condition of the loading areas, in terms of e.g., carrying capacity, pollutants and littering. Certain locations may have restrictions on noisy operations.

An intermodal terminal is a larger and more extensive facility, often with more than one loading track and a large area for holding and stockpiling purposes. The Swedish Transport Administration manages no intermodal terminals, but has railway connecting to several of them. The map service presents these terminals. Also see Annex 2 B. Read more about the service *tracks to intermodal terminals* under Section 7.3.3.2. For access to other infrastructure for services other than those managed by the Swedish Transport Administration, see Section 7.2.

7.3.3.2 Services

The basic services intended for use in connection with the loading and unloading of goods are the services tracks to intermodal terminal and access to loading area.

7.3.3.2.1 Access to loading area

The service involves leasing the track and a limited ground space adjacent to the track (up to 12 metres, measured from the outer edge of the nearest rail) for loading and unloading with own management resources. Some places also include the use of a loading dock. Storage of goods is not permitted. Available loading areas on the Swedish Transport Administration's facilities are presented in the map service and in Annex 2 B and 7 A.

Suitable spaces connected to loading areas may be available for lease, for a minimum duration of 6 months, for example for storage of goods. For more information and contact, see the Swedish Transport Administration's website https://www.trafikverket.se/underhall-mark-byggnader.

The service has following conditions:

- linked to an arriving or departing train path
- is permitted solely for loading and unloading
- is agreed in periods of up to twelve hours.

When the loading area is left, the entity that has used the service shall ensure that:

- the loading area is free from goods
- the loading area is cleaned/brushed to remove waste of handling
- whatever waste are collected during cleaning are removed from the loading area
- walking paths adjacent to the track are cleared of obstacles
- the railway infrastructure can be inspected (for example, rails, sleepers, fortifications and seams), which means that the facility must be cleared of litter.

The Swedish Transport Administration clears snow from tracks, switches and crossings. If rail-bound vehicles are used, snow may be piled up on the part of the loading area closest to the track. The entity using the service is responsible for snow clearance and gritting on the loading area and, in some cases, on the access roads to the loading area as well. Cleared snow must be piled up in a suitable location.

Those who use the service and hire contractors who stay within the Swedish Transport Administration facilities are obliged to ensure that

hired contractors participate in the coordination maintained by the Swedish Transport Administration, including work environment rules.

The service *access to loading area* includes access to

- the tracks allocated at the loading area

10. This relates to the right to use agreed tracks for holding of vehicles in connection with the loading and unloading of goods. This should be done in accordance with the conditions established in the annual timetable, track access agreements, permits and licences, as well as regulations.

- loading area

11. The loading area closest to the load track may be used. The loading area can consist of a loading dock or a ground space. The use must be in accordance with the established conditions.

- traffic management

12. This relates to the right of access, where possible, to operational information via the Swedish Transport Administration's traffic management and communication system.

- traffic information for railway undertakings or traffic organisers. See also Section 5.3.4.1.

The Swedish Transport Administration also offers the *service tracks for holding* (without loading area), see Section 7.3.5.

For more information about loading areas, as well as conditions for their use, contact the Swedish Transport Administration, see Annex 1 A.

7.3.3.2.2 Tracks to intermodal terminals

The Swedish Transport Administration administers tracks to intermodal terminals where other actors provide ground space, facilities and services. For applications intended for holding in connection with loading and unloading on the tracks to these terminals, see Section 7.3.5. The map service also presents where terminals are located. See also Annex 2 B.

7.3.3.3 Service facility description

More detailed information, including name of operational points, type of loading area and technical characteristics such as track lengths, is available in Annex 7 A. In Annex 2 B, tab Operational points, operational points with loading areas and intermodal terminals are listed. The map

service offers an overview over location of loading areas and intermodal terminals with connection to railway.

7.3.3.4 Charges

Table 7.1 Charges for service access to loading area

Service	Charge
Access to loading area	SEK 11.94 per number of commenced hour and commenced hundred metres of track

The charge is levied based on agreed, non-cancelled service.

Calculation example: If the allocated service is between 4:00 p.m. and 6:00 p.m. and 200 meters, it counts as two commenced hours and two commenced hundred metres of track. If the allocated service is between 4:00 p.m. and 6:01 p.m. and 201 meters, it counts as three commenced hours and three commenced hundred metres of track.

7.3.3.5 Access conditions

See common provisions, Section 7.3.1.

7.3.3.6 Allocation of service

See common provisions, Section 7.3.1.

7.3.4 Marshalling yards and train formation facilities

7.3.4.1 General information

There are two types of railway yards: marshalling yards and other railway yards. Below is a short description of the conditions that apply for these two types.

Marshalling yards are defined according to the following features:

- automated switching
- marshalling hump
- arrival track
- allocation track
- retarding system/track braking system.

Marshalling yards with track braking system:

- Marshalling yard category 1, has at least 8 arrival tracks and at least 26 allocation tracks that are in series with each other: Hallsbergs rangerbangård, Malmö godsbangård and Sävenäs rangerbangård; see the map service. Hallsbergs rangerbangård also has departure tracks in series with the allocation tracks.
- Marshalling yard category 2, has at most 7 arrival tracks and at most 25 allocation tracks that are parallel to each other: Borlänge rangerbangård, Gävle godsbangård, Helsingborg godsbangård, Sundsvall rangerbangård and Ånge godsbangård; see the map service.

7.3.4.1.1 Other railway yards

Other railway yards are located at stations, and are defined on the basis of the two following points being fulfilled.

- 1 switch or more
- 1 track or more.

7.3.4.1.2 Train formation services

Train formation services include gravity shunting, shunting by pushing of wagons and other associated services for the planning and coordination of vehicle movements, and splitting and forming trains. The Swedish Transport Administration does not offer the service, but refer to other suppliers. See Section 7.3.4.6.

7.3.4.2 Services

The basic services offered by the Swedish Transport Administration in these facilities are access to *marshalling yards* and *track or track area for train formation*.

7.3.4.2.1 Access to marshalling yards

A marshalling yard is a facility constructed to split, sort and form trains. The marshalling yards and the tracks that belong to respective facilities are described in Section 7.3.4.3. The service comprises access to tracks and facilities within a marshalling yard. The service is linked to an arriving train path and is allocated by the Swedish Transport Administration in dialogue with the applicant.

The service includes

- **access to the sidings, switches and marshalling-specific facilities in the marshalling yard**

  This relates to the right to use the service in accordance with the conditions established in the annual timetable, track access agreements, permits and licences, as well as regulations. There may be restrictions at some marshalling yards.

- **access to catenary and electricity via heating posts**

  The right to use the Swedish Transport Administration's catenary at electrified marshalling yards. The right to connect to electricity via a heating post is also included.

- **traffic management**

  The Swedish Transport Administration's traffic management are done in accordance with applicable railway traffic regulations.

- **traffic information for applicants and traffic operators**

  See Section 5.3.4.1.

7.3.4.2.2 Track or track area for train formation

As the Swedish Transport Administration lacks planning support that makes it possible to allocate infrastructure capacity in such detail, the service is not provided in the annual timetable 2027,

The service *Track or track area for train formation* is a track access service intended for provision at stations where the Swedish Transport Administration sees the need to detail vehicle movements, on tracks that do not belong to the marshalling yards reported in Section 7.3.4.1.

The service involves the right to perform vehicle movements during a specific time period within a station or part of a station. The service is only available for an entity that has, or is applying for, *track for holding* and specifically only for the movement of vehicles on and between these tracks.

This means that the arrangement of trains and movement of vehicles can take place in the operationally situation; for example, by means of the railway undertaking requesting the track shunting routes that are necessary for the movement. In this way, train movement can take place outside of the signal that delimits the allocated service track for holding.

The service *track or track area for train formation* includes access to:

- **the tracks and switches required for the task**

  This relates to the right to use allocated the service in accordance with the conditions established in the annual timetable, track access agreements, permits and licences, as well as regulations.

- **catenary**

  The right to use the Swedish Transport Administration's catenary at electrified stations.

- **traffic management**

  The Swedish Transport Administration's traffic management are done in accordance with applicable railway traffic regulations.

- **traffic information for applicants and traffic operators**

  See Section 5.3.4.1.

7.3.4.3 Service facility description

Below is a list of the marshalling yards where the Swedish Transport Administration provides the service *access to marshalling yards*.

Table 7.2 List of marshalling yards where the Swedish Transport Administration provides the service access to marshalling yards

Marshalling yard	Operational point signature	Tracks included in the service access to marshalling yards	Increased security	Facility for test of brake systems
Borlänge rangerbangård	Blg	10–31	Yes	Track 7-31
Gävle godsbangård	Gäb	102–119	Yes	Track 112-124
Hallsbergs rangerbangård	Hrbg	11–18, 21–28, 31–38, 41–48, 201–211, 301–308	Yes	Track 11–48, 201–212
Helsingborgs godsbangård	Hbgb	11g–35g, 73g–82g	Yes	
Malmö godsbangård	Mgb	14–39	Yes	Track 17-38
Sundsvalls rangerbangård	Suc	5–7, 10–14	Yes	
Sävenäs rangerbangård	Sär	101–110, 1–34	Yes	Track 1–30

Ånge godsbangård	Åggb	11–31, 102–106		Track 10-26

7.3.4.4 Charges

Table 7.3 Charges for service access to marshalling yard

Service	Charge
Access to marshalling yard	SEK 104.46 per arriving train

The charge is levied for allocated, non-cancelled service.

7.3.4.4.1 Track or track area for train formation

The charge for the service is included in the service *tracks for holding*.

7.3.4.4.2 Train formation services at the operational point Hagalund

Information regarding charges is provided by SJ AB Depåproduktion. See Section 7.3.4.6 and Annex 1 A.

7.3.4.5 Access conditions

See common provisions, Section 7.3.1.

All of the marshalling yards have an established emergency status plan, and some have a higher security level, which also includes area protection. For marshalling yards with an established emergency status plan, there are requirements of completed emergency training. For more information on the training, contact the Swedish Transport Administration, see Annex 1 A. For more information on which marshalling yards have an emergency status plan, and more information on emergency status plans, is available on the Swedish Transport Administration's website trvdokument.trafikverket.se/, Enter *nödlägesplan* (emergency status plan) in the box headed *Dokumenttitel* (Title of document).

Permission to use the Swedish Transport Administration's marshalling-specific facilities is subject to requirements regarding competence and the relevant training. For more information, contact the Swedish Transport Administration, see Annex 1 A.

7.3.4.6 Allocation of service

See common provisions, Section 7.3.1.

7.3.4.6.1 Application for access to marshalling yard

An application for *access to marshalling yard* is made via the e-services MPK långtid and MPK korttid in connection with the application for capacity for train paths. In the e-service, applicants must enter traffic activity GR at the facility for arriving train path in order to be assigned the service.

The application for the service *access to marshalling yard* (Section 7.3.4.2.1) must state how the service will be operated and by whom. This information shall be submitted to the Swedish Transport Administration, in connection to the capacity application, via e-mail to trafikplanering.jarnvag@trafikverket.se.

In marshalling yards with a number of interested parties, the Swedish Transport Administration is managing an ongoing dialogue with the parties, both during the timetable process and timetable period, in order to ensure that operations at the sites can be managed in accordance with the intentions that the allocation was based on. The interested parties shall act together to determine the most suitable procedures in marshalling yards, for example, through purchasing services from one another or procuring another common service facility operator.

7.3.4.6.2 Train formation services at operational point Hagalund

Train formation services in the form of operational track and engineering work planning within the operational point Hagalund are provided daily between 05.00-23.00. The services are provided by SJ AB Depåproduktion on commission from the Swedish Transport Administration. Every party that uses the train formation service in Hagalund must enter into an agreement with SJ AB regarding the train formation service. Contact details regarding further information and signing of an agreement for the service, see contact details in Annex 1 A. If train formation services are required at other times than between 05.00-23.00, see Annex 1 A.

7.3.5 Storage sidings

7.3.5.1 General information

The Swedish Transport Administration offers track for holding. For the service *connection to electricity when holding railway vehicles*, see Section 7.3.11. If the holding includes loading or unloading at a loading

area where the service access to *access to loading area* (see Section 7.3.3.2) is offered, this service must be applied for.

7.3.5.2 Services

The Swedish Transport Administration offers the basic service *tracks for holding*.

7.3.5.2.1 Tracks for holding

The service offers the opportunity for holding in connection to arrival/departure, established in the annual timetable. An application for *tracks for holding* is required for all holding of vehicles. For stop within the service *train path*, see Section 5.3.

The service *tracks for holding* includes access to:

- the tracks allocated for holding

13. This relates to the right to use allocated capacity in accordance with the conditions established in the annual timetable, track access agreements, permits and licences, as well as regulations.

- traffic management

14. The Swedish Transport Administration's traffic management are done in accordance with applicable railway traffic regulations.

- traffic information for applicants or traffic operators

15. See Section 5.3.4.1.

7.3.5.3 Service facility description

Annex 7 A presents recommended tracks for holding, track length for holding as well as connection to electricity (heating posts).

7.3.5.4 Charges

7.3.5.4.1 Tracks for holding

The charge for the service is divided into Zone A and Zone B and is levied for allocated, non-cancelled service.

Table 7.4 Charges for service tracks for holding

Service	Charge
Holding Zone A	SEK 8.21 per allocated track length per track, per commenced hour and commenced hundred metres of track.
Holding Zone B	SEK 0.45 per allocated track, per commenced hour and commenced hundred metres of track.

Calculation example: If the allocated service is between 4:00 p.m. and 6:00 p.m. and 200 meters, it counts as two commenced hours and two commenced hundred metres of track. If the allocated service is between 4:00 p.m. and 6:01 p.m. and 201 meters, it counts as three commenced hours and three commenced hundred metres of track.

Zone A covers in Stockholm: Stockholm central (Cst), Hagalund (Hgl), Tomteboda bangård (Tm), Älvsjö (Äs) and Älvsjö godsbangård (Äsg). In Göteborg Zone A covers Göteborgs central (G), Göteborg Kville (Gk), Göteborg Skandiahamnen (Gsh) and Sävenäs rangerbangård (Sär). In Malmö Zone A covers Malmö central (Mc), Malmö godsbangård (Mgb) and Hyllie (Hie).

Zone B covers the holding sites not covered by Zone A.

7.3.5.5 Access conditions

See common provisions, Section 7.3.1.

Holding of vehicle is regulated from an electrical safety perspective by TDOK 2014:0415.

7.3.5.6 Allocation of service

See common provisions, Section 7.3.1.

Applications for holding shall firstly be formulated on the basis of the desired track length and time for the holding – not specific tracks. For more information, see the instructions in the e-service on the Swedish Transport Administration's website.

The Swedish Transport Administration refers to Annex 7 A, which lists recommended tracks for holding. The Swedish Transport Administration may, on special occasions, make a suitability assessment and allocate other tracks for holding.

In support of the application for holding the Swedish Transport Administration reports the guidelines for track usage, see Annex 4 D.

7.3.6 Maintenance facilities

The Swedish Transport Administration neither owns nor manages any maintenance facilities.

For information on suppliers of such services, see Section 7.2.

7.3.7 Other technical facilities

7.3.7.1 General information

The Swedish Transport Administration offers the basic service *access to brake testing facilities* in Göteborg Skandiahamnen and Luleå. Brake testing facilities are also available at Borlänge rangerbangård, Gävle godsbangård, Hallsbergs rangerbangård, Malmö godsbangård, Sävenäs rangerbangård and Ånge godsbangård.

7.3.7.2 Services

The Swedish Transport Administration offers the basic service *access to brake testing facilities*.

7.3.7.2.1 Access to brake testing facilities

In Göteborg Skandiahamnen (Gsh), adjacent to tracks 31–35, the Swedish Transport Administration has a facility for testing brake systems, for the charging of air into the brake system's mains, leakage detection and brake testing, as well as maintenance charging of connected sets of carriages. In Luleå (Le), adjacent to tracks m2–m7, the Swedish Transport Administration has a facility for testing brake systems, for the charging of air into the brake system's mains, leakage detection and brake testing, as well as maintenance charging of connected sets of carriages. There are training requirements for anybody intending to use the facilities.

At Borlänge rangerbangård, Gävle godsbangård, Hallsbergs rangerbangård, Malmö godsbangård, Sävenäs rangerbangård and Ånge godsbangård, the facility is included in the service *access to marshalling yards*, see Section 7.3.4.

7.3.7.3 Service facility description

Technical details about the tracks, such as track length, at Göteborg Skandiahamnen and Luleå is available in Annex 7 A, tab Holdings.

There are also facilities for test of brake systems at Borlänge rangerbangård, Gävle godsbangård, Hallsbergs rangerbangård, Malmö godsbangård, Sävenäs rangerbangård and Ånge godsbangård. These are included in the service *access to marshalling yards*.

7.3.7.4 Charges

Table 7.5 Charges for service access to brake testing facilities

Service	Charge
Access to the brake testing facility in Göteborg Skandiahamnen, track 31–35	SEK 89.53 per brake test
Access to the brake testing facility in Luleå, track m2–m7	SEK 89.53 per brake test

The charge is levied for allocated service.

7.3.7.5 Access conditions

There are training requirements for anybody who intends to use the facilities at Göteborg Skandiahamnen and Luleå. For more information on training, contact the Swedish Transport Administration, see Annex 1 A.

7.3.7.6 Allocation of service

See common provisions, Section 7.3.1.

For applications for the use of the brake testing facility at Göteborg Skandiahamnen and Luleå, see instructions in the e-service on the Swedish Transport Administration's website.

7.3.8 Maritime and inland port facilities

The Swedish Transport Administration manages no maritime and inland port facilities, but has a rail connection to several of them. The map service presents these facilities. Here, intermodal transport is made possible through a combination of railway and shipping facilities. See also Annex 2 B.

For information on suppliers of such services, see Section 7.2.

7.3.9 Relief facilities

7.3.9.1 General information

The Swedish Transport Administration provides a service for relief facilities. Map with the service's time limits and coverage area is available on bransch.trafikverket.se/jnb.

The map also shows that the service is available only on the infrastructure managed by the Swedish Transport Administration, with the exception of specifically marked sections.

7.3.9.2 Services

The Swedish Transport Administration provides the basic service *recovery vehicle for clearance of railway vehicles*.

7.3.9.2.1 Recovery vehicle for clearance of railway vehicles

The service is aimed at railway undertakers and is intended to clear its railway vehicle in situations where the vehicle for some reason prevents traffic on the infrastructure managed by the Swedish Transport Administration.

The service includes recovery vehicle with associated operative personnel.

7.3.9.3 Service facility description

The recovery vehicles are diesel trains with traction for at least 900 tonnes. The trains are equipped with movable coupling hooks, breaking pipes and feeder cable. This equipment enables transport via coupler with the transition coupler (coupler adapter) that the vehicle requiring assistance brings with it and that fits that vehicles automatic coupler.

The level of preparedness for the service is adapted to enable a clearance to commence within the deadlines and definitions specified in Section 6.3.1.1. The service aims to strengthen the ability for a quick, efficient and safe clearance of the vehicle in need of assistance. The vehicle is transported to a place designated by the Swedish Transport Administration. Recovery is not included in the service.

Specific information regarding signing agreements and delivery of the service, see Section 8.5.6.

7.3.9.4 Charges

Table 7.6 Charges for service recovery vehicle for clearance of railway vehicles

Service	Charge for up to 3 hours work (per recovery vehicle)	Additional charge for work that exceeds 3 hours (per recovery vehicle)
Provision of recovery vehicle for clearance of railway vehicle	SEK 20,000	SEK 5,000 per commenced hour

The time is counted from (the charge is applied):

- from the time that the starting permission has been granted to start blocked line operation with recovery vehicle, or shunting, to the vehicle requiring assistance
- to the time that the vehicle requiring assistance is located in the area designated by the Swedish Transport Administration.

If the Swedish Transport Administration has caused the recovery situation, no charge will be levied for the use of the service. The same applies when another railway undertaker, within the scope of the service, carries out the clearance at the request of the Swedish Transport Administration.

7.3.9.5 Access conditions

See Section 8.5.6.

7.3.9.6 Allocation of service

Service agreement is signed in connection with signing of the track access agreement, see Section 8.5.6.

7.3.10 Refuelling facilities

The Swedish Transport Administration does not have any fuel depots or supply fuel in any other manner.

For information on suppliers of such services, see Section 7.2.

7.3.11 Connection to electricity when holding railway vehicles

7.3.11.1 General information

The Swedish Transport Administration offers a service for connection to electricity when holding railway vehicles on the Swedish Transport Administration's infrastructure, see Section 5.4.1 and Annex 5 C.

7.3.11.2 Services

The Swedish Transport Administration offers the additional service *connection to electricity when holding railway vehicles*.

7.3.11.2.1 Connection to electricity when holding railway vehicles

It is possible to connect railway vehicles to an electricity supply (for warming and cooling, for example) during holding via:

- train heating posts (1 000 V)
- locomotive heating posts (230 V)
- diesel locomotive heating posts (400 V)
- raised pantograph.

7.3.11.3 Service facility description

Information on which type of heating posts available at each track for holding is presented in Annex 7 A, tab Heating posts. Tracks for holding with the possibility for connection to electricity via pantograph is presented in the same annex, in the tab Holdings.

7.3.11.4 Charges

The charge for connection to electricity relates to connection to heating posts and connection via raised pantographs. The charge for connection to electricity when holding railway vehicles is based on a fixed cost per number of commenced 24-hour periods for each connection to the energy source.

Table 7.7 Charges for service connection to electricity when holding railway vehicles

Service	Charge
Connection to train heating post, locomotive heating post or diesel locomotive heating post	In processing
Connection to electricity via a raised pantograph for vehicles with or without energy meters	In processing

The charging model for the service *connection to electricity when holding railway vehicles* is currently under development and will be presented through an amendment during 2026.

For vehicles that have an energy meter and a raised pantograph, electricity is charged during holding, along with traction current.

For vehicles without an energy meter, the electricity consumption of is included in the standard calculations as described in Annex 5 C, Table 1 and Table 2. Electricity consumption while holding is therefore not reported separately. Annex 5 C also presents standardised templates for consumption, loss surcharges, and calculation examples.

7.3.11.5 Access conditions

See common provisions, Section 7.3.1.

For technical requirements for power supply via catenary, see Section 2.3.9.

7.3.11.6 Allocation of service

See common provisions, section 7.3.1.

8 The Swedish Transport Administration's General Terms and Conditions

8.1 Track access agreements

The Swedish Transport Administration's General Terms and Conditions begin to apply with the signing of a track access agreement. The terms and conditions contain provisions for the use of train paths and other railway services.

The track access agreement, or other specially drawn up agreement concerning the use of services, contains agreements between the Swedish Transport Administration and railway undertakings or traffic organisers regarding what applies during the provision and use of a service.

What is specified in track access agreements, or other agreements concerning the use of a service, applies primarily with respect to what is specified in the Swedish Transport Administration's Network Statement along with the General Terms and Conditions.

8.2 General

During the exercising of rights and responsibilities, the parties may engage substitutes according to the following conditions. If the Swedish Transport Administration's contracting parties engages a substitute, they must inform the Administration of this in writing 14 calendar days before a service is to be used. The information must include a clear indication of the substitute's authorization. An entity that is enlisted as a substitute may not appoint another entity to take its place without special consent from the Swedish Transport Administration. According to Chapter 7 section 23 of the Railway Markets Act, an entity that has been allocated a train path may not transfer it to another party. A train path shall not be considered to have been transferred if the entity is not a railway undertaking engages a railway undertaking to operate the traffic.

The parties are responsible to each other in all respects for the substitute that the party enlists, as well as the equipment, personnel and other resources that they use or enlist. In the event of a claim for compensation that results from the obligation, the parties shall make these claims to one another. Invoices issued to the Swedish Transport Administration shall include conditions of payment within 30 days.

Unless otherwise specified in the Traffic Access Agreement, or in some other specific agreement concerning the use of services, the provisions of the Swedish Transport Administration's General Conditions of Contract regulate the entitlement of one of the parties to the agreement to receive payment from the other party.

8.3 Performance of the parties

8.3.1 The Swedish Transport Administration's delivery

Based on the scope of the track access agreement, the Swedish Transport Administration shall supply train paths and other services to the contracting party in accordance with the decision concerning the establishment of the Timetable including documents necessary for performing agreed train paths, as well as additions and changes that apply in accordance with decisions on capacity allocation for additional needs.

To enable necessary maintenance and inspection according to an annual maintenance plan of facilities for services, for example *tracks for holding*, the Swedish Transport Administration may, with 6 weeks' notice, temporarily change allocated service to a track other than agreed (at a manageable distance from the agreed track). Such a move from a track (and possibly back) can take place on a maximum of three occasions per year and operational point. If the contracting party does not move their vehicles within the prescribed time, the Swedish Transport Administration will have the vehicles moved at the contracting party's expense. If the Swedish Transport Administration requests the contracting party to move the vehicles on additional occasions, or with shorter notice than 6 weeks, the Swedish Transport Administration shall reimburse the contracting party for the direct costs incurred as a result of the contracting party's moving of the vehicle.

Claims due to costs caused by moving to and from a temporary track must be submitted to the contracting party as soon as possible and at the latest within 90 days from the date of the move to and from the temporary track.

If the parties have agreed upon more detailed terms and conditions for the supply and use of services, the services shall be used in accordance with these detailed terms and conditions.

8.3.2 The contracting party's usage

The Swedish Transport Administration's contracting party shall use the Administration's services in connection with the terms and conditions specified in the Swedish Transport Administration's allocation decision.

If the contracting party considers that the use of a service will differ from the allocation, it must immediately notify the Swedish Transport Administration of this. The contracting party must cancel allocated services that it will not use.

If the contracting party uses services that have not been allocated, the usual charge for the service will be levied, as well as charges for any costs for complaints from other railway companies and traffic organizers as well as costs for possible removal of obstructing vehicles.

During the use of the services supplied by the Swedish Transport Administration, the contracting party shall follow:

- the terms and conditions stipulated in the Track Access Agreement
- rules and conditions stipulated in the Network Statement
- the statutes that regulate the operations in question
- regulations governing the current activity.

If the contracting party does not comply with the aforementioned terms and conditions for use of the service, it does not have the right to use the service, unless permission is provided by the Swedish Transport Administration, either through a new decision regarding the allocation of services or through special consent. The Swedish Transport Administration may grant this permission if the deviation is minor or if there are clear reasons for the deviation and if no-one else is affected in a negative way.

8.3.3 Recovery resources prior to use

Prior to use of the service, the Swedish Transport Administration's contracting parties must show that they have access to the resources necessary for recovery, whether this be by means of their own resources or through agreement with another party.

8.3.4 Payment for service

The Swedish Transport Administration's contracting partner shall pay for the services provided as well as in the event of cancellation, in accordance with the rules and conditions specified in the Network Statement.

The Swedish Transport Administration's contracting partner shall pay charges according to the invoice. See also Section 5.9.

8.3.5 Environmental responsibility

The entity using a service is responsible for any residues, for example service and maintenance of vehicles, will be cleared in a safe and quick manner. The expenses for cleaning may be charged.

8.4 Deviations from the agreement

8.4.1 Reservation charge and delay and cancellation charge in the event of deviations

The parties shall reciprocally supply and use the train paths without causing deviations from established timetable and track access agreement.

The party requesting a change according to section 5.6 must pay a reservation charge.

The party that causes deviations in accordance with Section 5.7 shall pay a delay charge.

The liability to pay delay charges and reservation charges for train paths cancelled less than 24 hours before planned departure time from the departure station applies during normal operational conditions.

If operational conditions are not normal, the Swedish Transport Administration shall provide notice of this.

8.5 Remedy of deviations

8.5.1 In cooperation and in dialogue

In the event of disruptions in railway traffic, the railway undertaker and the Swedish Transport Administration shall, in dialogue, strive to resolve the situation through cooperation. If it is not possible to reach an agreement, the Swedish Transport Administration shall, according to Chapter 7, Section 21 of the Railway Market Act (2022:365), implement the necessary measures to restore traffic to normal conditions. The responsibility includes the authority to decide on the necessary measures to be taken for the preparation of evacuation and for execution of clearance. Defined deadlines in Sections 6.3.1.1 form the basis for the

decision taken by the Swedish Transport Administration. Procedures for evacuation and clearance situations can be found in Annex 6 B.

8.5.2 Notification in the event of deviations and errors

One party shall immediately notify the other party in the event of disruptions. Disruptions will be remedied so that safety is maintained and traffic impacts are minimised according to the following priority:

16. taking care of passengers on the affected train
17. minimise impacts on traffic.

The Swedish Transport Administration shall, as soon as necessary information is available, consult with the railway undertakings and traffic organisers on what measures that it plans to take in the event of weather warnings or other similar circumstances (reported by SMHI, MCF or another authority or organisation), where there is a risk that these circumstances will have a large-scale impact on the railway traffic. The Swedish Transport Administration shall give special consideration to the various preconditions of the trains concerned. The Swedish Transport Administration shall, as soon as further actions have been decided, inform the railway undertaking and traffic organisers of those measures which the Swedish Transport Administration plans to take.

If a railway undertaking or traffic organiser discovers errors or deficiencies in the Swedish Transport Administration's facilities or in the information that will be delivered to passengers, it shall report this to the Administration. The Swedish Transport Administration shall send information to the entity that reported the error concerning the actions that will be taken in order to remedy the situation.

The contracting party shall also inform the Swedish Transport Administration's traffic centre about changes that affect the planned traffic information.

8.5.3 Forecast for remedies and continuing traffic

The party that causes the disruption shall provide a forecast of when the disruption can be remedied.

If emergency measures do not completely remedy the disruption, the Swedish Transport Administration shall develop a forecast of the possibilities for rectification. The Swedish Transport Administration's contracting party shall be informed of the content of the forecast.

The Swedish Transport Administration shall also provide a forecast of how the relevant train paths are affected, and inform passengers via its information channels. In the event of major disruptions, the contracting parties will be consulted in order to determine which traffic measures will be taken prior to the final information being provided to passengers.

8.5.4 Response time

The Swedish Transport Administration shall endeavour to achieve a response time of a maximum one (1) hour and, where possible, to remedy the fault within the same window.

8.5.5 In the event of accidents

Work at the site of the accident is carried out in accordance with Annex 8 A.

8.5.6 Resources for clearance

The railway shall at the latest by the signing of the track access agreement inform the Swedish Transport Administration on what resources for clearance the undertaker has at its disposal in the event of traffic disruption, by its own vehicles or via agreement with a service facility operator, which meets the deadlines in Section 6.3.1.1. This only applies if the railway undertaker does not intend to sign a service agreement according to Section 7.3.9 in all coverage areas.

The Swedish Transport Administration is gradually establishing a service for providing *recovery vehicles for clearance of railway vehicles* (see Section 7.3.9). Where and when the service is available and how the Swedish Transport Administration informs about the availability in a specific coverage area is stated in Section 7.3.9.

The railway undertaking signs an agreement on the service in connection with the signing of the track access agreement, see Annex b point 3 in the track access agreement. If the railway undertaking does not provide information according to the first paragraph in 8.5.6 above, the railway undertaking, with the signing of the track access agreement, shall be deemed to have concluded an agreement with the Swedish Transport Administration regarding the service, see Annex b point 3 in the track access agreement.

Regardless of the above, if the deadline specifically in Section 6.3.1.1 cannot be considered to be held, the Swedish Transport Administration can decide to put in resources in the form of recovery vehicles for

clearance according to Chapter 7, Section 21 of the Railway Market Act. Furthermore, if the situation requires as above, the railway undertaker shall, at the Swedish Transport Administration's request, leave vehicles and drivers to the disposal of the Swedish Transport Administration, for clearance in accordance with Section 8.5.1 in the Network Statement and in accordance with Chapter 7, Section 22 of the Railway Market Act (2022:365).

A traffic organiser shall, when signing the track access agreement, or at least 30 days before traffic commences, inform the Swedish Transport Administration how the required clearance capacity for the relevant traffic is ensured. This means that the traffic organiser must report how the traffic operator hired for the traffic fulfils the requirement for clearance capacity in accordance with the above.

8.5.7 Compensation for clearance

For the resources placed at the disposal of the Swedish Transport Administration by its contracting party for clearance on behalf of a party other than the contracting party, the contracting party has the right to compensation. The compensation refers to direct costs that have arisen from the time the contracting party has made its clearance vehicle available, until the transfer of the vehicle and property has been completed or until the clearance vehicle has returned to its original place after the clearance has been completed.

The Swedish Transport Administration's contracting party is liable for costs relating to recovery and clearance of its own vehicles, and shall compensate the Administration for specified costs incurred when applicable. The Swedish Transport Administration will invoice this on a running basis, and the terms of payment will be 90 days.

When the Swedish Transport Administration can be regarded as being the responsible party, the Swedish Transport Administration's party to the agreement shall be entitled to receive compensation for clearance and towing costs. This applies even though no property damage has been occasioned. A request for this type of compensation must have been received by the Swedish Transport Administration within ninety (90) days of the performed clearance. Failure to observe the deadline will result in non-payment.

The Swedish Transport Administration's contracting party may conclude a special agreement regarding invoicing with a party other than the Administration.

8.6 Liability for compensation

8.6.1 General

Unless otherwise explicitly specified in the track access agreement, another special agreement on the use of a service, or another provision in the Swedish Transport Administration's General Terms and Conditions, a party is not liable for compensation towards the other party for damage other than property damage that has been caused by the first-mentioned party to that other party and that in each individual case exceeds 0.5 price base amounts.

Furthermore, unless otherwise explicitly specified in the track access agreement, another special agreement on the use of a service, or another provision in the Swedish Transport Administration's General Terms and Conditions, a party is under no circumstances liable for compensation or damages towards the other party for the following:

1. damage that arise as a result of the other party not fulfilling their obligations in accordance with the track access agreement or other special agreement regarding the use of a service,
2. consequential or indirect damage, or
3. damage that arise as a result of conditions that constitute grounds for release from liability in accordance with the below.

8.6.2 Damages caused by negligence

A party shall always be considered to have caused the other party damages through negligence if:

1. the damage was caused by the party's vehicles (railway vehicles owned, leased, borrowed or used in another manner), machines or the operation of vehicles and machinery
2. damage caused by the load, including inadequate packaging or incorrect loading that the party was managing for transportation, or
3. damage caused by the party's railway network, including but not limited to heat distortion or rail fracture.

In addition, the Swedish Transport Administration shall always be considered to have caused damage through negligence if:

- the damage is caused by trees on the Swedish Transport Administration's property or on land that is covered by the vegetation clearance easement (routes in accordance with a list

under Trädsäkring on the Swedish Transport Administration's website) for the benefit of the Administration's property, or

- the damage is caused by boulders from rock cutting or tunnels that are being constructed or maintained by the Swedish Transport Administration.

With regard to winter-equipped vehicles, in addition to the other provisions in this agreement, the Swedish Transport Administration is always considered to have caused damage to these types of vehicles if the damage is caused by the vehicle being driven lineside in snow masses, where the presence of these masses was a result of neither railway traffic nor the snow clearance of a third party's infrastructure or property.

Vehicles with ploughs are regarded as winter-equipped vehicles, in accordance with the specifications published on the Swedish Transport Administration's website at the time when the track access agreement was concluded, as are vehicles or carriages with equivalent equipment.

The Swedish Transport Administration is considered to have caused damage where this is a result of the Administration neglecting to take measures to clear obstacles other than snow from the tracks or delaying unreasonably before taking such measures, provided the obstacle is reported as an emergency incident in accordance with this agreement, and on the condition that the Swedish Transport Administration is managing clearance of the obstacle.

8.6.3 Contributory negligence

Compensation that a party is liable to pay as a result of damages can be adjusted if the other party has contributed to the damage. The adjustment must be reasonable, taking into consideration the damage caused by each party.

8.6.4 Compensation amount

The liability to pay compensation in the event of property damage covers the object's value after the cost of repairs (but not costs exceeding the object's value), loss of value, and compensation for losses during a period of inactivity, as well as other direct damages. See Annex 8 B.

8.6.5 Liability to pay compensation for damages suffered by a third party

If a third party claims damages from a party, and that party believes the other party should ultimately be liable for the damages, the party may not

approve or have any other form of control over the claim without having reached an agreement with the other party in this respect. This means that the party must file the claim for damages with the other party as soon as possible.

If a party receives a claim for damages from a third party and believes that the other party should ultimately be liable for the damages, the other party may bring an action in the matter at its own risk and cost, after having received the claim in accordance with the above. If the other party then chooses not to bring an action, the party shall not approve the claim or arrive at a settlement regarding the claim without having first obtained the other party's opinions, which shall be taken into reasonable consideration. The parties shall act quickly with the application of this provision.

If a party, with regard to what is stated in the first and second paragraph above, has paid damages or compensation to a third party (in accordance with the track access agreement or other special agreement regarding the use of services) that shall be borne by the other party, the party then has right of recourse against the other party. The right of recourse applies regardless of what is prescribed by the law or other statutes with regard to liability. However, this only applies to compensation that is paid to third parties as a result of liability in accordance with statutes or the track access agreement.

Beyond the right to compensation as per points 8.4 and 8.11, the contracting party does not have the right of regress to obtain compensation from the Swedish Transport Administration for compensation paid by the contracting party to another party that was affected by delays or other disruptions in the traffic. The limitation does not apply to compensation that paid with the support of the Railway Traffic Act (2018:181).

Despite the above, the Swedish Transport Administration may reclaim compensation for damages from the contracting party - where these have been paid to a third party in accordance with the law or another statute - only if the Administration is able to demonstrate that the contracting party caused the damage.

8.6.6 Responsibility during railway operation

The Swedish Transport Administration's contracting party bears the responsibility for damages suffered by its personnel, passengers or agents, as well as goods and similar that that entity was in charge of transporting, where these have been caused by railway operations. If the contracting party has paid out compensation for these types of damages, the

compensation may be reclaimed from the Swedish Transport Administration only if the damage was caused by the Swedish Transport Administration.

8.6.7 Liability to pay compensation in the event of damages connected to clearance

In the case of clearance situations where the Swedish Transport Administration's recovery vehicle is used, the Swedish Transport Administration is responsible to the contracting party for the recovery vehicle in accordance with the provisions of Section 8.2.

If damage occurs in connection with clearance requested by the Swedish Transport Administration, the Administration is liable for the damages on the condition that the contracting party had placed resources at its disposal in accordance with what was stated in Section 8.5.6. This does not apply, however, if the contracting party's driver is guilty of negligence in connection with the clearance. In the assessment of what constitutes negligence in connection with the clearance, the parties shall take into consideration the difficulties involved in clearance.

If damage occurs as a result of resources placed at the Swedish Transport Administration's disposal not fulfilling the requirements in accordance with Section 8.5.6, the contracting party is liable for the Administration's damages or any compensation paid by the Administration to a third party, in the same manner as with negligence.

8.6.8 Data for investigation of damages

In the event of damage, the parties shall ensure that the necessary investigation is conducted in order to identify what caused the damage. The party that has control over facilities, vehicles or machines shall provide the technical data requested by the other party which is relevant to the investigation.

8.6.9 Time limit on claims for compensation

Claims resulting from damages shall be made to the other party as soon as possible, and at the latest ninety (90) days (a) from the incident that caused the damage, or (b) if it is a claim from a third party, from the time when the party received the claim.

A claim shall be made in writing, but do not need to specify the amount initially. They shall, however, contain a preliminary account of the conditions that are being stated as the grounds for the claim.

8.6.10 Demonstration of negligence

The party that incurs damages is not required to demonstrate that the other party was negligent if, in cases such as those described in Section 8.6.2, the connection between cause and damage is established.

8.6.11 Cause of damage

If the investigation does not identify what caused the damage, the parties shall bear their own costs.

8.7 Grounds for exemption

8.7.1 Notification about grounds for exemption

The parties are free from liability for failure to fulfil their contractual obligations if the latter is as a result of war, terrorism, riot, shortage of energy in the country, blockade, fire or explosion, authority decision or other incident beyond the parties' control, or when these type of circumstances affect a subcontractor. The parties do not have the right to cite incidents caused by their own actions or decisions as grounds for exemption.

If there are grounds for exemption in accordance with the above, the party citing the ground for exemption shall take justifiable measures to reduce and nullify the effects of the incident.

The party that requests an exemption in accordance with the aforementioned provisions shall immediately inform the other party, and notify as soon as possible when the grounds for exemption have ceased to apply.

8.7.2 The State's right to use the railway

With consideration for the country's defence, security, preparedness and mobilisation, or due to military or preparedness exercises under a state of emergency or similar reasons, the State has the right to use the Swedish Transport Administration's railway network, which also encompasses the operating rights and capacity allocation obtained by the Administration's contracting party, to the scope and extent that the State considers necessary. The Swedish Transport Administration is free from liability for failure to fulfil its contractual obligations in such cases. In this context, the Swedish Transport Administration's contracting party has the right to compensation from the State for the encroachment that the State's usage entailed, to the extent that compensation is stipulated by laws or statutes.

In this case, the compensation shall be paid out by the authority that is liable to pay compensation in accordance with laws or statutes.

8.8 The validity of the agreement

8.8.1 Track access agreements

The track access agreement, or other special agreement regarding the use of services, is valid for a maximum of one (1) timetable period. Alternatively the termination of these agreements may be provided in writing. The agreements cease to be valid at the turn of the month falling three (3) months after the day on which the notification is received by the addressee.

8.8.2 Termination in the event of a breach of contract

If one party commits a material breach of contract, the other party, regardless of what is stated in Section 8.8.1, has the right to terminate the agreement for its immediate cessation after thirty (30) days, if the other party has informed the party in writing that the agreement is to be terminated as the result of a major breach of contract. The right only applies if the breach of contract is not remedied before the end of the 30 day period.

The party that receives written notification shall, in consultation with the other party and to the best of their ability, take measures to rectify the breach of contract as quickly as possible.

The Swedish Transport Administration is however entitled to immediately terminate the parties' track access agreements if a railway undertaking or a traffic organiser is in default of payment, see also Section 5.9.

8.8.3 The agreement ceases to be valid in the event of bankruptcy and revocation of the license

The track access agreement or other special agreement regarding the use of services ceases to apply with immediate effect, without specific notice, if one party declares bankruptcy or if the permit allowing the railway undertaking to operate traffic is revoked.

8.9 Disputes

8.9.1 Consultation body in the first instance

Disputes between the parties relating to the track access agreement or other agreement or document that was drawn up with support of the track access agreement shall in the first instance be settled by the consultation body appointed by the parties. Unless the parties have agreed on something else, the Swedish Transport Agency or Swedish public court applies as the exclusive forum when a dispute cannot be resolved through consultation.

8.10 Certain international transports

8.10.1 Rules in accordance with COTIF

For international transports where COTIF appendices A and B can be applied (Convention concerning International Carriage by Rail of 9 May 1980 as amended by the Vilnius Protocol of 3 June 1999), the parties shall apply the provisions stipulated by COTIF Appendix E.

The provisions in this agreement are also applicable to the extent that they are consistent with COTIF Appendix E.

8.11 Liability for economic damage

In accordance with the Rail Traffic Act (2018:181), the Swedish Transport Administration, as the administrator of railway infrastructure, shall be responsible for demonstrated economic damage arising for a carrier resulting from that carrier's obligations, in accordance with COTIF 1999 along with its appendices, the Regulation ((EU) 2021/782) on rail passengers rights and obligations, and the Act (2015:953) on the rights of public transport passengers.

The Swedish Transport Administration is responsible to the extent that such damage has been caused by a carrier while utilising the railway infrastructure and the damage is due to the railway infrastructure. The carrier shall limit the damage, and damage that arises in addition to the legal obligations of the carrier in accordance with the references above is not covered by the liability of the Swedish Transport Administration.

The Swedish Transport Administration is not responsible when any of the grounds for freedom from liability in CUI Appendix E are present. This means, among other things, that the Swedish Transport Administration is

not responsible when the damage has been caused by an event that cannot be attributed to the railway operation in itself, or when the damage has been caused by an event that is due to third-party behaviour, the consequences of which have not been possible to avoid or prevent by the infrastructure manager even when necessary care has been taken.

The carrier can submit a claim, in writing, for compensation for economic damage. Carrier refers to the entity who holds the train path for the traffic in question. The carrier may, in accordance with Appendix E (delegation from traffic organiser to traffic operator) to the track access agreement, delegate the right to submit a claim for compensation and to receive compensation.

The claim for compensation for economic damage shall contain a description of events and grounds for the claim and documentation that shows and specifies the damage.

The Swedish Transport Administration shall, in accordance with section 10 of the Rail Traffic Act, deduct delay and cancellation charges paid to the carrier due to the same incident. The Swedish Transport Administration makes this deduction regardless of whether it is the carrier itself or a traffic operator appointed by it which has suffered the economic damage.

If causes that can be attributed to the Swedish Transport Administration and causes that can be attributed to someone else have contributed to economic damage, the Swedish Transport Administration shall be responsible only to the extent that the causes that can be attributed to the Swedish Transport Administration have contributed to the damage in question.

Contacts

1 Information about the Network Statement

Questions about the Network Statement.

The Swedish Transport Administration
Avdelning Kund och marknad, enhet Tjänsteledning
781 89 Borlänge

E-mail: networkstatement@trafikverket.se
Website: https://www.trafikverket.se/jnb

2 Telephone numbers and addresses

The Swedish Transport Administration
781 89 Borlänge

Phone: +46 771-921 921

E-mail: trafikverket@trafikverket.se
Website: http://www.trafikverket.se

3 Other Contacts

Transportstyrelsen (the Swedish Transport Agency)
Website: https://www.transportstyrelsen.se/sv/jarnvag/

Phone: +46 771-503 503

Regeringskansliet (Government Offices of Sweden)
Landsbygds- och Infrastrukturdepartementet (Ministry of Rural Affairs and Infrastructure)
103 33 Stockholm

Website: http://www.regeringen.se
Phone: +46 8-405 10 00

4 Support Railway

At Support Railway you get help with access to the Swedish Transport Administration's systems and energy meter including SIM-card.

The Swedish Transport Administration
Support järnväg
781 89 Borlänge

E-mail: support.jarnvag@trafikverket.se

5 Questions regarding capacity and services

The application relates to:

- minimum package of access services (train path)
- minimum package of access services (train path) for international traffic
- minimum package of access services (train path) for an exceptional transport
- passenger stations
- freight terminals
- marshalling yards and train formation facilities
- storage sidings
- other technical facilities
- connection to electricity when holding railway vehicles.

Submission of announcements data for passenger trains, see chapter 5 section 5.3.4.2 and section 5.4 below.

5.1 Questions about the application no later than 2026-04-13 or supplementary application

The Swedish Transport Administration
Avdelning Kapacitet järnväg, enhet Leveranssamordning
781 89 Borlänge

E-mail: trafikverket.jarnvag@trafikverket.se

Via the Swedish Transport Administration's e-service (MPK Långtid)
Phone: +46 10-125 10 10
State if the question concerns long-term planning or late path request.

5.2 Questions about the application until 15:00 on weekdays before the next operating period

The Swedish Transport Administration
Avdelning Kapacitet järnväg, enhet Leveranssamordning
781 89 Borlänge

Phone: +46 771-921 921

Via the Swedish Transport Administration's e-service (MPK Korttid)
Phone: +46 10-125 10 10.

5.3 Questions about the application from 15.00 on weekdays before the next operating period and during the operating period

Via the Swedish Transport Administration's e-service (MPK Korttid).

E-mail:

operativaledaren.syd@trafikverket.se
operativaledaren.vast@trafikverket.se
operativaledaren.ost@trafikverket.se
operativaledaren.nord@trafikverket.se

5.4 Announcement for passenger trains

Announcement information which cannot be adjusted via the Swedish Transport Administration's e-service (in accordance with chapter 5, section 5.3.4.2) and support for overall traffic information about planned events shall be sent to

trafikinformationsledaren.syd@trafikverket.se
trafikinformationsledaren.vast@trafikverket.se
trafikinformationsledaren.ost@trafikverket.se
trafikinformationsledaren.nord@trafikverket.se

5.5 Details on vehicle type and pantograph model/type according to Annex 6 A

The Swedish Transport Administration
781 89 Borlänge

E-mail address for questions about power supply: elkraft@trafikverket.se

E-mail address for questions about railway work vehicles:
trafiksakerhetjvg@trafikverket.se

5.6 Train formation services at Hagalund station according to Section 7.3.4.6

SJ AB, Depåproduktion
Besöksadress: Råsta Strandväg 16

Operational contacts, from 05:00 to 23:00:
Phone: 010-127 39 02

Operational contacts outside if these hours should refer to the Swedish Transport Administration´s Traffic Control Center in Stockholm

E-post operativa ärenden: tagbildningsplanerare@sj.se

E-post A-skyddsfrågor: askyddhgl@sj.se

E-post övriga ärenden: tagbildningssamordnare@sj.se

Signing if agreements for the train formation service:
Phone: 070 – 762 51 02
E-post: magnus.alexandersson@sj.se

For other contacts and information about the train formation service, please refer to the facility description for SJ AB, Train Formation Service Hagalund at https://bransch.trafikverket.se/anlaggningsbeskrivning

5.7 Additional services according to Section 5.4.2

Questions about permits and conditions for exceptional transports:
The Swedish Transport Administration
Avdelning Kapacitet Järnväg, enhet leveranssamordning – Komplexa specialtransporter och villkorshandläggning
781 89 Borlänge

Phone – Transport conditions: +46 10-123 20 20
E-mail: specialtransporter.jarnvag@trafikverket.se

Phone – Transport permits: +46 10-124 20 20
E-mail: specialtransporter.tillstand@trafikverket.se

5.8 Other recipient of application for capacity other than the Swedish Transport Administration in accordance with Section 4.2

Applications for capacity which other Swedish infrastructure manager must forward to the Swedish Transport Administration:

E-mail: trafikplanering.jarnvag@trafikverket.se

6 Ancillary services

6.1 Application for other ancillary services:

Conditions for test running of vehicles:

The Swedish Transport Administration
Avdelning Kapacitet Järnväg, enhet leveranssamordning – Komplexa specialtransporter och villkorshandläggning
781 89 Borlänge

E-mail: provkorning.jarnvag@trafikverket.se

7 Damages, complaints about services and invoicing issues

7.1 Submission of claims for property damage in accordance with section 8.6

The Swedish Transport Administration
Eftermarknad, TRAV-skador
781 89 Borlänge

E-mail: TRAV-skador@trafikverket.se

7.2 Complaints about services and invoicing issues

The Swedish Transport Administration
Eftermarknad, Fakturering
781 89 Borlänge

E-mail: fakturering.jarnvag@trafikverket.se

7.3 Invoice about clearance work in accordance with Section 8.5.7

The Swedish Transport Administration
Fakturahantering
EF 1207
781 89 Borlänge

7.4 Invoice about property damage according to Annex 8 B - Procedures during the settlement of claims, Section 1.7.4

The Swedish Transport Administration
Fakturahantering
EF 1207
781 89 Borlänge

7.5 Application for economic damage – right of regress – passenger traffic

The Swedish Transport Administration

Avdelning Kund och marknad, enhet Ekonomisk reglering,
Orsaksutredning och ekonomisk skada
781 89 Borlänge

E-mail: ekonomisk.skada.jarnvag@trafikverket.se

For more information on contacts and form for application for economic damage in Section 8.11, se the Swedish Transport Administration's website: trafikverket.se/ekonomisk-skada-persontrafik/

7.6 Application for economic damage – right of regress – freight traffic

The Swedish Transport Administration
Avdelning Kund och marknad, enhet Ekonomisk reglering,
Orsaksutredning och ekonomisk skada
781 89 Borlänge

Phone: 010-123 20 20
E-mail: ekonomisk.skada.jarnvag@trafikverket.se

For more information on contacts and form for application for economic damage in Section 8.11, se the Swedish Transport Administration's website: trafikverket.se/ekonomisk-skada-godstrafik/.

8 Delay and cancellation codes

8.1 Request for renewed assessment (BONO and BONO+) of the Swedish Transport Administration's delay coding in accordance with Section 5.7.6.1

E-mail: begaranomnyorsakskod@trafikverket.se

8.2 Request for renewed assessment (BRIO) of the Swedish Transport Administration's cancellation coding in accordance with Section 5.7.6.2

E-mail: begaranomnyorsakskod@trafikverket.se

8.3 Request for dispute resolution for coding in accordance with Section 5.7.6.3

E-mail: tvistlosningorsakskod@trafikverket.se

9 International traffic

9.1 International traffic in accordance with Section 1.7.1.1

Information about ScanMed RFC and C-OSS contact for pre-arranged paths www.scanmedfreight.eu (see also Sections 4.2 and 4.5).

9.2 International traffic in accordance with Section 1.7.2

Information about RNE (RailNetEurope), contacts, capacity according to international train path's OSS www.rne.eu/organisation/oss-c-oss, system Path Coordination System (PCS) and common definitions in RNE represents on RNE:s website www.rne.eu/organisation/network-statements (see also Section 4.2).

9.3 National One-Stop Shop in accordance with Section 1.7.2.1

The Swedish Transport Administration
Box 366
SE - 20123 Malmö

E-mail: oss@trafikverket.se

Charges

Minimum access package (train path) on the Swedish Transport Administration's infrastructure

Charge	Amount (SEK)	Unit	Segment	Section
Track charge average axle load ≤ 10 tonnes	0.0204	Gross-tonne-kilometre	Freight traffic, service trains	5.3.6
Track charge average axle load > 10 tonnes ≤ 17 tonnes	0.0227	Gross-tonne-kilometre	Freight traffic, service trains	5.3.6
Track charge average axle load > 17 tonnes ≤ 25 tonnes	0.0249	Gross-tonne-kilometre	Freight traffic, service trains	5.3.6
Track charge average axle load > 25 tonnes	0.0268	Gross-tonne-kilometre	Freight traffic, service trains	5.3.6
Track charge average axle load ≤ 17 tonnes	0.0218	Gross-tonne-kilometre	Passenger traffic	5.3.6
Track charge average axle load ≤ 17 tonnes	0.0237	Gross-tonne-kilometre	Passenger traffic	5.3.6
Train path charge	4.98	Train kilometre	Passenger traffic, freight traffic, service trains	5.3.6

Passage over the Öresund Link

Charge	Amount (SEK)	Unit	Segment	Section
Track charge average axle load ≤ 10 tonnes	0.0204	Gross-tonne-kilometre	Service trains	5.3.6
Track charge average axle load > 10 tonnes ≤ 17 tonnes	0.0227	Gross-tonne-kilometre	Service trains	5.3.6
Track charge average axle load > 17 tonnes ≤ 25 tonnes	0.0249	Gross-tonne-kilometre	Service trains	5.3.6
Track charge average axle load > 25 tonnes	0.0268	Gross-tonne-kilometre	Service trains	5.3.6
Track charge average axle load ≤ 17 tonnes	0.0218	Gross-tonne-kilometre	Passenger traffic	5.3.6
Track charge average axle load ≤ 17 tonnes	0.0237	Gross-tonne-kilometre	Passenger traffic	5.3.6
Train path charge	4.98	Train kilometre	Passenger traffic, service trains	5.3.6
Passage charge Öresund Link	3 445.80	Passage	Freight traffic	5.3.6

Basic services, additional services and ancillary services

Charge	Amount (SEK)	Unit	Section
Brake testing facility in Göteborg Skandiahamnen tracks 31–35, access to	89.87	per brake test	7.3.7
Brake testing facility in Luleå tracks m2–m7, access to	89.87	per brake test	7.3.7
Electricity via train heating post, locomotive heating post or diesel locomotive heating post, connection to	Tariff model in progress	per commenced day	7.3.11
Electricity via raised pantograph for vehicles with or without electricity metres, connection to	Tariff model in progress	per raised pantograph and commenced day	7.3.11
Recovery vehicle for clearance of railway vehicles, provision of	20 000	per recovery vehicle for up to 3 hours work	7.3.9
Recovery vehicle for clearance of railway vehicles, provision of	5 000	per recovery vehicle and commenced hour exceeding 3 hours	7.3.9
Loading area, access to	11.94	per hour and commenced hundred metres of track	7.3.3
Test-driving of vehicles, any measures taken in conjunction with processing and test-driving	The Swedish Transport Administration’s prime cost		5.5.3
Test-driving of vehicles, processing of conditions	1 296.71	per commenced hour	5.5.3
Marshalling yard, access to	104.46	per arriving train	7.3.4

Exceptional load, coverage of routes in the conditions of carriage	1	per kilometre and commenced month	5.4.2
Exceptional load, any measures taken in conjunction with the processing and the transportation	The Swedish Transport Administration's prime cost		5.4.2
Exceptional load, processing of application for transport permit	375	per commenced half-hour	5.4.2
Exceptional load, processing of application for transport conditions	1 000	per commenced hour	5.4.2
Holding zone A	8.21	per allocated track length per track, per commenced hour and commenced hundred metres of track	7.3.5
Holding zone B	0.45	per allocated track length per track, per commenced hour and commenced hundred metres of track	7.3.5

Barrier-free length and platforms

The document is not suitable for publication in this format because it contains a large amount of rows and multiple sheets. The document is available on the Swedish Transport Administration's website.

https://bransch.trafikverket.se/contentassets/659d4c63c1e1481e87044ef957ec3812/annex-2-a---barrier-free-lenghts-2026-02-12.xlsx

Track standard data

The document is not suitable for publication in this format because it contains a large amount of rows and multiple sheets. The document is available on the Swedish Transport Administration's website.

https://bransch.trafikverket.se/contentassets/659d4c63c1e1481e87044ef957ec3812/annex-2-b---track-standard-data-2026-02-12.xlsx

Highest permitted speed per line

The document is not suitable for publication in this format because it contains a large amount of rows and multiple sheets. The document is available on the Swedish Transport Administration's website.

https://bransch.trafikverket.se/contentassets/659d4c63c1e1481e87044ef957ec3812/annex-2-c---highest-permitted-speed-per-line-2026-02-12.xlsx

Gradients per line

The document is not suitable for publication int this format because it contains a large amount of rows and multiple sheets. The document is available on the Swedish Transport Administration's website.

https://bransch.trafikverket.se/contentassets/659d4c63c1e1481e87044ef957ec3812/annex-2-d-2027-gradients-per-line-2025-12-05.xlsx

Other availability impacts

1 Sections with a risk of prolonged reductions

In part of the railway network is a heightened risk of prolonged reductions in speed or axle load. These are presented below.

Table 1. Line/section with risk of prolonged restrictions

143 (Bastuträsk)-Skelleftehamns övre
215 (Ramsjö)–(Ånge)
224 (Ånge)–(Sundsvall C)
303 Gävle C–Strömsbro
325 (Ludvika)–Ställdalen
340 (Fagersta)-(Ludvika)
376 (Repbäcken)–Vansbro–Malung
621 (Uddevalla C)–Strömstad
631 Kil–Charlottenberg
661 (Kil)–Torsby
831 (Nässjö)–(Hultsfred)

Line section 143 (Bastuträsk)–Skelleftehamn Övre
(Finnforsfallet)–(Skellefteå), the bridge over Skellefte river, km 33+220: Reduced speed over the bridge due to brittle steel in the beams. Risk of further reductions of speed and axle load.

Line section 215 (Ramsjö)–(Ånge)
(Östervall)–(Alby), the bridge over Ljungan river at Alby, down track, km 469+116: There is a risk of prolonged reductions of axle load and speed due to carrying capacity problem.

Line section 224 (Ånge)–(Sundsvall C)
The bridge over Ljungan river, Parteboda, (Ånge)–(Erikslund), km 489+462 and the bridge over Ljungan river, Erikslund, (Ånge)-(Erikslund), 498+829: There is a risk of prolonged reduction of axle load and speed due to carrying capacity problems.

Line section 303 Gävle–Strömsbro
Drottninggatan street in Gävle, km 114+370: There is risk of prolonged reduction of axle load and speed due to carrying capacity problems.

Line section 325 (Ludvika)–Ställdalen
The bridge over Ställdalsån river, Ställdalen km 463+564: There is risk for prolonged reduction of axle load and speed due to carrying capacity problems. Applies to the exit towards the track Silverhöjdspåret.

Bandel 340 (Fagersta)-(Ludvika)
Fagersta central–Söderbärke, bridge over Hugnorasundet, km 179+553: There is a risk of prolonged reduction of axle load and speed due to brittle steel in the beams.

Line section 376 (Repbäcken)–Vansbro–Malung
Repbäcken–Rågsveden, km 36+650 – 162+119: There is risk of prolonged reduction to 40 km/h.

The bridge over Västerdalsälven river, (Björbo)–(Dala Järna), km 269+344: There is risk of prolonged reduction of axle load and speed.

Vansbro–-Rågsveden, bro över Gryckån, km 154+218: There is a risk of prolonged reduction of axle load and speed due brittle steel in the beams.

Vansbro–-Rågsveden, Rågsveden vägport, km 159+748: There is a risk of prolonged reduction of axle load and speed due to brittle steel in the beams.

Line section 621 (Uddevalla C)–Strömstad
Uddevalla–Överby, km 89+590 – 166+050: There is risk of prolonged reductions of speed to 80 km/h due to bad tracks.

Line section 631 Kil–Charlottenberg
The bridge over Norsälven river between Kil and Fagerås, km 353+85 – 353+263: There is risk of prolonged reductions of axle load and speed due to carrying capacity problems.

Line section 661 (Kil)–Torsby
Kil–Rottneros, km 1+446 – 35+140: There is risk of prolonged reduction to 80 km/h due to bad tracks.

Line section 831 (Nässjö)–(Hultsfred)

(Hjältevad)–(Hultsfred), km 45+877 – 82+561: There is risk of speed reduction to 80 km/h due to bad tracks.

Governing documents

Document	Title	Version
TDOK 2017:0701	Points–control and stop block using a local setter, and control *Växlar och spårspärrar – lokal manövrering och kontroll*	1.0
TDOK 2013:0657	Order- and protection regulations for railway yards *Ordnings- och skyddsregler för bangårdar*	4.0
TDOK 2020:0074	Detectors: Handling of alarms and measures after established damage *Detektorer. Hantering av larm samt åtgärder efter konstaterade skador*	3.0
TDOK 2014:0415	Electricity safety regulations for stations *Elsäkerhetsföreskrifter för trafikplatser*	2.0
TDOK 2016:0193	Use of GSM-R on the Swedish Transport Administration's railway facility *Användning av GSM-R på Trafikverkets järnvägsanläggning*	4.0
TDOK 2021:0412	Temporary changes in Traffic Regulations for Railways *Tillfälliga ändringar i TTJ*	8.0
TDOK 2015:0309	Traffic Regulations for Railways *Trafikbestämmelser för järnväg*	11.0
TDOK 2014:0774	Electric requirements for vehicles regarding compatibility with the infrastructure and other vehicles *Elektriska krav på fordon med avseende på kompatibilitet med infrastrukturen och andra fordon*	1.0
TDOK 2014:0775	Requirements for pantographs and interaction between the pantograph and catenary line *Krav på strömavtagare och interaktionen mellan strömavtagaren och kontaktledningen*	1.0
TRVINFRA 00164 KRAV	Catenary. Holding of vehicles with raised pantograph. Technical requirements for vehicles *Kontaktledning* *Uppställning av fordon med uppfälld strömavtagare* *Tekniska krav på fordon*	1.0
TRVINFRA 00164 RÅD	Catenary. Holding of vehicles with raised pantograph. Technical requirements for vehicles *Kontaktledning* *Uppställning av fordon med uppfälld strömavtagare* *Tekniska krav på fordon*	1.0
TDOK 2023:0120	Re-routing of train journeys within stations with station parts	2.0

	Omledning av tågfärd inom driftplats med driftplatsdelar	
TDOK 2024:0179	Use of brake percentage tables, etc. *Användning av bromsprocenttabeller m.m.*	1.0

Monitoring of operational points

1 Category A

Operational points controlled remotely and operational points that are locally monitored permanently belong to Category A. No special conditions are specified for capacity allocation on these stations because of monitoring.

1.1 Stations that are locally monitored permanently

- Kil
- Luleå
- Nässjö
- Trelleborg

2 Category B

Operational points that are locally monitored for a certain time according to a plan belong to Category B. The Swedish Transport Administration plans monitoring at these stations on the basis of:

- the needs that follow from applications for train paths ahead of the future annual timetable, and the resources available to The Swedish Transport Administration
- the additional needs for monitoring that follow from applications for train paths after the establishment of the annual timetable ("ad hoc applications") and the resources available to The Swedish Transport Administration.

An ad hoc train path application that would result in additional monitoring must be submitted to The Swedish Transport Administration eight weeks in advance.

This category also includes operational points that are remotely controlled from a dispatch centre at certain times and which are locally monitored for the rest of the time. During periods when the station is locally monitored, the conditions for capacity allocation may be limited.

2.1 Operational points that are locally monitored at some times and remotely controlled at other times, according to a plan

- Jönköpings godsbangård

2.2 Stations which are locally monitored at some times, according to a plan

- Bengtsfors
- Berga
- Blomstermåla
- Bofors
- Bäckebron
- Dingle
- Eksjö

- Forsheda
- Forshem
- Hjältevad
- Hultsfred
- Kisa
- Landeryd
- Lidköping
- Lycksele
- Lysvik
- Mariestad
- Munkedal
- Mönsterås
- Olofström
- Oskarshamn
- Reftele
- Rottneros
- Skene
- Smålandsstenar
- Strömstad
- Sunne
- Tanum
- Torsby
- Torup
- Veddige
- Vetlanda
- Vimmerby
- Viskafors
- Värnamo

3 Category C

Stations with no plan for local monitoring belong to Category C. The Swedish Transport Administration plans the monitoring of these stations on the basis of the additional needs for monitoring that follow from applications for train paths after establishment of the annual timetable ("ad hoc applications") and the resources available to The Swedish Transport Administration.

An ad hoc train path application that would result in additional monitoring must be submitted to The Swedish Transport Administration twelve weeks in advance.

3.1 Operational points that may be locally monitored at times

- Lyrestad*
- Mörlunda

* This station is not fully equipped. The Swedish Transport Administration may decline an ad hoc train path application that results in additional monitoring even if the application is received earlier than twelve weeks in advance.

4 Category D

Operational points with no plan for local monitoring belong to Category D. The Swedish Transport Administration does not plan monitoring at these stations.

4.1 Operational points that are not locally monitored

- Billingsfors
- Dals Långed
- Finnforsfallet
- Horred

- Hova
- Järpås
- Mariannelund
- Oskarström
- Rossön
- Skee
- Skellefteå
- Sollefteå
- Storfors
- Ådalsliden
- Åsensbruk
- Österalnö

Priority criteria

Contents

1 The structure of the priority criteria

1.1 The purpose of the priority criteria

Chapter 7, Section 2 of the Railway Market Act (2022:365) says that in case not all applications for infrastructural capacity can be coordinated, the infrastructure manager has to allocate capacity by levying charges or by employing priority criteria that lead to socio-economic efficient use of the infrastructure.

The priority criteria are the Swedish Transport Administration's tool for resolving conflicts of interest that arise when capacity will be allocated for a new annual timetable. The priority criteria are applied either when an congestion has been declared after unresolved dispute, or when the infrastructure has been declared congested before the start of the coordination period.

1.2 Scope

The priority criteria use the calculation of socio-economic costs for two types of objects that are dealt with in the capacity allocation process: train paths and associations.

1.3 Train paths

The train path carries the bulk of the costs that may be associated with railway transport. Some costs are dealt with in the calculation model not as costs for the train path but rather as the object-type associations.

1.4 Associations

Associations between train paths are planning objects that contain only information on conditions about relations between different train paths and which help to keep track of commercial and technical production “networks”. Associations describe temporal connections between train paths, which can be assigned either to commercial needs, or production needs (vehicle schedule). The sole purpose of associations is to direct the position in time of associated train paths through demands and thus they do not include any timings, but specified time differences. An association carries all socio-economic costs that are affected by how relations between trains change and are maintained. Many costs that intuitively could be tied

to empty vehicle transports in the flows will instead, in the calculation model, be costs for interrupted vehicle circulations.

1.5 Basic principles

The basic principle of the Swedish Transport Administration's priority criteria is to choose the solution to a conflict between applicants that provides the greatest socio-economic benefit. This assumes that there is a conflict of interests that cannot be resolved without the use of priority criteria as arguments for coordination or as a basis for the established timetable.

The priority criteria are applied either when a congestion has been declared after an unresolved dispute, or when the infrastructure has been declared congested before the start of the coordination period.

The priority criteria do not provide a specific priority between trains. No train is prioritised in favour of another. The priority criteria point out the solution that will be recommended with the help of a calculation model. The model is based on a number of simplifications and standards. The cost of the priority categories is based on ASEK (principles and prices for social cost-benefit analysis in the Swedish transport sector). See the Swedish Transport Administration's website.

1.6 Details in the application

In order for the calculation model to work, a number of details from the applicants must be processed. These details are provided in the e-services for the capacity application.

1.7 Categorise the objects

For all applied train paths, a relevant priority category must be specified. The specification takes place with the help of a number of identification conditions, see Sections 3.2-3.4 in this annex. The same goes for associations, but identification conditions for the priority categories is found in Section 3.5-3.6 within this annex.

1.8 Pre-defined cost parameters for the categories

Every train path or association that belongs to the same category is dealt with, in the priority calculations, in the same way and uses the same cost parameters.

1.9 Calculate cost differences between solutions

The Swedish Transport Administration must often modify train paths that have been applied for in order to create valid train paths for all trains. Each modification leads to planning effects that have an impact on the socio-economic benefits. These planning effects are measured and calculated in terms of costs.

1.10 Prioritise the most efficient solution

The calculation model provides answers as to which solution results in the lowest cost and which should therefore be recommended.

2 Information that directly or indirectly have a priority affect

2.1 Apply correctly – become correctly prioritised

When applying for capacity for train paths, it is important, and sometimes decisive, that all details in the information that directly or indirectly affect the priority criteria calculation model are specified with their correct values.

If the applicant aims at describing their needs rather than solutions to their needs, the possibilities for the Swedish Transport Administration to coordinate different requests and to create better and more efficient solutions will increase. This principle can be exemplified by the fact that information about “earliest acceptable departure time” and “latest acceptable arrival time” gives the Swedish Transport Administration better basis for efficient solutions than the corresponding information about “preferred departure time” and “preferred arrival time”.

2.2 Type of information in the application data

Type of information	Description of what sort of information from the applicant there is within each info-type
Specification	Fundamental information or requirements that is not modified by the Swedish Transport Administration during the process.

Conditions	Conditions that constitute the applicants acceptance limits to the Swedish Transport Administration's proposed allocation.
Preference	The applicants preferences that the Swedish Transport Administration should consider and meet as far as possible
Declaration	Fundamental information involving data provided according to rules and regulations. If the Swedish Transport Administration consider it justified, i.e. in case the information appear doubtful, incorrect or uncertain for any other reason, the Swedish Transport Administration might re-examine data provided and decide to use such revised data that is concluded to be more correct.
Information	Other information that normally is not discussed or negotiated between the involved parties.

2.3 Mandatory or optional data in application information

Notes	Type of information	Explanation
*	Mandatory	An asterisk (*) adjacent to data means mandatory, this information must always be included in a capacity application.
No *	Optional	Data which has no asterisk (*) is optional, but the Swedish Transport Administration's construction of the annual timetable could be facilitated if stated. This information could thus be specified when considered suitable, but the applicant is not obliged to include it in the application for capacity.

2.4 Data in the application used for priority purposes

Notes	Used for	Explanation
$^{+}$	Priority calculation	A superscripted plus sign ($^{+}$) adjacent to data means that the corresponding data is utilized when calculating the socio-economic effect that settles the priority between conflict solutions. In case data is used for priority calculation (there is a $^{+}$) but is optional at the same time (there is no *), the consequence of not specify this information should carefully be considered. The calculation of the total

		socio-economic effect will in such case not include any effect due to the optional data, unless given.
º	Planning, allocation but indirectly also prioritising	A superscripted zero (º) adjacent to data means that the corresponding data is used in connection with planning, allocation and indirectly with prioritising. It might as well be used at conflict resolution, thus having an influence on priority and the result thereof.

2.5 Recommended application data for correct priority

Notes	Data marked with notes showing if the information is recommended to specify in an application in order to get the correct priority.
*+	Mandatory, must be specified
*º	Mandatory, must be specified
+	Optional, but highly recommended to ensure the application correct priority
º	Optional, could indirectly have a marginal impact on priority

2.6 Data regarding train paths

Data	Sub-data	Info type	Description
Running data		Specification	Running data for each train path. Running data is composed of five sub-data: From date, Until date, Days of week, Deviation type and Deviation dates.
- " -	From date +*	Specification	***First day*** in proposed running period.
- " -	Until date+*	Specification	***Last day*** in proposed running period.
- " -	Days of week+*	Specification	***Days of week*** in proposed running period.
- " -	Additio-nal/ Except dates +	Specification	Possible deviation, defined as ***Deviation type*** and ***Deviation date.***
Location		Specification	Locations will be specified by its ***Location code*** and defines the route for the train path.
- " -	Origin location+*	Specification	***Origin location*** sometimes indicated as: ***From location***

- " -	Destina-tion location⁺*	Specification	***Destination location*** sometimes indicated as: ***To location***
- " -	Traffic activity location⁰*	Specification	Locations where the train must stop for traffic activities. Stops for other reasons (e.g. crossing) is considered as technical stops and should not be included in the application. Such stops does not affect the priority.
Train path service⁰*		Specification	Passenger traffic, freight traffic or service train.
Priority category⁺*		Declaration	Priority category for a train path is to be selected by the applicant based on its assessment of the correct category based upon the identification conditions in Section 3.3, 3.4 and 3.5. Only categories that match the selected train path service can be chosen.
Traffic activity at traffic activity location⁰*		Specification	Traffic activities referring to all type of stops for the benefit of the applicant, necessary to accomplish the train path, but not activities considered as technical stops (e.g. for crossing etc.). Traffic activities can be for commercial needs (such as boarding and alighting of passengers, couple and uncouple freight wagons, etc.) or for train operational resource needs (like on-board personnel change, holding for personnel's breaks, changeover of locomotive, etc.). Multiple traffic activities could be selected for a single stop but only those that match the chosen train path service.
Train stop duration at traffic activity location⁰*		Specification	Estimated duration required (minutes, seconds) for all traffic activities at all traffic activity locations. Applied stop duration must only include time for applied traffic activities and should not include time for technical reasons (e.g. additional time for train meet), time to synchronise departure time with connections etc.
Preferred arrival time	Destination location⁰	Preference	The applicant's preferred arrival time to the destination. This information is optional.

			(No departure time can be specified at the destination).
- " -	Traffic activity location⁰	Preference	The applicant's preferred arrival time to any of the traffic activity locations.
Preferred departure time	Traffic activity location⁰	Preference	The applicants preferred departure time to any of the traffic activity locations.
- " -	Origin location*	Preference	The applicants preferred departure time to the train path's origin location. This information is mandatory unless the preferred arrival time to the destination location is specified in which case this information is optional. (No arrival time can be given on the origin location).
Preference time⁺		Specification	The applicant can specify any of the preferred departure times or arrival times as Preference time, preferably the time that is considered most business critical. The calculation of the displaced path time in the calculation model is controlled by the Preference time. In case the applicant has not specified any Preferences time, the displaced path time is instead calculated on the location with the lowest time difference between any preferred time and corresponding allocated time. Preference time can be given on one location only.
Acceptance time	Latest accepted arrival time⁰	Conditions	The latest arrival time that the applicant will accept. This type of data could be given for any location but is most important for the destination location.
- " -	Earliest accepted departure time⁰	Conditions	The earliest departure time that the applicant will accept. This type of data could be given for any location but is most important for the origin location.
Business critical time window (freight trains only)	Freight trains Time limit at arrival⁺	Declaration	Intended for better control of socio-economic costs by allowing the applicant to specify a business critical time window for freight trains. The absolute latest arrival a freight train can have to the destination location (or to optional traffic activity location) where exceeding the time means

			that the train's business task will be lost. In conflict resolution options where this limit is run over, the cost will be equal to the one of an excluded train path, and no train path will thus be allocated.
Business critical time window (freight trains only)	Freight trains Time limit at departure+	Declaration	Intended for better control of socio-economic costs by allowing the applicant to specify a business critical time window for freight trains. The absolute earliest departure a freight trains can have from the origin location (or from optional traffic activity location) where exceeding the time means that the train's business task will be lost. In conflict resolution options where this limit is run over, the cost will be equal to the one of an excluded train path, and no train path will thus be allocated.
Max transit time⁰		Conditions	***Max transit time***, an optional expression for ***Longest acceptable total time***, is an acceptance limit, meaning the longest possible total transportation time from origin to destination location that will be accepted by the applicant. In case the applicant does not specify any value for ***Max transit time*** the replacement value ***Max transit time"*** (*"* = bis = double prime) will be applied as the acceptance limit instead. See below for further information about ***Max transit time"*** and its calculation.
Max transit time"⁰		Conditions	***Max transit time"*** (*"* = bis = double prime), a replacement value sometimes used (see above), that will be calculated as follows: ***Max transit time"*** = time difference in application given between ***Earliest acceptable departure time*** from origin location[1] and ***Latest acceptable arrival time*** to destination location[2]. 1) If Acceptance time departure is not specified, the Preferred departure time from origin location, will be used instead

			2) If Acceptance time arrival is not specified, the Preferred arrival time to destination location, will be used instead.

2.7 Data regarding associations between train paths

This list contains only a selection of the data for associations that could be entered when applying for train paths, mainly data that is important for priority and conflict resolution. Explanation to * + 0 and "Data-type" is found in Section 2.2-2.5 in this annex.

Data	Sub-data	Data type	Description
Location*			An association links two train paths together on a traffic activity location where both have a stop with a traffic activity of a type that is required for the intended type of association (see below).
From Train ID *			Sometimes called ***Train ID from***. ID for the train that the association is connecting FROM.
To Train ID *			Sometimes called ***Train ID to***. ID for the train that the association is connecting TO.
Running data		Specification	For the dates in force for an association, the term used is Running data, which defines its validity range in calendar time. **If an association's dates in force exactly correspond with the trains it connects, no running data has to be specified.** Running dates for associations are to be specified in the same way as running data for train paths and is composed of five sub-data: From date, Until date, Days of week, Deviation type and Deviation dates. The running data for the two trains connected by the association will restrict the dates, for which the association is effective, since an association never will have an effect on any date when not both connected trains are running (due to their running data).

- " -	From date+*	Specification	***First day*** in proposed running period.
- " -	Until date+*	Specification	***Last day*** in proposed running period.
- " -	Days of week+*	Specification	***Days of week*** during proposed running period.
- " -	Additional/ Except dates+	Specification	Possible deviation, defined as ***Deviation type*** and ***Deviation date***.
Duration		Info	Duration in this context means the time at the association location, between the two trains connected by the association. **Duration** = the time between the From Train ID arrival to the To Train ID departure. An association's duration is a key information to whether it work as intended or not. Association time = Duration. The term Association time is sometimes used instead of duration, but meaning the same thing.
- ” -	Min. possible duration+*	Conditions	This means the shortest duration that is possible based on the applicant's assessed practical conditions for each individual association. If the association's duration will **go below** this length in time, the association will not function and it will be "interrupted". This will in turn lead to the inclusion of a cost according to Section 4.2, when calculating the socio-economic costs.
- " -	Max. acceptable duration⁰	Conditions	The longest duration for each individual association that the applicant consider acceptable to avoid commercially bad solutions or high production costs for each association.
Priority category+*		Declaration	Priority category for an association is to be selected by the applicant based on its assessment of the correct category based upon the identification conditions in Section 3.5 and 3.6. Only categories that match the selected train path service for the two trains that the association connects will be available.
Associa-tion type+		Declaration	This information **does not** have to be specified in the application since it is directly derived from the association's

			priority category. There are three different association types: - Connection freight transport - Connection passenger service - Vehicle turn-round cycle

3 Priority category grouping

3.1 Categorisation of train paths and associations

Train paths and associations have each been divided into predetermined categories in order to facilitate a practical handling of the calculation of socio-economic costs for alternative conflict resolutions. Each of these categories - priority categories - is intended to represent all individual trains classified within the same category. For each category, there are linked cost parameters, which are used for cost calculations. There are priority categories for train paths and associations.

3.2 Priority categories for train paths – freight transports

Priority categories must comply with the identification requirements specified in one of the rows pertaining to each respective category. Each requirement is associated with a specific identification key.

Priority categories for train paths – freight transports.

Priority Category		Iden-tifica-tion key	Identification conditions								Type of traffic, description	Example
			Traffic concept: ***Rapid**** transport	Time sensi-tive. Logis-tics	Custom. agreed fast transport	Required		Goods quantity (weight)	Level of re-fine-ment	Train confi-gura-tion	Note: The text in these two columns are aimed to give an estimation of the signification for each category	
Name	Code					Delive-ry pre-cision	Flex ibil-ity					
Gods–snabb *freight–fast*	**GS**	*GS1*	❹	❺	-	❺	-	❸	❺	-	Very time-sensitive transport of industrial products with just-in-time freight, where a very short transport time is required.	Just-in-time-freight train
		GS2	❹	-	❺	❺	-	❸		-	Very time-sensitive transport of post, parcels and part load where a very short transport time is required.	Postal/mail train
		GS3	❹	-	❺	❹	-	❸	-	Inter-modal	Very time-sensitive intermodal transport, + a very short transport time is required.	High priority intermodal
Gods–övernatt *freight–over-night*	**GT**	*GT1*	❷	❺	-	❹	-	❸	❹	Train Load	Time-sensitive transport of industrial products with tight logistics chains, where a short transport time is required.	High priority Train Load Services
		GT2	❷	❹	❹	❹	-	❸	❹	Train load	Time-sensitive transport for high-value goods + requires a short transport time	High priority Train Load
		GT3	❷	-	❹	-	-	❸	-	Inter-modal	Intermodal transport where a short transport time is required.	Standard Intermodal
		GT4	-	-	❺	-	-	❸	-	Wagon Load	Wagonload trains with tight connections due to customer commitments, requiring a short transport time	High priority Wagon Load
Gods–regula-ritet *freight–regula-rity*	**GR**	*GR1*	-	❹	-	❹	-	❸	❹	Train Load	Transport of industrial products within logistics and supply chains, where high delivery precision is required	Regularly going Train load services
		GR2	-	❹	-	❹	-	❹	-	Train Load	Transport of products integrated with the industrial process, where high delivery precision is required.	Regularly going Train load services
Gods–nätverk *freight network*	**GN**	*GN1*	-	-	❹	-	-	❸	-	Wagon Load	Wagon load trains with connections due to customer commitments	Standard Wagon Load
Gods–flexi-bilitet *freight–flexibility*	**GF**	*GF1*	-	-	-	-	❹	❸	-	Train Load	Train Load Services where flexibility is more important than short transport time	Flexible Train load services
		GF2	-	-	-	-		❸	-	Train Load	Train load services where short transport time cannot be justified or verified	Other Freight trains
		GF3	-	-	-	-	-	❸	-	Wagon Load	Wagon Load trains where short transport time cannot be justified or verified.	Other Freight trains
		GF4	-	-	-	-	-	❸	-	Wagon Load	Wagon Load trains without connections due to customer commitments	Low priority Wagon Load
Ospec. *unsspec*	**GO**	*GO1*	-	-	-	-	-	-	-	-	Unspecified freight train	Undefined freight trains

❺	Very high
❹	High
❸	Medium

❷	Low
❶	Very low
❼	Non
-	No specific demands

*	Vehicles and stopping pattern must facilitate short running times

3.3 Priority categories for train paths – passenger transports

Priority category		Iden-tifica-tion key	Identification conditions				Type of traffic, description	Example
			Num-ber	Time sensitive share	Regi-onal share	Traffic concept: ***Rapid**** transport	Note: The text in these two columns are aimed to give an estimation of the signification for each category	
Name	Code		of passengers					
Stor-pendel[1]	**SP**	*SP1*	≥ 700	≥ 75 %	≥ 75%	-	High share of time sensitive regional passengers, maximum load factor	Stockholm commuter train, peak periods
Regio-Pendel *Regional commuter*	**RP**	*RP1*	≥ 300	≥ 75 %	≥ 75 %	-	High share of time-sensitive regional passengers, very high load factor	Big cities commuter train, peak periods
		RP2	≥ 300	≥ 75 %	≥ 75 %	-	High share of time-sensitive regional passengers, very high load factor	Very heavy regional relations, peak periods
Regio-max *Regional max*	**RX**	*RX1*	≥ 200	≥ 75 %	≥ 75 %	-	High share of time-sensitive regional passengers, high load factor	Heavy regional relations
		RX2	≥ 75	≥ 75 %	-	Must	High share of time-sensitive passengers, medium high load factor + Rapid transport	Regional express traffic, peak and mid-peak periods
Regio-standard *Regional standard*	**RS**	*RS1*	≥ 75	≥ 75 %	≥ 75 %	-	High share of time-sensitive regional passengers, medium high load factor	Medium-principal regi-onal trains, peak periods
		RS2	≥ 25	≥ 25 %	-	Must	Frequent regional traffic, medium-high share of time-sensitive regional pass low load factor. Rapid transport	Regional express traffic, off-peak periods
Regio-låg *Regional low*	**RL**	*RL1*	≥ 25	≥ 75 %	≥ 75 %	-	High share of time-sensitive regional passengers, low load factor	Light regional trains, peak periods
		RL2	≥ 75	-	≥ 25 %	-	Medium-high share of time-sensitive regional passengers, medium-high load factor	Medium-heavy regional trains
		RL3	≥ 25	-	≥ 25 %	-	Medium-high proportion of regional passengers, low load factor	Medium-principal regi-onal trains, off-peak
Regio-mini[2]	**RI**	*RI1*	≥ 0	-	≥ 25 %	-	Medium-high share of regional passengers, very low load factor	Medium-principal regi-onal trains, off-peak
Fjärr-[3] express	**FX**	*FX1*	≥ 200	≥ 75 %	-	Must	High share of time-sensitive passen-gers, high load factor. Rapid transp.	Business trains, peak periods

Fjärr-[4] standard	**FS**	*FS1*	≥ 75	≥ 25 %	-	-	Medium-high share of time-sensitive passengers medium-high load factor	Heavy Inter-regional trains, peak periods
Fjärr-låg *Distant-low*	**FL**	*FL1*	≥ 25	≥ 25 %	-	-	Medium-high share of time-sensitive passengers, low load factor	Light traffic, interregional trains, peak/mid-peak
		FL2	≥ 75	-	-	-	Low share of time-sensitive pass-engers, medium-high load factor	Night trains
Fjärr-mini *Distant-mini*	**FI**	*FI1*	≥ 0	-	-	-	Very low load factor	Light traffic, interregional trains, off-peak
		FI2	≥ 0	-	-	-	Train excursion where the journey itself is the objective	Excursion train, no transport assignment
Ospeci-ficerat[5]	**PO**	*PO1*	-	-	-	-	Unspecified passenger train (long-distance or regional)	-

Key to the signs in the table above

-	No specific requirements

*	Vehicles and stopping pattern must facilitate short running times. The stopping pattern must have significantly fewer stops than other rail traffic on the same route

3.4 Priority categories for train paths – empty transports

Priority Category	Code	Identifi-cation key	Identification conditions	Type of traffic. Transport of:	Example
			Type of transport		
Empty traffic *Tomtransport*	TT	TT1	Engine + carriages	Engine/Coach/Wagon	No passenger or freight transport
		TT2	Multiple-unit set	Motor coaches etc.	
Running light *Ensamt lok*	EL	EL1	Freight train engine	Engine without coaches	
		EL2	Pass. train engine	Engine without wagons	

3.5 Priority categories for associations – connections

Priority categories must comply with the identification requirements specified in one of the rows pertaining to each respective category.

Priority Category			Identification conditions

Name		Code	Identi-fication key	Type of Traffic	Number of passengers	Load hauled in wagons of interest
Anslutning godstransport *Connection Freight transport*	max	AGX	AGX1	Freight transport	-	≥ 750 gross tons
	hög *high*	AGH	AGH1		-	≥ 450 gross tons
	standard	AGS	AGS1		-	≥ 300 gross tons
	låg *low*	AGL	AGL1		-	≥ 150 gross tons
	mini	AGI	AGI1		-	≥ 0 gross tons
Anslutning person-transport *Connection Passenger service*	max	APX	APX1	Passenger service	≥ 125	-
	hög *high*	APH	APH1		≥ 75	-
	standard	APS	APS1		≥ 50	-
	låg *low*	APL	APL1		≥ 20	-
	mini	API	API1		≥ 0	-

3.6 Priority categories for associations – turn-round cycle

Priority categories must comply with the identification requirements specified in one of the rows pertaining to each respective category.

Priority Category			Identi-fication key	Identification conditions	
Name		Code		Turn-around decisive for the size of vehicle fleet*	Train composition
Fordons-omlopp *Vehicle schedule*	hög *high*	FOH	FOH1	X	Engine + coaches (passenger)
			FOH2	X	Engine + wagons (freight)
			FOH3	X	Larger multiple-unit set
			FOH4	X	Medium sized multiple-unit set
	standard	FOS	FOS1	X	Solely coaches (no engine)
			FOS2	X	Solely wagons (no engine)
	låg *low*	FOL	FOL1	X	Single engine (no carriages)
			FOL2	X	Smaller sized multiple-unit set

Key to the signs in the table above

*	Turn-around decisive for the size of vehicle fleet is understood only to mean a situation where no other equivalent vehicle is available in the location where the turnaround takes place which could be used as a replacement for the one that is to be turned around Lager multiple-unit set > 350 seats Medium sized multiple-unit set 150- 350 seats Smaller sized multiple-unit set < 150 seats

4 Identification of priority categories

4.1 Identification conditions for priority categories

In order to determine which priority category each train path belongs to, the applicant itself must declare its evaluation. The evaluation must be objective and truthful and be based on the identification conditions described in Sections 3.2–3.4 in this annex and be matched against the properties of the train path based on experience of previously established traffic. For priority categories for new traffic, see section 4.4 in this annex.

The evaluation means that the applicant checks whether the train path or the association fulfils all identification conditions as specified for the priority category, which is assumed to be correct. Unless all conditions are fulfilled, another priority category must be chosen.

In many cases, there is more than one set of conditions that lead to the same priority category. Each set has a unique identification key shown on a separate line. Every key includes one possible set of requirements that must be met for validation. All conditions on the same line (identification key) must be fulfilled, but it is sufficient that one of the lines (one identification key) is fulfilled in order for the category to apply. In the application, the identification keys are not specified, only the priority category that it points to. For the applicant, it may however be appropriate to save the details regarding the evaluations made, as this may facilitate any scrutiny of the information.

The priority category must be chosen on an individual basis for each specific train path. It is not allowed to specify the same prioritisation category for an entire traffic system based on the valuation of only one of the constituent trains. Taking information on one individual train and using it as some kind of collective priority category for an entire group of trains together is not allowed. Each individual train path must fulfil the conditions in order for the priority category to apply. There may

however be variations throughout the year, on some routes etc. This requires some consideration, see below.

4.2 The Swedish Transport Administration can re-examine priority categories in the application

The applicant must follow the identification conditions specified, and may not at own discretion, declare a priority category for own trains. The Swedish Transport Administration will analyse the information presented, and if there are any doubts, the Swedish Transport Administration will re-examine the information. In such cases, the Swedish Transport Administration may request verification of the information, to ensure that the correct priority category is set for a train path. If the applicant does not comply with such a request, the Swedish Transport Administration will enforce the right of interpretation of the priority category.

4.3 Variations and uncertainties in identification conditions

For all trains, variations can arise in the identification conditions (number of travellers, share of time-sensitive travellers etc.). These variations may relate to time (certain days or periods) or space (certain routes). Normally, a train may only have one unique train path product if it is to be managed rationally in the capacity allocation process. This means that the train must be represented by some kind of mean value, even if variations occur over time and along its journey. The general rule is that, if the identification conditions for the chosen priority category are met (or exceeded) by at least 40 percent of the train's distance and by at least 40 percent of the train's running days, the priority category is applied over the train's entire journey and all periods/days.

4.4 Identification of priority categories when commencing new traffic

When a train path that has been applied for concerns new traffic that does not correspond with already established traffic, special rules apply for the identification of priority categories during the first years of such traffic. Normally, the identification conditions shall be matched against properties in the train path that are to be based on experience from previously established traffic. In this case, the properties of the train path shall also be based on the anticipated future traffic that is estimated possible to achieve after a certain time.

4.4.1 Definitions

4.4.1.1 New traffic

Mainly the opposite of established traffic.

Train paths where there is a lack of experience from established traffic and there are thereby no properties to match against the identification conditions.

4.4.1.2 Priority category established

Priority categories in which the identification conditions have been matched against properties that are based on experience of established traffic.

If priority category established shall be used despite the fact that established traffic is lacking, priority category established shall be either unspecified passenger trains or unspecified freight trains.

4.4.1.3 Priority category new start

Priority categories in which the identification conditions have been matched against properties that are based on estimates of anticipated future values that are judged to be achieved once the newly started traffic has been fully established.

4.4.2 Identification of correct category

In the identification of priority categories, the value of a train path applied for* (e.g. transport volumes) or other properties* shall be matched against identification conditions that are presented in the Tables in Section 3.2–3.6 in this Annex.

*) It is the content of these values and properties that distinguish between "established" and "new start".

If the applicant wishes to use “Priority category new start”, the applicant shall specify which train paths thereby are considered to constitute “New traffic”.

The Swedish Transport Administration will check whether the train paths, specified as “New traffic”, fulfils the definition according to Section 4.4.1.1 in this Annex and can reject the applicant’s information.

In order to evaluate the reasonableness of the estimates made according to Section 4.4.1.1 in this Annex, the Swedish Transport Administration may appeal against the priority category new start that are specified in the application. The Swedish Transport Administration may then require a presentation of those assumptions that the estimates, as per the previous paragraph, are based on.

4.4.3 Extent of priority category new start

Figure 4.1 below shows the extent, i.e. the period during which and with what share, the “priority category new start” may be alleged in the application for train path that constitutes “new traffic”.

Notice that Year 1, Year 2 etc. refers to the first respectively the second traffic year (365 days) during which the newly started traffic has been operating.

At application for year 2 there can be at the most 4 months of traffic operation.

At application for year 3 there can be at the most 4+12 months of traffic operation.

Figure 4.1 Extent of priority category new start

	Running time from starting date for new traffic			
Type of priority category	Year 1	Year 2	Year 3	Year 4 and following.
“Priority category established” (share)	0%	0%	100%	100%
“Priority category new start” (share)	100%	100%	0%	0%
Days and years are calculated from the start of train path traffic and are not linked to the timetable changeover Year 1 concerns the period from Day 1 (start of train path traffic) until Day 365 Year 2 concerns the period from Day 366 until Day 730 Year 3, etc.				

4.4.4 Impact on the cost parameters during calculation

Within one individual year, for each train path a calculation is made of the total output cost by the total output cost for the priority categories established and new start, respectively, being weighted on the basis of the shares as percentage that are specified in Figure 4.1.

This means that the calculation is in practice performed as though it was two different train paths each with its own priority category and different arrangements for cost parameters, in which the different results are then weighted together.

4.4.5 To invoke New traffic/priority category new start

To invoke the possibility of using priority category new start instead of priority category established is voluntary and an applicant can always refrain from it.

To refer to the use of priority category new start can at most be done during the period shown in the table in Figure 4.1. Once this period has expired, these conditions cannot be referred to. The Swedish Transport Administration may, however, grant an exception at the request of the applicant if such circumstances exist whereby the applicant has still not been able to fully evaluate the outcome. One condition is that the discrepancy is due to factors beyond the applicant's control and are not of an economic nature.

5 Cost parameters

The tables below show the cost parameters used for categorised objects (trains and associations) when calculating the socio-economic cost in the model.

5.1 Cost parameters for trains

Cost parameters for the effects below specified per train for each priority category.

Table 5.1 Cost parameters for trains

Priority category	Cost parameters for the following effects calculated per train				Parameters for exclusion of train path		
	Transport time	Transport distance	Displaced path time	Excluded **train path**	Benefit limit for train path	Corr. factor basic time	Running time template
Code	SEK/min	SEK/km	SEK/min	SEK/km	%	%	Code
A	**B**	**C**	**D**	**I**	**J**	**K**	**L**
GS	360	27	207	-	15	2	GB201211
GT	343	30	186	-	25	2	GR401410
GN	287	33	138	-	35	2	GR401409
GR	231	27	109	-	35	2	GB200710
GF	134	27	37	-	45	2	GR401410
GO	101	20	27	-	50	2	60 km/h
SP	1449	88	1018	-	15	20	PX600616
RP	913	88	615	-	15	15	PX600616

RX	671	87	275	-	15	15	PX410020
RS	358	48	171	-	20	12	PX610016
RL	237	30	126	-	30	12	PX510018
RI	82	26	13	-	40	12	PY310014
FX	1016	74	567	-	20	6	PX2-2000
FS	677	72	383	-	25	8	PR600616
FL	377	65	164	-	35	8	PR600416
FI	160	33	41	-	45	8	PX620018
PO	61	19	10	-	50	8	PR600616
TT	107	46	0	-	100	0	PR600616
EL	62	15	0	-	100	0	ellok120

5.2 Cost parameters for associations

Cost parameters for the effects below specified per association for each priority category.

Table 5.2 Cost parameters for associations

Priority category	Cost parameters for the following effect	
	Duration	Interrupted
Code	SEK/min	SEK/association
K	L	M
APX	839	71 748
APH	395	33 764
APS	247	21 102
APL	138	11 817
API	39	3 376
AGX	161	123 677
AGH	97	74 206
AGS	60	46 379
AGL	36	27 827

AGI	12	9 276
FOH	-	52 850
FOS	-	28 008
FOL	-	12 671

6 Calculation of socio-economic costs

6.1 Terms of cost calculation of solution options

The basis of the priority criteria is that different solutions for conflicts of interest are compared. The solutions should always be possible to implement in accordance with the regulations for resolving conflicts with regard to train paths. This means that a comparative solution may not contain unresolved sequential effects of conflicts. For train paths, these forms are referred to as valid train paths. An alternative solution must only consist of valid train paths in order to be included in a comparative alternative.

6.1.1 Valid train paths

In order for a train path to be approved as valid, and thereby included in a socio-economic analysis where the planning effects are measured and the costs are calculated, the following must be directly applied for the train path's time indications:

1. prerequisites in the form designated temporary capacity restrictions, published capacity plans and other planning conditions published in the Network Statement.

2. time used during the journey (running time)

   The amount of time used is produced with the help of the track and vehicle/technical conditions, which affect the running times of the trains. Vehicles running time performance are represented of as so-called running-time templates. The amount of running time templates and definition may vary from one annual timetable to another.

3. time used at stops

   The time required for traffic changes at stops for a train may vary. Normally there is a minimum possible time in which a traffic change can be carried out, so that the amount of time taken is realistic. Until further notice, the time values traditionally used by the industry are applied in cases where regulated information on minimum times for traffic exchanges is lacking in in the Network Statement.

4. adaptation of train paths for delivery precision

   In order to create train paths that can be delivered with the intended punctuality, an adaptation is often required, primarily because of two reasons:

   a. The train path should be able to be delivered in accordance with the punctuality requirements that apply.

   b. The train path should be able to be delivered with respect to all surrounding train paths in the annual timetable (the train paths should therefore be mutually valid).

These conditions mean that train paths in different respects must include time margins internally within the train and externally between trains.

Train paths that comply with the above requirements of valid in the sense that the Swedish Transport Administration can undertake the delivery of the train path. The requirements are therefore fundamental for train paths that can be included in the comparisons.

The train paths in an application that has been submitted need not comply with the requirements in order to be valid, but rather the requirement only applies for those suggestions for train paths that can make up a part of a possible conflict resolution where priority criteria can be used.

6.2 Calculation of the socio-economic effect costs

For all train paths and associations that are part of delimited groups (see Section 6.3), total costs per day shall be calculated based on the following effect costs.

Table 6.1 Effect cost

Effect cost (calculation item)	Description of calculation (bold letter, see below)
Trains cost for transport distance	= Transport distance {km} x **C** {SEK/km}
Trains transport time cost	= Total transport time {min} x **B** {SEK/min}
Displaced path time cost	= Displaced path time {min} x **D** {SEK/min}
Cost for “Excluded train path”	= (Transport time {exclusion} x **B**) + (Transport distance x **C**) Where Transport time {exclusion} = Basic running time {direct}* x (100+**K**) x (100+**J**)
Cost for “freight train without time limit”	= Cost for “Excluded train path”

Cost for an association's duration	= Duration {min} x **L** {SEK/min}
Cost for a broken association	= **M** {SEK/association}
Total cost	= Summary of all calculation items above for all detailed plan days:

Bold letter = Letter in column heading in tables 5.1 and 5.2. In the calculation, the value in the column should be used for the relevant category.

*) Basic running time {direct} refers to the running time of a train whose characteristics correspond to the running time template specified in Table 5.1, Column L, conducted without stopping between its starting and finishing point. Generally, basic running time never includes any supplement for quality and congestion.

6.3 Calculation of socio-economic costs of solution options

6.3.1 Delimiting and forming a conflict resolution group for cost calculations

If a calculation is to be performed in accordance with the model for the priority criteria for a particular conflict of interests, the area of calculation must first be geographically delimited. The delimination determines how far out in the railway network secondary conflicts of interests need to be resolved. From the delimitation, it is possible to unequivocally deduce which individual train paths and associations will be affected, and these will therefore together make up the conflict resolution group for which calculations must be performed.

6.3.2 Socio-economic costs of an individual solution option

The socio-economic costs of an individual solution option are made up of the sum of the output costs for each of all the train paths and associations included in the conflict resolution group.

6.3.3 Comparison among different solution options

In order to determine which solution to a conflict of interests the prioritisation criteria indicate as the most economically beneficial to society, alternative solutions to the conflict must be created. All alternative solutions that have been developed for a specific conflict of interests and that will become the subject of reciprocal comparison include all output costs that belong to the conflict resolution group.

6.4 Definition and cost for ”Excluded train path”

By “excluded train path” is meant a train path that has been applied for but for which, contrary to the applicant’s wishes, capacity has not been allocated due to capacity shortage.

The cost for the days when a train path that has been applied for cannot be allocated (due to congestion) is called the cost of an “Excluded train path”. This effect cost also arises when the number of train paths applied for exceeds the capacity of the route in question. The cost is set at the same value as the maximum delay of the train before it loses its commercial value. The maximum delay is set at a value equal to a percentage, with regard to cost parameters; it is called a “benefit limit” (%), multiplied by the train’s basic time, i.e. the transport time the train has (including the applied-for stop except for the first and last) without encountering any congestion.

In order to harmonise cost in connection with variations in transport time for the same section of line, the basic running time is used without stopping with a predetermined running time model. This time is converted into base time with the aid of a correction factor.

6.5 Manual corrections for limitations of the model

The calculation model that forms the basis of the priority criteria is a substantial simplification of reality. In many cases, deviations between the model and reality may be considerable. It is in the nature of the model to work in this manner and the parties to some degree must be prepared to tolerate such effects in order for the annual timetable to be carried out within an acceptable period of time.

In cases when considerable deviations occur, the applicant may submit information to show that the model’s substantial standardisation of reality has caused large deviations. The Swedish Transport Administration can then, subsequent to a special review, correct the models values with calculations manually.

6.6 Priority by selecting the most favourable conflict resolution

In order to settle a conflict of interests, the conflict resolution option that according to the described calculation model provides the lowest cost will be chosen in front of all other options that provides a higher cost.

6.7 Separation and revision of priority category

In the event that congestion cannot be solved with the priority criteria, a solution must be found by applying the priority criteria model with situation-specific information. For these situations, the Swedish Transport Administration will request information from the applicants concerned in order to calculate train path-specific cost parameters for the categories concerned. This will, for timesaving reasons, take place already when the applicant requests a dispute resolution.

In order for the submitted information to be used, it must be in the format described below to make it possible to correct the model's calculations and be relevant from a socio-economic perspective.

Submitted information must also be supplemented with an appropriate verification document, such as statistics or other equivalent information in order for a correction of values to be made. The Swedish Transport Administration will review the data and assess the credibility. The Swedish Transport Administration may reject documentation that does not appear reasonable or credible.

The information that may be relevant to request on these occasions is that which is reported in the tables below.

Table 6.2 Passenger traffic

Parameters	Unit	Explanation/verification
Number of seats on the train	Quantity	Number of seats for the applied train path
Average travel on the train	Quantity	Average travel for the applied train path (statistics or similar)
Share of business travellers	Share in %	Percentage of average travel for the applied train path (statistics or similar). A business traveler is defined as a traveler who has the trip paid for by the employer. It must be possible to verify this.

Table 6.3 Freight traffic

Parameters	Unit	Explanation/verification
Load	Tonne	Volume gross tonne load on the train, on average, for the applied train path

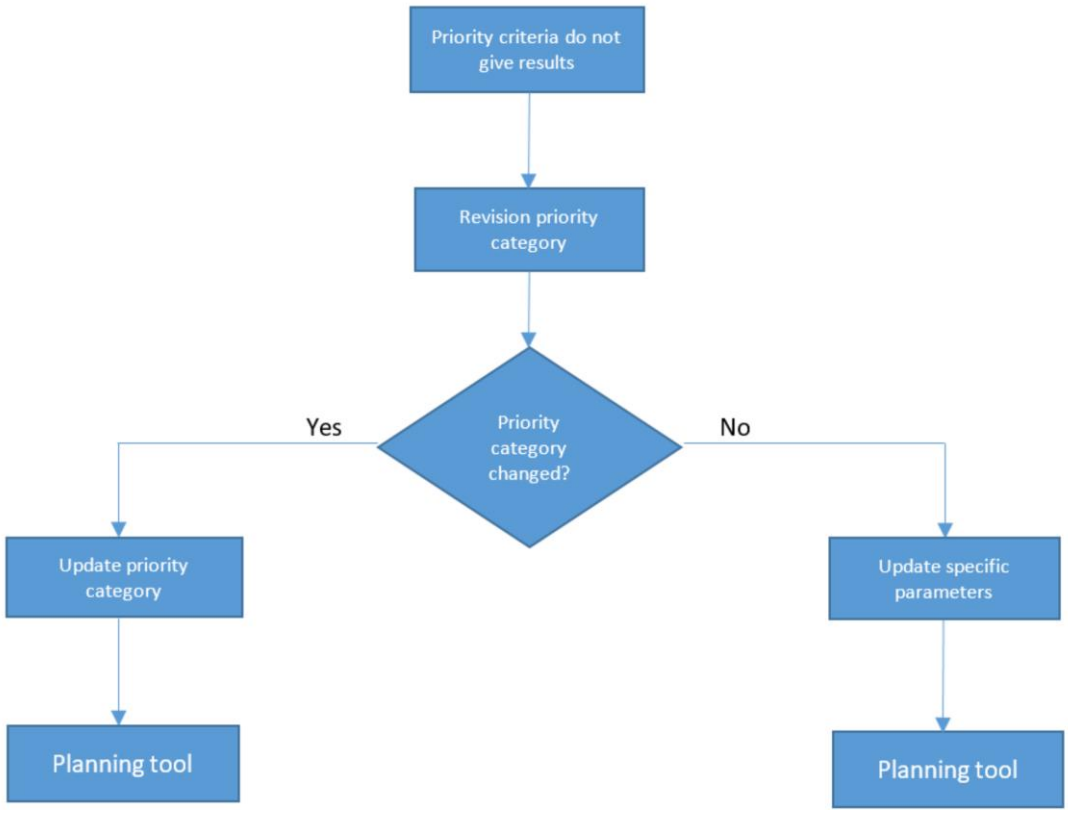
The information submitted shall be based on the same conditions that apply to identify the conditions for entering the correct priority category. See Section 4.3 in this Annex.

6.7.1 Application of submitted information

Before separation with train path-specific cost parameters is applied, an examination will be made as to whether the trains involved in the conflict meet the train category as specified in the application. If it shows that the application for train path has been made with the wrong train category (or categories), the correct train category (or categories) will be used for new application of priority categories. If none of the applications' train categories are changed, a distinction will instead be made with train-specific cost parameters.

The information provided by the applicants is used to calculate train-specific cost parameters instead of the standard values reported in Section 5.1 in this Annex. These train-specific cost parameters are then used in the planning tool to calculate the socio-economic cost for the various solution alternatives.

Figure 4.2 Separation



6.7.2 New traffic

If the alternatives tested with the priority criteria include completely new traffic, see definition in Section 4.4 in this Annex, and for which there are no prerequisites for submitting situation-specific information, the standard values that apply to the category specified by the applicant in their application are used.

Traffic calendar 2027

Date	Day	Day of week	Operated as
2026-12-23		W	F
2026-12-24	Christmas Eve	Th	Sa
2026-12-25	Christmas Day	F	Su
2026-12-26	Boxing Day	Sa	Su
2026-12-30		W	F
2026-12-31	New Year’s Eve	Th	Sa
2027-01-01	New Year’s Day	F	Su
2027-01-02		Sa	Sa
2027-01-05	Twelfth Night	Tu	F
2027-01-06	Epiphany	W	Su
2027-01-07		Th	M
2027-03-25	Maundy Thursday	Th	F
2027-03-26	Good Friday	F	Sa
2027-03-27	Holy Saturday	Sa	Sa
2027-03-28	Easter Sunday	Su	Su
2027-03-29	Easter Monday	M	Su
2027-03-30		Tu	M
2027-04-30	Walpurgis Night	F	F
2027-05-01	Labour Day	Sa	Sa
2027-05-05		W	F
2027-05-06	Ascension Day	Th	Sa
2027-06-06	National Day	Su	Su
2027-06-24		Th	F
2027-06-25	Midsummer’s Eve	F	Sa
2027-06-26	Midsummer’s Day	Sa	Su
2027-11-05	All Saints’ Eve	F	F
2027-11-06	All Saints’ Day	Sa	Sa

Construction conditions

1 General construction conditions

A train path must not be constructed in such a way that it risks disrupting other planned train paths. This annex describes some of the timetable construction conditions that aim to ensure that this does not happen.

1.1 Estimation of running time

The running time for trains is automatically estimated by the Swedish Transport Administration's planning tool. Applicants can use the running time service to estimate the running time for a selected route before submitting the application. More information is available on the Swedish Transport Administration's website https://bransch.trafikverket.se/tekniska-tjanster-kapacitet.

1.1.1 Deceleration supplement

Train routes for freight trains must include deceleration supplement from the departure station, when changing drivers and after breaks for connecting or disconnecting wagons. The supplement must be 90 seconds and be on the first line section monitored by signaller, if the infrastructure allows this. The deceleration supplement is not included in the running time calculated by the running time service.

1.1.2 Engineering work supplement

The running time service automatically calculates the engineering work supplement in question.

1.1.3 Quality supplement

The quality supplement is a kilometre-based supplement that depends on the train type and the infrastructure's design.

Train types:

- Passenger trains of vehicle type X2: 1-minute addition per 100 km
- Other passenger trains: 40-second addition per 100 km
- Freight trains and service trains: 0-minute addition per 100 km

Infrastructure design:

- Trains operating on single-track sections: 3-minute addition per 100 km
- Trains operating on double/multiple tracks: 2-minute addition per 100 km

The running time service automatically calculates the applicable quality additions.

It is possible to adjust parts of the quality supplement, subject to the Swedish Transport Administration's assessment in each individual case, to accommodate train meets or to round times at desired locations. For the entire route, the total amount of quality supplement must be fulfilled, meaning that if 30 seconds are removed from one subsection, 30 seconds must be added to a nearby subsection.

1.2 Planned dwell times

Planned dwell times must correspond to actual dwell times. The advertised departure time may, however, be the same as the arrival time which is preferable in order to allow departure as soon as possible.

Correct dwell times do not only apply to stops where passengers get on and off, but also where activities take place, such as staff changes, train terminal looping and coupling and uncoupling trainset.

If it turns out during follow-ups of delays that a stoppage systematically takes longer than planned, the Swedish Transport Administration reserves the right to extend the planned dwell time in the next annual timetable.

Table 1. Minimum dwell time requirements categorised by train length

Train length	With central door control	Without central door control
< 200	-	2 minutes
201–300	-	3 minutes
301–400	2 minutes	3 minutes
> 400	3 minutes	3 minutes

In certain locations with high capacity utilisation, special requirements apply to the dwell time, see Section 2 of this Annex.

1 Bottleneck plan – Western Sweden

This bottleneck plan regulates capacity utilisation on the sections Alingsås – Herrljunga and Öxnered–Herrljunga–Borås–Göteborg during annual timetable 2027 and the period 13 December 2026–22 August 2027.

1.1 Background

In 2027, work will be carried out on the Western Main Line between Alingsås and Olskroken, involving the replacement of several switches, the catenary system, as well as rock clearing in the tunnels. This work requires speed reductions and single-track operations, which are regulated in a capacity plan. However, at certain times the line will need to be completely closed for traffic, which is not regulated in the capacity plan. Diversion routes and the operated section between Herrljunga and Alingsås are instead regulated in this bottleneck plan.

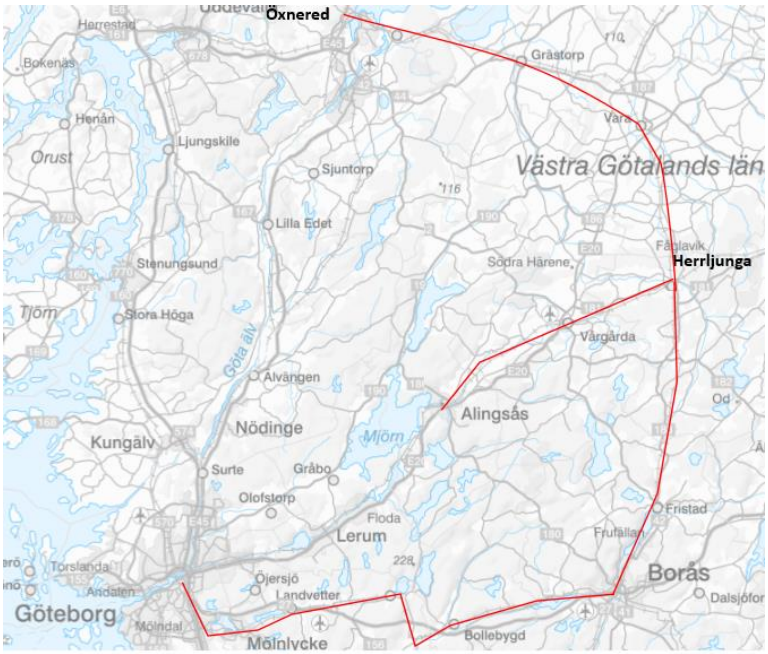
1.2 Purpose

The Swedish Transport Administration has established the following capacity plan with the aim of maximising capacity in order to meet applications as far as possible, in accordance with Chapter 7, Section 12 of the Railway Market Act, during the works on the section Alingsås–Olskroken. However, it is not possible to apply the capacity plan to sections other than where the work is being carried out, and therefore, this bottleneck plan has been established to regulate capacity utilisation on the diversion routes.

1.3 Scope

The bottleneck plan covers the sections Herrljunga–Alingsås as well as Öxnered – Herrljunga–Borås–Almedal during the period 13 December 2026 until 22 August 2027, when the section Alingsås–Partille is fully closed.

Figure 1 Sections covered by the bottleneck plan



2 Infrastructure conditions

This section provides an overview of the infrastructure on the relevant sections.

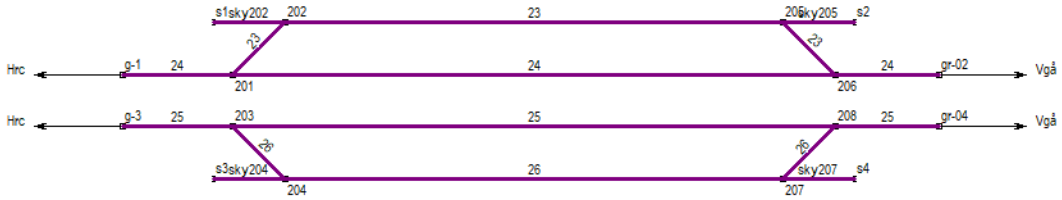
2.1 Herrljunga–Alingsås

The Western Main Line between Herrljunga and Alingsås is double-track. The following traffic locations are situated along the section.

2.1.1 Herrljunga västra

Herrljunga västra is a passing location without the possibility to switch between the up-tracks and down-tracks. The passing tracks can accommodate long freight trains (750 meters). The location does not serve passenger exchanges. A walkway and lighting will be arranged between tracks 25 and 26 (the two tracks on the up-track side) to enable locomotive terminal looping, shunting or wagon inspection/brake tests. Tracks 23 and 24 (down-track side) will then be used for passing traffic in both directions with meeting opportunities.

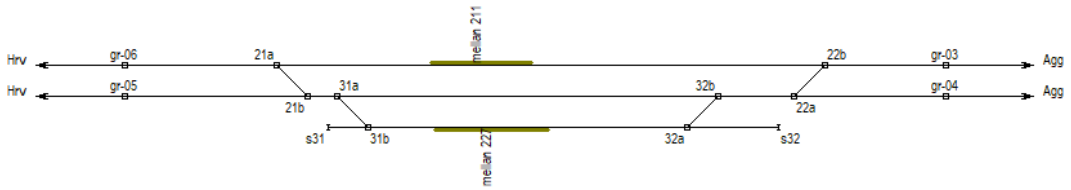
Figure 2 Herrljunga västra



2.1.2 Vårgårda

Vårgårda is a station with three tracks. Tracks 1 and 3 have platforms for passenger exchanges.

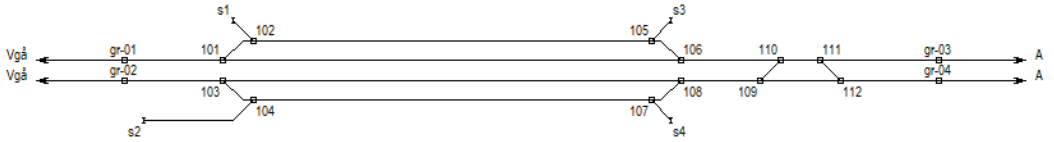
Figure 3 Vårgårda with platform locations



2.1.3 Algutsgården

Algutsgården is a passing location with crossover switches at the western end. The passing tracks can accommodate long freight trains (750 meters). The location does not serve passenger exchanges.

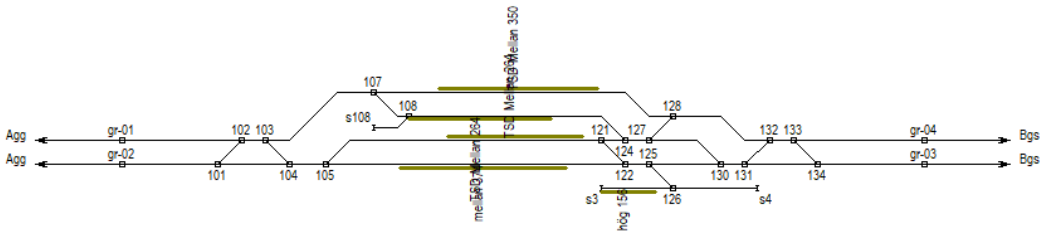
Figure 4 Algutsgården, track layout



2.1.4 Alingsås

Alingsås has four main tracks and a siding track designated for holding. The outermost tracks (1 and 4) have a 350-meter-long platform. Tracks 2 and 3 share a central 250-meter-long platform. Track 0 (at the bottom of the image) is an electrified and signal-controlled siding track intended for holding. There is space for a 150-meter-long train on each side of switch 126

Figure 5 Alingsås



During the period the Bottleneck plan is in effect, the line is open for passenger trains in category B and C. On section Herrljunga central–Vårgårda, these trains may only be operated on the down-track. The up-track between Herrljunga and Vårgårda and tracks 25-26 in Herrljunga Västra is only open for freight traffic.

2.2 Öxnered–Herrljunga

The 68 km long section between Öxnered and Herrljunga is single-track and has six meeting locations of varying lengths. The determining section is Vargön–Grästorp (18 km), followed by the section Grästorp–Håkantorp (14 km).

2.3 Herrljunga–Borås

The Herrljunga – Borås section is 43 km long. The section is single-track and has three meeting locations. The determining section is Herrljunga–Ljung (11 km).

2.4 Borås–Almedal

The Borås–Almedal section is 67 km long. The section is single-track and has seven meeting locations. The determining section is Borås–Sandared (10 km) and Sandared–Rödberg (11 km).

3 Operations

This chapter describes how train paths should be applied for and planned during the period when the bottleneck plan is in effect. This applies to both applications for the established timetable and applications for rest capacity after the timetable for 2027 has been set.

Train paths that have not been requested can be used by trains in another category, on the condition that this does not affect other train paths according to the bottleneck plan.

3.1 Trains with few stops– category S

High-speed trains with speed category S are re-routed via Borås in both directions. Applications should be made as follows:

	Ank	Avg
Göteborg		XX.20
Borås	XX.09	XX.19
Herrljunga	XX.52	(XX.02)

	Ank	Avg
Herrljunga	(XX.56)	XX.07
Fristad	XX.29	XX.31
Borås c	XX.43	XX.53
Sandared	XX.01	XX.02
Mölnlycke	XX.32	XX.33
Mölndals ö	XX.39	XX.45
Göteborgs c	XX.55	

3.2 Trains with few stops– category C

Trains with few stops according to speed category C normally have passenger exchanges in Alingsås. Therefore, these trains should turn in Alingsås and be replaced by buses between Alingsås and Göteborg.

These trains with the ordinary origin- or destination location Göteborgs Central must therefore be requested with the origin and/or destination location Alingsås. On the Herrljunga Central–Vårgårda section, only the down track is available for these trains, as the up track is allocated for locomotive run-around in Herrljunga västra. Applications should be made as follows:

	Ank	Avg
Herrljunga		XX.39
Alingsås	XX.55	

	Ank	Avg
Alingsås		XX.05
Herrljunga	XX.21	

3.3 Trains with few stops – category B

Trains with few stops according to speed category B normally have passenger exchanges in Vårgårda and Alingsås. These trains should turn in Alingsås and be replaced by buses between Alingsås and Göteborg.

These trains with the ordinary origin- or destination location Göteborgs Central must therefore be requested with the origin and/or destination location Alingsås. On the Herrljunga Central–Vårgårda section, only the down track is available for these trains, as the up track is allocated for locomotive run-around in Herrljunga västra. Applications should be made as follows:

	Ank	Avg
Herrljunga		XX.25
Vårgårda	XX.36	XX.37
Alingsås	XX.48	

	Ank	Avg
Alingsås		XX.12
Vårgårda	XX.22	XX.23
Herrljunga	XX.33	

3.4 Trains with many stops – category B

The category "trains with many stops" includes the regional trains that normally operate the diversion routes as well as trains between Göteborg–Värnamo or beyond on the Coast-to-Coast Line (*Kust-till-kust-banan*). The tables below should be used when applying for train paths. Train paths can be planned with shorter travel times if there are no opposing trains at the relevant time.

3.4.1 Öxnered–Herrljunga

Trains that operate only on Saturdays and Sundays during the period in which the bottleneck plan applies may be requested at times other than those stated below, provided they do not obstruct freight trains that are re-routed in accordance with section 3.5.1. If freight trains operate on the section, the allocation of train paths shall follow the same principles as on weekdays when the bottleneck plan applies.

Applications for trains operating on days other than Saturday and Sunday shall be made in accordance with:

	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Öxnered		XX.30		XX.36		XX.06		
Vänersborg	XX.35	XX.36	XX.41		XX.11			
Vargön	XX.41	XX.46						
Grästorp	XX.58	XX.01						
Håkantorp	XX.10	XX.14						XX.30
Vara	XX.18	XX.19					XX.34	
Vedum	XX.26	XX.31						
Herrljunga	XX.40							

	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Herrljunga		XX.20						
Vedum	XX.30	XX.31						
Vara	XX.38	XX.39						XX.23
Håkantorp	XX.43	XX.48					XX.27	
Grästorp	XX.58	XX.59						
Vargön	XX.11	XX.13						
Vänersborg	XX.20	XX.24		XX.19		XX.49		
Öxnered	XX.29		XX.24		XX.54			

The time for trains on the Göteborg–Vänersborg route and vice versa can be adjusted on the section Öxnered–Vänersborg on the condition that this does not affect the timetable of any other train.

3.4.2 Herrljunga–Borås

Applications should be made as follows:

	Ank	Avg
Herrljunga		XX.33
Ljung	XX.41	XX.43
Torpåkra	XX.47	XX.47
Mollaryd	XX.51	XX.51
Borgstena	XX.54	XX.54
Fristad	XX.59	X1.01
Knalleland	X1.10	X1.10
Borås	X1.14	

	Ank	Avg
Borås		XX.47
Knalleland	XX.49	XX.34
Fristad	XX.59	XX.59
Borgstena	X1.04	X1.04
Mollaryd	X1.07	X1.07
Torpåkra	X1.11	X1.11
Ljung	X1.15	X1.18
Herrljunga	X1.26	

3.4.3 Borås–Göteborg

The track is available during the time when the bottleneck plan applies for regional trains category B, but no more than one train per direction every other hour.

Applications for regional trains category B should be made as follows:

From Göteborg, odd hour:

	Ank	Avg
Göteborg		XX.35
Liseberg	XX.39	XX.40
Mölnlycke	XX.50	XX.52
Hindås	XX.16	XX.19
Rävlanda	XX.26	XX.27
Bollebygd	XX.31	XX.32
Sandared	XX.43	XX.44
Borås	XX.52	

From Borås, even hour

	Ank	Avg
Borås		XX.14
Sandared	XX.22	XX.23
Bollebygd	XX.38	XX.39
Rävlanda	XX.43	XX.51
Hindås	XX.58	XX.04
Mölnlycke	XX.19	XX.20
Liseberg	XX.35	XX.36
Göteborg	XX.40	

3.5 Freight trains

Mail trains operated at a maximum speed of 130 km/h or higher may be operated as category B trains on the Herrljunga–Borås–Göteborg section in accordance with Sections 3.4.2 and 3.4.3, or via Öxnered in accordance with Section 3.5.1. All freight trains that normally run via the Western Main Line (Västra stambanan) on section Herrljunga–Partille are diverted via Öxnered

3.5.1 Öxnered–Herrljunga

Trains heading towards Göteborg stop at Herrljunga västra for locomotive run-around at tracks 25—26. Trains heading towards Falköping stop at Herrljunga Central for locomotive run-around at track 6. Applications should be made as follows:

	Ank	Avg
Herrljunga c		XX.12
Herrljunga västra	XX.16	XX.41
Herrljunga c		XX.45
Vedum	XX.56	XX.00
Vänersborg	XX.53	XX.00
Öxnered		XX.06

	Ank	Avg
Öxnered		XX.56
Grästorp	XX.27	XX.30
Herrljunga c	XX.09	RL

3.5.2 Borås–Göteborg

No freight trains are re-routed via Borås, but the freight trains operating via the Coast-to-Coast Line (Kust-till-kust-banan) should apply according to the following times:

From Göteborg, even hour

	Ank	Avg
Almedal		XX.38
Rävlanda	X1.11	X1.14
Rödberg	X1.23	X1.31
Borås		X1.50

From Borås, even hour

	Ank	Avg
Borås		XX.12
Rävlanda	XX.38	XX.51
Almedal		X1.25

4 Bottleneckplan Bergslagsbanan

This bottleneck plan regulates capacity utilisation on the section Gävle–Storvik–Borlänge–Ludvika–Ställdalen–Frövi, during week 33 2027.

4.1 Background

During 2027, several projects will be carried out within Avesta Krylbo operating site, involving extended full closures and operational hours. The projects involve switch replacements, platforms measures, partial double-tracking to the south, new sorting yard lightning and other capacity-enhancing measures. The switch replacements are the critical (dimensioning) intervention and requires disruption to traffic in all four directions at Avesta Krylbo. They are planned to be carried out week 33 2027.

4.2 Purpose

The full closure of Avesta Krylbo results in significant traffic disruptions. Surrounding diversion routes is not expected to be able to accommodate all regular traffic together with diversion traffic within the standard capacity allocation

process. To achieve the most efficient possible use of capacity during the closure of Avesta Krylbo, a bottleneck plan will be established for the primary diversion route.

4.3 Scope

The bottleneck plan covers the sections Gävle–Storvik–Borlänge–Ludvika–Ställdalen–Frövi during the time when Avesta Krylbo is closed (Monday 16 August 2027 until 22 August 2027, week 33).

Diversionary traffic will also operate on several other section, but these are not covered by the bottle neck plan:

- **Ludvika – Fagersta – Kolbäck**

Number of trains re-routed on this section is quite few. These trains are considered able to be accommodated with existing traffic. The section is therefore not covered by this bottleneck plan. Ludvika station has no specific restrictions, and trains that normally operate Fagersta–Ludvika with a turnaround at Ludvika, may likewise perform turnaround movements at Ludvika throughout the validity period of the bottleneck plan.

- **Ställdalen – Kil – Öxnered**

Number of trains re-routed on this section is quite few. These trains are considered able to be accommodated with existing traffic. The section is therefore not covered by this bottleneck plan.

- **Gävle – Uppsala – Stockholm**

Passenger trains Mora/Falun – Stockholm can be re-routed this way. In addition, only a few trains are expected to be diverted via this route. These trains are considered able to be accommodated with existing traffic since the whole section has double track. The section is therefore not covered by this bottleneck plan.

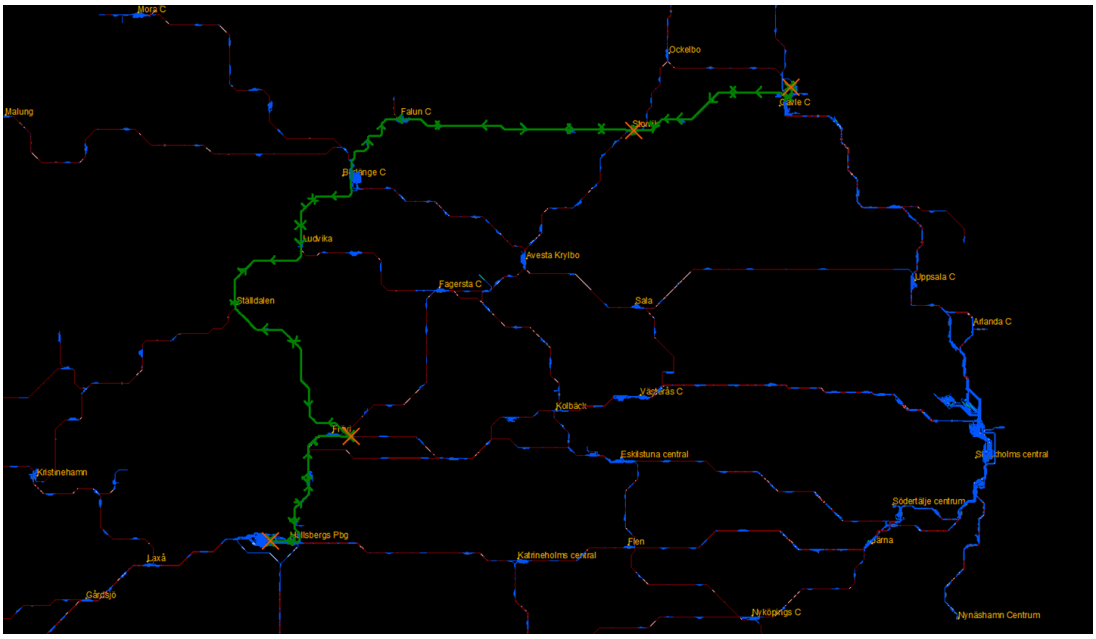
- **Frövi – Hallsberg**

South of Frövi the diversionary route coincides with the standard route. The section has double track and is therefore not covered by this bottleneck plan.

4.4 Infrastructure conditions

This chapter provides an overview of the infrastructure on the affected sections.

Figure 1 shows the primary diversion route between Hallsberg and Gävle when Avesta Krylbo is closed



4.4.1 (Gävle)–Borlänge

The section is 115 km long and mainly single-track, electrified and equipped with traffic control system H. There are 17 stations on the section where train meeting is possible. 7 of those stations has more than two tracks where both train meetings and passing's can occur at the same time. One station (Villersmuren) can handle train meetings with long trains (longer than 630 m).

Along the route there are two difficult hills, Ryggen- och Granstandahills. The Ryggen hill begins just after Korsnäs in the east direction and has a gradient at 17 percent. Heavy trains heading east shall, if possible, avoid stopping in Korsnäs. Granstanda hill begins just after Storvik in the west direction and has a gradient at 17 percent.

4.4.2 (Borlänge)–Ställdalen

The section is 82 km long. Single-track, electrified and equipped with traffic control system H. There are 8 stations on the section where train meeting is possible. 2 of those stations has more than two tracks where both train meetings and passing's can occur at the same time. One station (Klenshyttan) can handle train meetings with long trains (longer than 630 m). Between Grängesberg and Ställdagen there are two routes, via Hörken or via Silverhöjden. A track switch is planned for 2026, leading to that the line via Silverhöjden will achieve an equivalent standard as the line via Hörken. As of today, it is not clear whether the section can be defined as a section with double track and thereby a much simpler operation.

4.4.3 (Ställdalen)–(Frövi)

The section is 63 km long. Single-track, electrified and equipped with traffic control system H. There are 6 stations on the section where train meeting is possible. 3 of those stations has more than two tracks where both train meetings and passing's can occur at the same time. No stations are able to handle train meetings with long trains (longer than 630 m). The lengths of both Rällså and Kopparberg are under 630 m.

4.5 Operations

In this capacity plan, the traffic is divided into two different categories, passenger trains (RST) and freight trains (GT). Passenger trains includes commuter trains (SP, RP), regional trains (RX, RS, RL, RI, PO) and long-distance trains (FX, FS, FL, FI, PO) while freight trains include priority codes GS, GT, GR, GN, GF och GO. Service trains has no specifically allocated capacity in the bottleneck plan, instead, the expected volume of service trains is considered able to be accommodated during periods when unused train paths are available. See the detailed example later in this chapter.

Traffic is described divided into three partial distances: Gävle–Borlänge, Borlänge–Ludvika och Ludvika–Frövi. The traffic description describes the numbers of train path channels per time interval, with different time interval depending on the time of day and partial distance.

Exact channels per train path are not specified, as the section accommodates large volume of long-distance freight trains whose precise passage times are governed by the capacity situation on numerous surrounding routes. Specifying the exact channels would have reduced the flexibility and risked creating a rigid structure that would disadvantage all traffic types on the line.

Every partial distance has a specified maximum capacity in terms of the number of train paths per hour. I the final construction, individual hours may exceed this maximum capacity, for example during convoy operation with a high number of trains in the same direction, although the defined maximum capacity applies when viewed over time.

As a complement to the numbers of train path channels per category and time interval, a description of expected load on the line is presented.

The baseline assessment is made on the basis of three levels:

- Normal capacity utilisation: There are several available train paths and train meetings occur, but most trains can be expected to achieve normal driving times on the line.

- High-capacity utilisation: A few unused train paths exist per three-hour time interval; but traffic is congested. Most trains can expect longer driving times than normal due to numerous train meetings.
- Very high-capacity utilisation: The lines capacity is used at its maximum, no train paths are available. Most trains can expect longer driving times than normal due to numerous train meetings.

Although several route subsections will experience high load, there will be hours during the day on each subsection when not all train path channels will be used. When channels are unused for a certain train type, the Swedish Transport Administration can allocate the channel to another train type. See following example: One partial distance has five freight train channels and four passenger train channels during a two-hour time interval. The application shows that only three freight train paths will be used. The two other train path channels for freight train can be allocated to either passenger trains (beyond the four channel already allocated) or service trains, should that requirement be specified in the application. The evaluation is based on a standard weekday and weekend. Should any applicant decide to decrease traffic relative to the normal baseline, capacity utilisation may be reduced.

The branch stations along the line (Borlänge, Storvik, Ludvika, Frövi) are not subject to any specific restrictions regarding the number of trains.

4.5.1 General principals

The Bergslagen line (Bergslagsbanan) will be under heavy load for most of the day during this period. Both passenger- and freight trains can expect more train meetings and therefore longer journey times than usual. Train meetings between freight trains may happen on stations where they normally are avoided due to gradient conditions, for example Storvik westbound, Korsnäs eastbound, Rämshyttan southbound and Gräsberg northbound.

It is therefore especially important as an applicant to adapt traction power and wagon weight to manage these gradients[1]. On the section Ställdalen–Frövi, trains may be restricted to a maximum length of 600 meters due to short crossing places in Rällså and Kopparberg. For the trains that may be affected, a dialogue will take place during the train planning process. Planned maintenance work should not occur on the line while the bottleneck plan is in effect, only acute maintenance and faulting may take place.

[1] If support is required for calculations of maximum wagon weight on the route, the Swedish Transport Administration can assist by providing recommended maximum wagon weights according to the VVMax method upon request. However, it is the operator's responsibility to operate with traction and train weights that can handle the topography of the line.

4.5.2 Gävle–Borlänge

The Bergslagen line (Bergslagsbanan) will be under heavy load for most of the day during this period. Both passenger- and freight trains can expect more train meetings and therefore longer journey times than usual. Train meetings between freight trains may happen on stations where they normally are avoided due to gradient conditions, for example Storvik westbound, Korsnäs eastbound, Rämshyttan southbound and Gräsberg northbound.

It is therefore especially important as an applicant to adapt traction power and wagon weight to manage these gradients. On the section Ställdalen–Frövi, all trains must be limited to a length of 600 meters due to short crossing places in Rällså and Kopparberg. Planned maintenance work should not occur on the line while the bottleneck plan is in effect, only acute maintenance and faulting may take place.

Table 1. Number of train paths per train type and time interval Gävle-Borlänge, non-holidays week 33

Hour	Train type	Number of paths	Total	Comment
00–03	RST GT	0 14	14/3h	Normal capacity utilisation, unused train paths can be used by other traffic.
03–06	RST GT	2 12	14/3h	High capacity utilisation, but all traffic is expected to be accommodated. Very high capacity utilisation between 05:00-06:00.
06–09	RST GT	4 10	14/3h	Very high capacity utilisation. Large numbers of freight trains results in that one RST/h cannot be maintained.
09–12	RST GT	4 10	14/3h	Very high capacity utilisation. Large numbers of freight trains 09:00-10:00 results in that one RST/h cannot be maintained.
12–15	RST GT	6 8	14/3h	Normal capacity utilisation. A low expected number of freight train applications means that other types of trains can likely be allocated freight train paths that are not utilised.
15–17	RST GT	4 6	10/2h	High capacity utilisation. Large numbers of freight trains, however one train path/h and direction for RST is considered achievable.
17–19	RST GT	2 7	9/2h	Very high capacity utilisation. Large numbers of freight trains results in that only a two-hourly service for RTS can be guaranteed.
19–21	RST GT	2 7	9/2h	Very high capacity utilisation. Large numbers of freight trains result in that the amount of passenger trains need to be reduced. Traffic flow is mainly northbound.
21–24	RST	3	14/2h	

Bottleneck plans

Contents

1 Bottleneck plan – Western Sweden

This bottleneck plan regulates capacity utilisation on the sections Alingsås – Herrljunga and Öxnered–Herrljunga–Borås–Göteborg during annual timetable 2027 and the period 13 December 2026–22 August 2027.

1.1 Background

In 2027, work will be carried out on the Western Main Line between Alingsås and Olskroken, involving the replacement of several switches, the catenary system, as well as rock clearing in the tunnels. This work requires speed reductions and single-track operations, which are regulated in a capacity plan. However, at certain times the line will need to be completely closed for traffic, which is not regulated in the capacity plan. Diversion routes and the operated section between Herrljunga and Alingsås are instead regulated in this bottleneck plan.

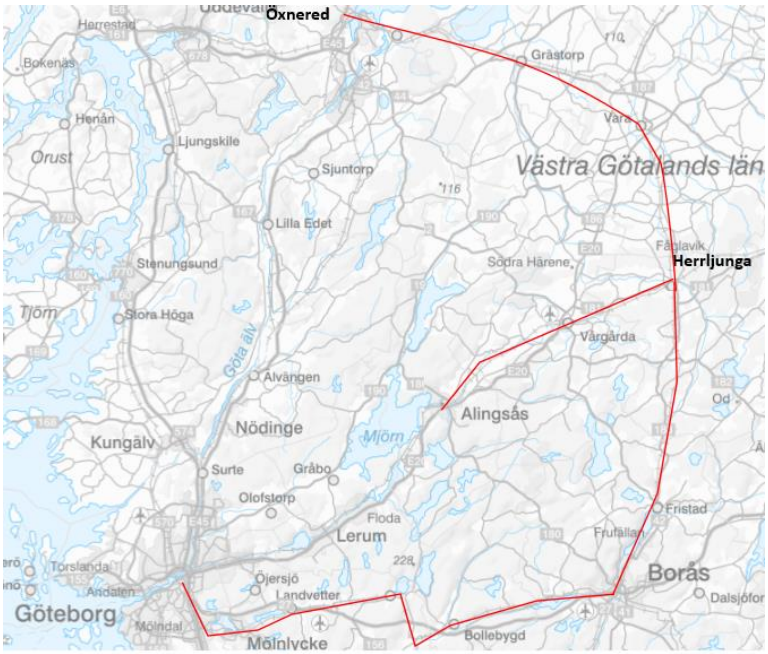
1.2 Purpose

The Swedish Transport Administration has established the following capacity plan with the aim of maximising capacity in order to meet applications as far as possible, in accordance with Chapter 7, Section 12 of the Railway Market Act, during the works on the section Alingsås–Olskroken. However, it is not possible to apply the capacity plan to sections other than where the work is being carried out, and therefore, this bottleneck plan has been established to regulate capacity utilisation on the diversion routes.

1.3 Scope

The bottleneck plan covers the sections Herrljunga–Alingsås as well as Öxnered – Herrljunga–Borås–Almedal during the period 13 December 2026 until 22 August 2027, when the section Alingsås–Partille is fully closed.

Figure 1 Sections covered by the bottleneck plan



2 Infrastructure conditions

This section provides an overview of the infrastructure on the relevant sections.

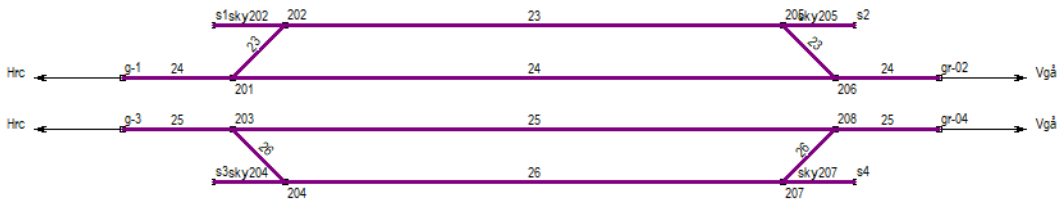
2.1 Herrljunga–Alingsås

The Western Main Line between Herrljunga and Alingsås is double-track. The following traffic locations are situated along the section.

2.1.1 Herrljunga västra

Herrljunga västra is a passing location without the possibility to switch between the up-tracks and down-tracks. The passing tracks can accommodate long freight trains (750 meters). The location does not serve passenger exchanges. A walkway and lighting will be arranged between tracks 25 and 26 (the two tracks on the up-track side) to enable locomotive terminal looping, shunting or wagon inspection/brake tests. Tracks 23 and 24 (down-track side) will then be used for passing traffic in both directions with meeting opportunities.

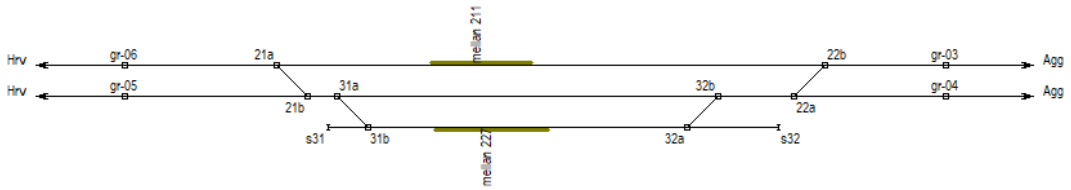
Figure 2 Herrljunga västra



2.1.2 Vårgårda

Vårgårda is a station with three tracks. Tracks 1 and 3 have platforms for passenger exchanges.

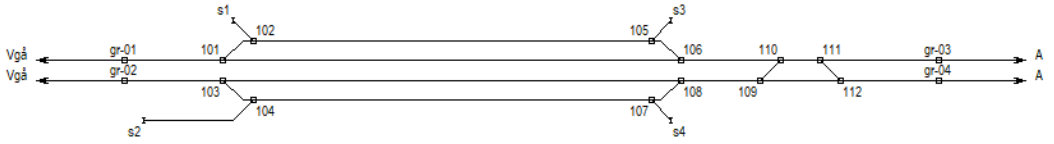
Figure 3 Vårgårda with platform locations



2.1.3 Algutsgården

Algutsgården is a passing location with crossover switches at the western end. The passing tracks can accommodate long freight trains (750 meters). The location does not serve passenger exchanges.

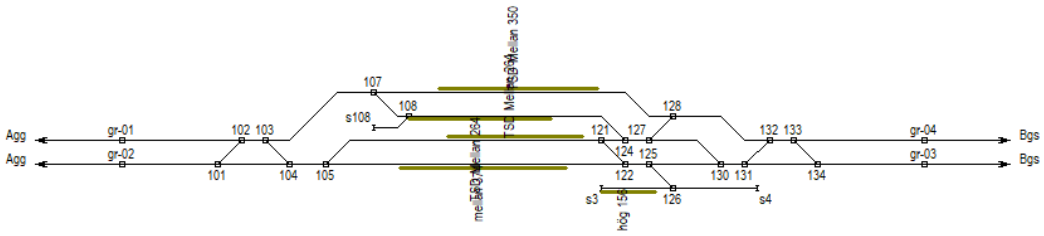
Figure 4 Algutsgården, track layout



2.1.4 Alingsås

Alingsås has four main tracks and a siding track designated for holding. The outermost tracks (1 and 4) have a 350-meter-long platform. Tracks 2 and 3 share a central 250-meter-long platform. Track 0 (at the bottom of the image) is an electrified and signal-controlled siding track intended for holding. There is space for a 150-meter-long train on each side of switch 126

Figure 5 Alingsås



During the period the Bottleneck plan is in effect, the line is open for passenger trains in category B and C. On section Herrljunga central–Vårgårda, these trains may only be operated on the down-track. The up-track between Herrljunga and Vårgårda and tracks 25-26 in Herrljunga Västra is only open for freight traffic.

2.2 Öxnered–Herrljunga

The 68 km long section between Öxnered and Herrljunga is single-track and has six meeting locations of varying lengths. The determining section is Vargön–Grästorp (18 km), followed by the section Grästorp–Håkantorp (14 km).

2.3 Herrljunga–Borås

The Herrljunga – Borås section is 43 km long. The section is single-track and has three meeting locations. The determining section is Herrljunga–Ljung (11 km).

2.4 Borås–Almedal

The Borås–Almedal section is 67 km long. The section is single-track and has seven meeting locations. The determining section is Borås–Sandared (10 km) and Sandared–Rödberg (11 km).

3 Operations

This chapter describes how train paths should be applied for and planned during the period when the bottleneck plan is in effect. This applies to both applications for the established timetable and applications for rest capacity after the timetable for 2027 has been set.

Train paths that have not been requested can be used by trains in another category, on the condition that this does not affect other train paths according to the bottleneck plan.

3.1 Trains with few stops– category S

High-speed trains with speed category S are re-routed via Borås in both directions. Applications should be made as follows:

	Ank	Avg
Göteborg		XX.20
Borås	XX.09	XX.19
Herrljunga	XX.52	(XX.02)

	Ank	Avg
Herrljunga	(XX.56)	XX.07
Fristad	XX.29	XX.31
Borås c	XX.43	XX.53
Sandared	XX.01	XX.02
Mölnlycke	XX.32	XX.33
Mölndals ö	XX.39	XX.45
Göteborgs c	XX.55	

3.2 Trains with few stops– category C

Trains with few stops according to speed category C normally have passenger exchanges in Alingsås. Therefore, these trains should turn in Alingsås and be replaced by buses between Alingsås and Göteborg.

These trains with the ordinary origin- or destination location Göteborgs Central must therefore be requested with the origin and/or destination location Alingsås. On the Herrljunga Central–Vårgårda section, only the down track is available for these trains, as the up track is allocated for locomotive run-around in Herrljunga västra. Applications should be made as follows:

	Ank	Avg
Herrljunga		XX.39
Alingsås	XX.55	

	Ank	Avg
Alingsås		XX.05
Herrljunga	XX.21	

3.3 Trains with few stops – category B

Trains with few stops according to speed category B normally have passenger exchanges in Vårgårda and Alingsås. These trains should turn in Alingsås and be replaced by buses between Alingsås and Göteborg.

These trains with the ordinary origin- or destination location Göteborgs Central must therefore be requested with the origin and/or destination location Alingsås. On the Herrljunga Central–Vårgårda section, only the down track is available for these trains, as the up track is allocated for locomotive run-around in Herrljunga västra. Applications should be made as follows:

	Ank	Avg
Herrljunga		XX.25
Vårgårda	XX.36	XX.37
Alingsås	XX.48	

	Ank	Avg
Alingsås		XX.12
Vårgårda	XX.22	XX.23
Herrljunga	XX.33	

3.4 Trains with many stops – category B

The category "trains with many stops" includes the regional trains that normally operate the diversion routes as well as trains between Göteborg–Värnamo or beyond on the Coast-to-Coast Line (*Kust-till-kust-banan*). The tables below should be used when applying for train paths. Train paths can be planned with shorter travel times if there are no opposing trains at the relevant time.

3.4.1 Öxnered–Herrljunga

Trains that operate only on Saturdays and Sundays during the period in which the bottleneck plan applies may be requested at times other than those stated below, provided they do not obstruct freight trains that are re-routed in accordance with section 3.5.1. If freight trains operate on the section, the allocation of train paths shall follow the same principles as on weekdays when the bottleneck plan applies.

Applications for trains operating on days other than Saturday and Sunday shall be made in accordance with:

	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Öxnered		XX.30		XX.36		XX.06		
Vänersborg	XX.35	XX.36	XX.41		XX.11			
Vargön	XX.41	XX.46						
Grästorp	XX.58	XX.01						
Håkantorp	XX.10	XX.14						XX.30
Vara	XX.18	XX.19					XX.34	
Vedum	XX.26	XX.31						
Herrljunga	XX.40							

	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Herrljunga		XX.20						
Vedum	XX.30	XX.31						
Vara	XX.38	XX.39						XX.23
Håkantorp	XX.43	XX.48					XX.27	
Grästorp	XX.58	XX.59						
Vargön	XX.11	XX.13						
Vänersborg	XX.20	XX.24		XX.19		XX.49		
Öxnered	XX.29		XX.24		XX.54			

The time for trains on the Göteborg–Vänersborg route and vice versa can be adjusted on the section Öxnered–Vänersborg on the condition that this does not affect the timetable of any other train.

3.4.2 Herrljunga–Borås

Applications should be made as follows:

	Ank	Avg
Herrljunga		XX.33
Ljung	XX.41	XX.43
Torpåkra	XX.47	XX.47
Mollaryd	XX.51	XX.51
Borgstena	XX.54	XX.54
Fristad	XX.59	X1.01
Knalleland	X1.10	X1.10
Borås	X1.14	

	Ank	Avg
Borås		XX.47
Knalleland	XX.49	XX.34
Fristad	XX.59	XX.59
Borgstena	X1.04	X1.04
Mollaryd	X1.07	X1.07
Torpåkra	X1.11	X1.11
Ljung	X1.15	X1.18
Herrljunga	X1.26	

3.4.3 Borås–Göteborg

The track is available during the time when the bottleneck plan applies for regional trains category B, but no more than one train per direction every other hour.

Applications for regional trains category B should be made as follows:

From Göteborg, odd hour:

	Ank	Avg
Göteborg		XX.35
Liseberg	XX.39	XX.40
Mölnlycke	XX.50	XX.52
Hindås	XX.16	XX.19
Rävlanda	XX.26	XX.27
Bollebygd	XX.31	XX.32
Sandared	XX.43	XX.44
Borås	XX.52	

From Borås, even hour

	Ank	Avg
Borås		XX.14
Sandared	XX.22	XX.23
Bollebygd	XX.38	XX.39
Rävlanda	XX.43	XX.51
Hindås	XX.58	XX.04
Mölnlycke	XX.19	XX.20
Liseberg	XX.35	XX.36
Göteborg	XX.40	

3.5 Freight trains

Mail trains operated at a maximum speed of 130 km/h or higher may be operated as category B trains on the Herrljunga–Borås–Göteborg section in accordance with Sections 3.4.2 and 3.4.3, or via Öxnered in accordance with Section 3.5.1. All freight trains that normally run via the Western Main Line (Västra stambanan) on section Herrljunga–Partille are diverted via Öxnered

3.5.1 Öxnered–Herrljunga

Trains heading towards Göteborg stop at Herrljunga västra for locomotive run-around at tracks 25—26. Trains heading towards Falköping stop at Herrljunga Central for locomotive run-around at track 6. Applications should be made as follows:

	Ank	Avg
Herrljunga c		XX.12
Herrljunga västra	XX.16	XX.41
Herrljunga c		XX.45
Vedum	XX.56	XX.00
Vänersborg	XX.53	XX.00
Öxnered		XX.06

	Ank	Avg
Öxnered		XX.56
Grästorp	XX.27	XX.30
Herrljunga c	XX.09	RL

3.5.2 Borås–Göteborg

No freight trains are re-routed via Borås, but the freight trains operating via the Coast-to-Coast Line (Kust-till-kust-banan) should apply according to the following times:

From Göteborg, even hour

	Ank	Avg
Almedal		XX.38
Rävlanda	X1.11	X1.14
Rödberg	X1.23	X1.31
Borås		X1.50

From Borås, even hour

	Ank	Avg
Borås		XX.12
Rävlanda	XX.38	XX.51
Almedal		X1.25

4 Bottleneckplan Bergslagsbanan

This bottleneck plan regulates capacity utilisation on the section Gävle–Storvik–Borlänge–Ludvika–Ställdalen–Frövi, during week 33 2027.

4.1 Background

During 2027, several projects will be carried out within Avesta Krylbo operating site, involving extended full closures and operational hours. The projects involve switch replacements, platforms measures, partial double-tracking to the south, new sorting yard lightning and other capacity-enhancing measures. The switch replacements are the critical (dimensioning) intervention and requires disruption to traffic in all four directions at Avesta Krylbo. They are planned to be carried out week 33 2027.

4.2 Purpose

The full closure of Avesta Krylbo results in significant traffic disruptions. Surrounding diversion routes is not expected to be able to accommodate all regular traffic together with diversion traffic within the standard capacity allocation

process. To achieve the most efficient possible use of capacity during the closure of Avesta Krylbo, a bottleneck plan will be established for the primary diversion route.

4.3 Scope

The bottleneck plan covers the sections Gävle–Storvik–Borlänge–Ludvika–Ställdalen–Frövi during the time when Avesta Krylbo is closed (Monday 16 August 2027 until 22 August 2027, week 33).

Diversionary traffic will also operate on several other section, but these are not covered by the bottle neck plan:

- **Ludvika – Fagersta – Kolbäck**

Number of trains re-routed on this section is quite few. These trains are considered able to be accommodated with existing traffic. The section is therefore not covered by this bottleneck plan. Ludvika station has no specific restrictions, and trains that normally operate Fagersta–Ludvika with a turnaround at Ludvika, may likewise perform turnaround movements at Ludvika throughout the validity period of the bottleneck plan.

- **Ställdalen – Kil – Öxnered**

Number of trains re-routed on this section is quite few. These trains are considered able to be accommodated with existing traffic. The section is therefore not covered by this bottleneck plan.

- **Gävle – Uppsala – Stockholm**

Passenger trains Mora/Falun – Stockholm can be re-routed this way. In addition, only a few trains are expected to be diverted via this route. These trains are considered able to be accommodated with existing traffic since the whole section has double track. The section is therefore not covered by this bottleneck plan.

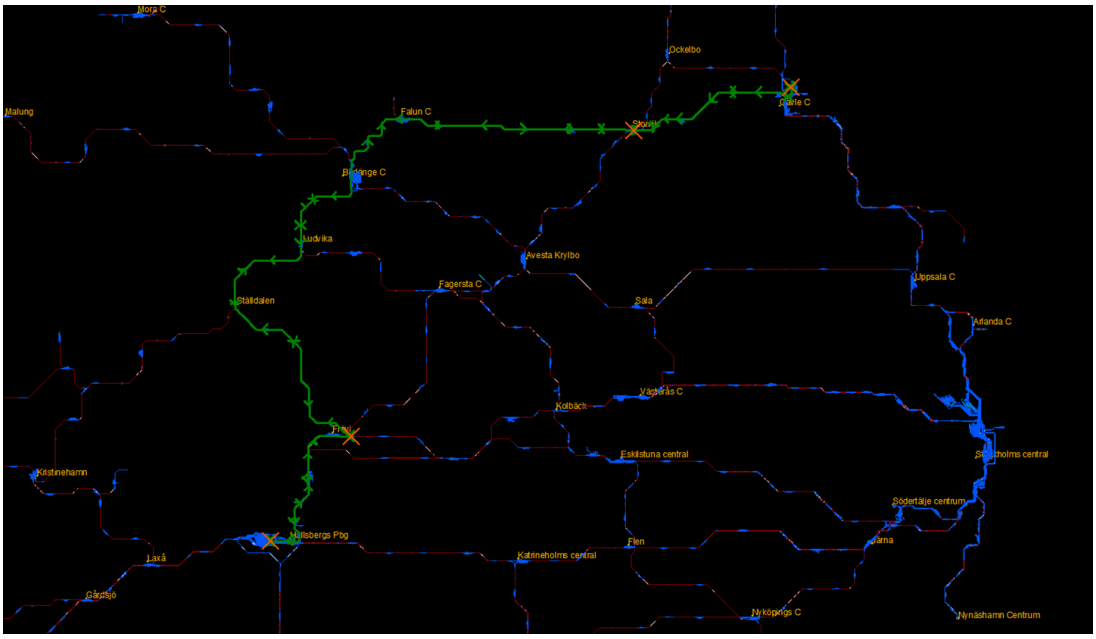
- **Frövi – Hallsberg**

South of Frövi the diversionary route coincides with the standard route. The section has double track and is therefore not covered by this bottleneck plan.

4.4 Infrastructure conditions

This chapter provides an overview of the infrastructure on the affected sections.

Figure 1 shows the primary diversion route between Hallsberg and Gävle when Avesta Krylbo is closed



4.4.1 (Gävle)–Borlänge

The section is 115 km long and mainly single-track, electrified and equipped with traffic control system H. There are 17 stations on the section where train meeting is possible. 7 of those stations has more than two tracks where both train meetings and passing's can occur at the same time. One station (Villersmuren) can handle train meetings with long trains (longer than 630 m).

Along the route there are two difficult hills, Ryggen- och Granstandahills. The Ryggen hill begins just after Korsnäs in the east direction and has a gradient at 17 percent. Heavy trains heading east shall, if possible, avoid stopping in Korsnäs. Granstanda hill begins just after Storvik in the west direction and has a gradient at 17 percent.

4.4.2 (Borlänge)–Ställdalen

The section is 82 km long. Single-track, electrified and equipped with traffic control system H. There are 8 stations on the section where train meeting is possible. 2 of those stations has more than two tracks where both train meetings and passing's can occur at the same time. One station (Klenshyttan) can handle train meetings with long trains (longer than 630 m). Between Grängesberg and Ställdagen there are two routes, via Hörken or via Silverhöjden. A track switch is planned for 2026, leading to that the line via Silverhöjden will achieve an equivalent standard as the line via Hörken. As of today, it is not clear whether the section can be defined as a section with double track and thereby a much simpler operation.

4.4.3 (Ställdalen)–(Frövi)

The section is 63 km long. Single-track, electrified and equipped with traffic control system H. There are 6 stations on the section where train meeting is possible. 3 of those stations has more than two tracks where both train meetings and passing's can occur at the same time. No stations are able to handle train meetings with long trains (longer than 630 m). The lengths of both Rällså and Kopparberg are under 630 m.

4.5 Operations

In this capacity plan, the traffic is divided into two different categories, passenger trains (RST) and freight trains (GT). Passenger trains includes commuter trains (SP, RP), regional trains (RX, RS, RL, RI, PO) and long-distance trains (FX, FS, FL, FI, PO) while freight trains include priority codes GS, GT, GR, GN, GF och GO. Service trains has no specifically allocated capacity in the bottleneck plan, instead, the expected volume of service trains is considered able to be accommodated during periods when unused train paths are available. See the detailed example later in this chapter.

Traffic is described divided into three partial distances: Gävle–Borlänge, Borlänge–Ludvika och Ludvika–Frövi. The traffic description describes the numbers of train path channels per time interval, with different time interval depending on the time of day and partial distance.

Exact channels per train path are not specified, as the section accommodates large volume of long-distance freight trains whose precise passage times are governed by the capacity situation on numerous surrounding routes. Specifying the exact channels would have reduced the flexibility and risked creating a rigid structure that would disadvantage all traffic types on the line.

Every partial distance has a specified maximum capacity in terms of the number of train paths per hour. I the final construction, individual hours may exceed this maximum capacity, for example during convoy operation with a high number of trains in the same direction, although the defined maximum capacity applies when viewed over time.

As a complement to the numbers of train path channels per category and time interval, a description of expected load on the line is presented.

The baseline assessment is made on the basis of three levels:

- Normal capacity utilisation: There are several available train paths and train meetings occur, but most trains can be expected to achieve normal driving times on the line.

- High-capacity utilisation: A few unused train paths exist per three-hour time interval; but traffic is congested. Most trains can expect longer driving times than normal due to numerous train meetings.
- Very high-capacity utilisation: The lines capacity is used at its maximum, no train paths are available. Most trains can expect longer driving times than normal due to numerous train meetings.

Although several route subsections will experience high load, there will be hours during the day on each subsection when not all train path channels will be used. When channels are unused for a certain train type, the Swedish Transport Administration can allocate the channel to another train type. See following example: One partial distance has five freight train channels and four passenger train channels during a two-hour time interval. The application shows that only three freight train paths will be used. The two other train path channels for freight train can be allocated to either passenger trains (beyond the four channel already allocated) or service trains, should that requirement be specified in the application. The evaluation is based on a standard weekday and weekend. Should any applicant decide to decrease traffic relative to the normal baseline, capacity utilisation may be reduced.

The branch stations along the line (Borlänge, Storvik, Ludvika, Frövi) are not subject to any specific restrictions regarding the number of trains.

4.5.1 General principals

The Bergslagen line (Bergslagsbanan) will be under heavy load for most of the day during this period. Both passenger- and freight trains can expect more train meetings and therefore longer journey times than usual. Train meetings between freight trains may happen on stations where they normally are avoided due to gradient conditions, for example Storvik westbound, Korsnäs eastbound, Rämshyttan southbound and Gräsberg northbound.

It is therefore especially important as an applicant to adapt traction power and wagon weight to manage these gradients[1]. On the section Ställdalen–Frövi, trains may be restricted to a maximum length of 600 meters due to short crossing places in Rällså and Kopparberg. For the trains that may be affected, a dialogue will take place during the train planning process. Planned maintenance work should not occur on the line while the bottleneck plan is in effect, only acute maintenance and faulting may take place.

[1] If support is required for calculations of maximum wagon weight on the route, the Swedish Transport Administration can assist by providing recommended maximum wagon weights according to the VVMax method upon request. However, it is the operator's responsibility to operate with traction and train weights that can handle the topography of the line.

4.5.2 Gävle–Borlänge

Very high capacity utilisation on the section; in practice, almost all trains between northern and southern Sweden need to use this section, as well as timber traffic from the inland to the Gävle coast. In addition, there are diversions of passenger trains towards Dalarna and regular regional trains. The line cannot handle all traffic, and some services will need to be cancelled.

The line is assessed to accommodate just under five trains per hour. As the fifth train does not quite fit within a one-hour period, the capacity is assessed at 14 trains per three hours. Due to the large volume of freight trains, no more than one passenger train per hour in each direction can operate on the section. During certain periods with a high volume of freight trains, the number of passenger trains must be reduced even further and replaced by bus services. Passenger trains can expect longer journey times than normal due to frequent train meetings with freight trains.

As many trains diverge at Storvik towards the Northern Main Line (Norra stambanan) to Ockelbo, there is a certain amount of rest capacity between Storvik and Gävle. For applicants seeking capacity only on the Gävle–Storvik–Gävle section, capacity may be applied for and allocated in addition to the described paths.

The two tables below describe the number of train paths by train category: the first for weekdays (16–20 August) and the second for the weekend (21–22 August). The reference station for the hourly breakdown is Hofors, located approximately midway along the section. This means that a train passing Hofors at 03:02 is counted within the 03:00–06:00 time interval.

Table 1. Number of train paths per train type and time interval Gävle-Borlänge, non-holidays week 33

Hour	Train type	Number of paths	Total	Comment
00–03	RST GT	0 14	14/3h	Normal capacity utilisation, unused train paths can be used by other traffic.
03–06	RST GT	2 12	14/3h	High capacity utilisation, but all traffic is expected to be accommodated. Very high capacity utilisation between 05:00-06:00.
06–09	RST GT	4 10	14/3h	Very high capacity utilisation. Large numbers of freight trains results in that one RST/h cannot be maintained.
09–12	RST GT	4 10	14/3h	Very high capacity utilisation. Large numbers of freight trains 09:00-10:00 results in that one RST/h cannot be maintained.

12–15	RST GT	6 8	14/3h	Normal capacity utilisation. A low expected number of freight train applications means that other types of trains can likely be allocated freight train paths that are not utilised.
15–17	RST GT	4 6	10/2h	High capacity utilisation. Large numbers of freight trains, however one train path/h and direction for RST is considered achievable.
17–19	RST GT	2 7	9/2h	Very high capacity utilisation. Large numbers of freight trains results in that only a two-hourly service for RTS can be guaranteed.
19–21	RST GT	2 7	9/2h	Very high capacity utilisation. Large numbers of freight trains result in that the amount of passenger trains need to be reduced. Traffic flow is mainly northbound.
21–24	RST GT	3 11	14/2h	High capacity utilisation. Large numbers of freight trains, mainly 21:00-22:00 results in that the amount of passenger trains may need to be reduced.

Table 2 Number of train paths per train type and time interval Gävle-Borlänge, Saturday to Sunday week 33.

Hour	Train type	Number of paths	Total	Comment
00–03	RST GT	0 14	14/3h	Saturday: High capacity utilisation but all traffic is expected to be accommodated. Sunday: Normal capacity utilisation.
03–06	RST GT	0 14	14/3h	Saturday: High capacity utilisation but all traffic is expected to be accommodated. Sunday: Normal capacity utilisation.
06–09	RST GT	6 8	14/3h	Saturday: High capacity utilisation with a long expected journey time, but all traffic is expected to be accommodated Sunday: Normal capacity utilisation.
09–12	RST GT	6 8	14/3h	Saturday: High capacity utilisation with a long expected journey time, but all traffic is expected to be accommodated Söndag: Normal capacity utilisation.
12–15	RST GT	6 8	14/3h	Normal capacity utilisation, unused train paths may be used by other traffic
15–18	RST GT	6 8	14/3h	Normal capacity utilisation, unused train paths may be used by other traffic. Traffic increases from around 17:00.
18–21	RST GT	6 8	14/3h	High capacity utilisation but all traffic is expected to be accommodated. Long expected journey time, especially Sunday.

21–24	RST GT	4 10	14/3h	Normal capacity utilisation, unused train paths may be used by other traffic.

4.5.3 Borlänge–Ställdalen

High capacity utilisation on the section, including re-routing trains between north and south of Sweden as well as trains with destination Borlänge. Furthermore, the capacity is assessed to be slightly lower then on Gävle–Borlänge due to the generally slightly longer distances between meeting locations and the absence of any triple-track stations, apart från Ludvika.

Four trains per hour is expected to be able to operate on the section. The capacity utilisation Borlänge–Ludvika is slightly higher than Ludvika–Ställdalen since trains heading towards Ludvika–Ställdalen diverts towards Fagersta at Ludvika, but not to such extent that the section needs to be described separately.

The tables below describe the number of train paths per train type, the first table presents non holidays (16-20 August) and the second table presents weekend (21-22 August). The reference station for the hourly division is Ludvika.

Table 3. Number of train paths per train type and time interval Borlänge-Ställdalen, non-holidays week 33

Hour	Train type	Number of paths	Total	Comment
00–03	RST GT	0 12	12/3h	High capacity utilisation, but all traffic is expected to be accommodated
03–06	RST GT	2 10	12/3h	Normal capacity utilisation, unused train paths may be used by other traffic
06–09	RST GT	2 10	12/3h	Very high capacity utilisation. Large amount of freight trains results in that one RST/h cannot be maintained.
09–12	RST GT	4 8	12/3h	Very high capacity utilisation. Large amount of freight trains results in that one RST/h cannot be maintained.
12–15	RST GT	5 7	12/3h	Very high capacity utilisation. Slightly fewer freight trains, but some reduction of passenger trains may be necessary.
15–17	RST GT	4 4	8/2h	High capacity utilisation. One train path/h and direction for RST is considered achievable.
17–19	RST GT	4 4	8/2h	Very high capacity utilisation. One train path/h and direction for RST is considered achievable.

19–21	RST GT	2 6	8/2h	Very high capacity utilisation. Large amount of freight trains results in that one RST/h cannot be maintained.
21–24	RST GT	2[2] 10	12/3h	Very high capacity utilisation. Large amount of freight trains results in that one RST/h cannot be maintained.

Table 4. Number of train paths per train type and time interval Borlänge-Ställdalen, Saturday and Sunday week 33

Hour	Train type	Number of paths	Total	Comment
00–03	RST GT	0 12	12/3h	Saturday: High capacity utilisation but all traffic is expected to be accommodated. Sunday: Normal capacity utilisation.
03–06	RST GT	0 12	12/3h	Saturday: High capacity utilisation but all traffic is expected to be accommodated. Sunday: Normal capacity utilisation.
06–09	RST GT	3 9	12/3h	Saturday: High capacity utilisation with a long expected journey time, but all traffic is expected to be accommodated Sunday: Normal capacity utilisation.
09–12	RST GT	3 9	12/3h	Saturday: Very high capacity utilisation with a long expected journey time, but all traffic is expected to be accommodated Sunday: High capacity utilisation.
12–15	RST GT	3 9	12/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
15–18	RST GT	3 9	12/3h	Normal capacity utilisation, unused train paths may be used by other traffic. Traffic increases from around 17:00.
18–21	RST GT	3 9	12/3h	Saturday: Middle-high capacity utilisation. Sunday: Very high capacity utilisation with a long expected journey time, but all traffic is expected to be accommodated.
21–24	RST GT	2 9	12/3h	Saturday: Normal capacity utilisation. Sunday: High capacity utilisation but all traffic is expected to be accommodated.

[2] t is likely that another train can operate at least the Ställdalen–Ludvika section, possibly reaching Borlänge but with significantly longer running times.

4.5.4 Ställdalen–Frövi

High capacity utilisation, but slightly lower than other sections since trains heading towards Värmland, as well as certain trains heading towards west of Sweden operates Ställdalen-Kil instead. The capacity is expected to be 4 trains per hour. Due to the high utilisation, meeting opportunities are needed in Lindesberg throughout the entire day. Consequently, there is no room for passenger trains that turn around in Lindesberg. These relief trains Frövi–Lindesberg–Frövi therefore need to be cancelled and replaced by buses if necessary.

At 23:00–05:00 all channels are reserved for freight trains only. If there are unused channels from any of the train types, it can be used by other traffic. At 06:00-23:00 on non-holidays, two channels are available for passenger trains and two channels for freight trains. On Saturdays and Sundays there are lower demand for passenger trains, which normally operates each hour. Consequently, more weekend slots are reserved for freight traffic, but as freight traffic also decreases during the weekend, the capacity situation is expected to remain favourable. If there are unused channels from any of the train types, it can be used by other traffic.

Traffic to and from Storå terminal is expected to continue at the current level.

Table below describes number of train paths per train type for the entire period (16–22 August). The reference station for the hourly division is Storå.

Table 5 Number of train paths per train type and time interval Ställdalen-Frövi, week 33

Hour	Train type	Number of paths	Total	Comment
00–05	0	4/h	4/h	Normal/high capacity utilisation, unused train paths may be used by other traffic
05–23 (Vardag)	2/h	2/h	4/h	Normal/high capacity utilisation, unused train paths may be used by other traffic
05–23 (Helg)	1/h[3]	3/h	4/h	Normal capacity utilisation, unused train paths may be used by other traffic
23–24	0	4/h	4/h	Normal capacity utilisation, unused train paths may be used by other traffic

[3] Även två tåg ena timmen följt av noll tåg andra timmen accepteras.

5 Bottleneck plan Söderhamn–Vännäs

This bottleneck plan regulates capacity utilisation on the sections Söderhamns västra–Sundsvalls central–Umeå central–Vännäs.

5.1 Background

During 2027 several time-consuming projects are in progress along Northern Main Line (Norra Stambanan) and Main Line through Upper Norrland (Stambanan genom över Norrland). The projects are

- switch changes in Bollnäs, Ljusdal and Hälsingenybo
- track and switch changes between Moradal–Bensjöbacken
- overhead line upgrades between Bräcke–Vännäs
- switch change and marshalling yard modification in Långsele
- **level crossing measures in Gottne.**

South of Ånge, the capacity-determining measure is the track replacement Bollnäs, requiring three weeks traffic of disruption, whereas north of Ånge the Moradal–Bensjöbacken track and switch replacements is capacity-determining (one week).

Northern Mail Line (Kilafors)–(Örabäcken) is closed week 29. The same applies in week 30, but there are also occasional daytime traffic disruptions Storvik–Kilafors–Söderhamn that may result in that certain trains needs to be re-routed via Gävle.

Both Northern Main Line (Norra stambanan) and Main Line through Upper Norrland (Stambanan genom över Norrland) is closed week 31. The terminals in Alby and Östavall can be accessed from Ånge during all weeks. Ånge godsbangård is also open throughout all weeks and can always be accessed from Sundsvall via Central Line (Mittbanan).

5.2 Scope

The closures on the section Kilafors–Ånge–Vännäs results in a significant traffic disruption. Surrounding diversion routes is not expected to be able to accommodate all regular traffic together with diversion traffic within the standard capacity allocation process. To achieve the most efficient possible use of capacity during the closure, a bottleneck plan will be established for the primary diversion route via the coast.

5.3 Purpose

The bottleneck plan covers East Coast Line (Ostkustbanan) Söderhamn västra–Sundsvall week 29–31 (19 July 2027 until 6 August 2027) and Ådalen Line (Ådalsbanan) and Bothnia Line (Botniabanan) on the section Sundsvall–Umeå central–Vännäs non-holidays week 31 (2 August 2027 until 6 August 2027).

Diversion traffic will also operate on a number of other routes, but which are not covered by this bottleneck plan:

- **Kilafors–Söderhamns västra**

  Regular traffic and diversion traffic are considered able to be accommodated in ordinary allocation process.

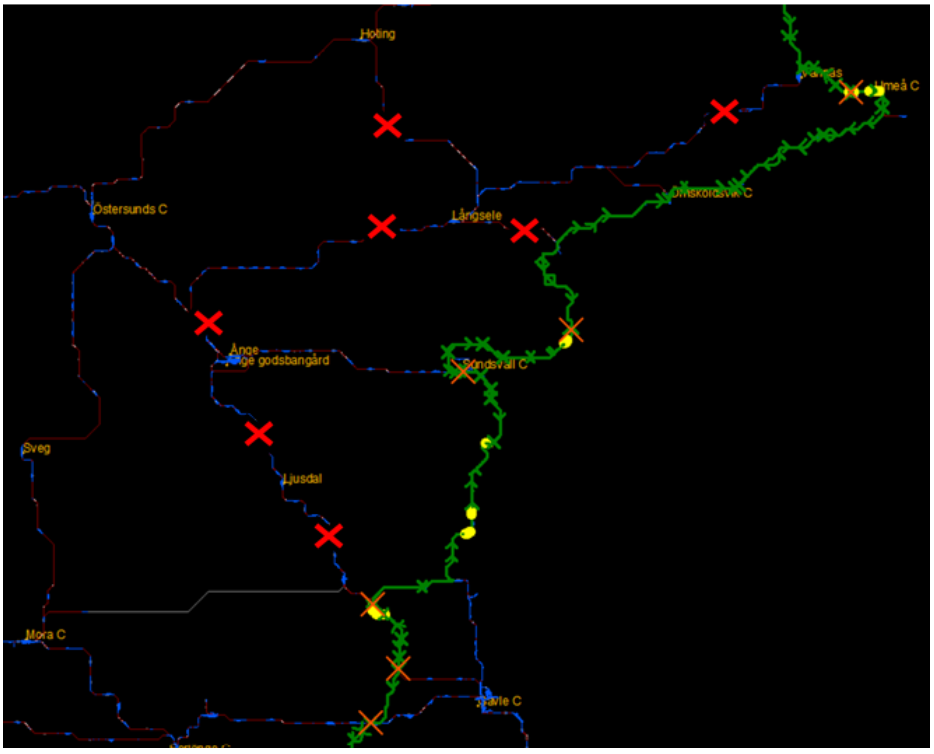
- **Nacksta–Ånge**

  Regular traffic and diversion traffic are considered able to be accommodated in ordinary allocation process.

5.4 Infrastructure conditions

This section provides an overview of the infrastructure on the relevant sections. Figure 2 below shows the diversity route between Kilafors and Vännäs when Northern Main Line (Norra stambanan) and Main Line through Upper Norrland (Stambanan genom över Norrland) is closed.

Figure 2 Closed section (red cross) and primarily diversion route (green line) during week 31, when the largest closure occurs.



5.4.1 (Söderhamns västra)–Sundsvall

The section is 140 km long and mainly single-track, electrified and equipped with traffic control system H. There are 19 stations on the section where train meeting is possible. Three of those stations has more than two tracks where both train meetings and passing's can occur at the same time. Totally 10 stations can handle train meetings with long trains (longer than 630 m). Steep gradients (16 percent) occur around Nacksta.

5.4.2 (Sundsvall)–Örnsköldsvik

The section is 194 km long. Single-track, electrified and equipped with traffic control system E2. There are 21 stations on the section where train meeting is possible. Nine of those stations has more than two tracks where both train meetings and passing's can occur at the same time. The majority of the stations can handle train meetings with long trains (longer than 630 m). Several steep gradients accour on the section, up to 20 percent.

5.4.3 (Örnsköldsvik)–Umeå

The section is 115 km long. Single-track, electrified and equipped with traffic control system E2. There are 15 stations on the section where train meeting is possible. Five

of those stations has more than two tracks where both train meetings and passing's can occur at the same time. The majority of the stations can handle train meetings with long trains (longer than 630 m).

5.4.4 (Umeå)–(Vännäs)

The section is 30 km long. Single-track, electrified and equipped with traffic control system H. There are three stations on the section where train meeting is possible. One of those stations has more than two tracks where both train meetings and passing's can occur at the same time. Two of the stations can handle train meetings with long trains (longer than 630 m).

5.5 Operations

In this capacity plan, the traffic is divided into two different categories, passenger trains (RST) and freight trains (GT). Passenger trains includes commuter trains (SP, RP), regional trains (RX, RS, RL, RI, PO) and long-distance trains (FX, FS, FL, FI, PO) while freight trains include priority codes GS, GT, GR, GN, GF och GO. Service trains has no specifically allocated capacity in the bottleneck plan, instead, the expected volume of service trains is considered able to be accommodated during periods when unused train paths are available. See the detailed example later in this chapter.

Traffic is described divided into four partial distances: Söderhamns västra–Sundsvalls central, Sundsvalls central– Örnsköldsviks central, Örnsköldsviks central–Umeå central and Umeå central–Vännäs. The traffic description describes the numbers of train path channels per time interval, with different time interval depending on the time of day and partial distance. Exact channels per train path are not specified, as the section accommodates large volume of long-distance freight trains whose precise passage times are governed by the capacity situation on numerous surrounding routes. Specifying the exact channels would have reduced the flexibility and risked creating a rigid structure that would disadvantage all traffic types on the line.

Every partial distance has a specified maximum capacity in terms of the number of train paths per hour. I the final construction, individual hours may exceed this maximum capacity, for example during convoy operation with a high number of trains in the same direction, although the defined maximum capacity applies when viewed over time.

As a complement to the numbers of train path channels per category and time interval, a description of expected load on the line is presented.

The baseline assessment is made on the basis of three levels:

- Normal capacity utilisation: There are several available train paths and train meetings accour, but most trains can be expected to achieve normal driving times on the line.
- High-capacity utilisation: A few unused train paths exist per three-hour time interval; but traffic is congested. Most trains can expect longer driving times than normal due to numerous train meetings.
- Very high-capacity utilisation: The lines capacity is used at its maximum, no train paths are available. Most trains can expect longer driving times than normal due to numerous train meetings.

Although several route subsections will experience high load, there will be hours during the day on each subsection when not all train path channels will be used. When channels are unused for a certain train type, the Swedish Transport Administration can allocate the channel to another train type. See following example: One partial distance has five freight train channels and four passenger train channels during a two-hour time interval. The application shows that only three freight train paths will be used. The two other train path channels for freight train can be allocated to either passenger trains (beyond the four channels already allocated) or service trains, should that requirement be specified in the application.

5.5.1 General principles

Planned maintenance work should not occur on the line while the bottleneck plan is in effect, only acute maintenance and faulting may take place. The traffic is based on normal summer peak traffic, according to traffic patterns observed in summer 2025.

5.5.2 Söderhamns västra–Sundsvall

Normally, just over 4 trains per hour can operate on the section with reasonable running times. In some hours, 5 trains per hour can operate the section, but this results in longer running times for the trains involved. An evaluation has been made that 14 train paths over 3 hours thus represents the normal maximum capacity, providing reasonable running times for the trains.

Passenger trains can therefore generally only be allocated one path per hour and direction (exceptions apply between 13:00–19:00). During certain hours, for example in the morning, there should be unused freight train paths that can, in such cases, be used by passenger trains.

Table below describes the number of train paths per train type on non-holidays week 29-31. The reference station for the hourly division is Hudiksvall. Over the weekend, total traffic is expected to be so low that no bottleneck plan is needed, and allocation can take place according to the usual principles.

Table 6. Number of train paths per train type and time interval Söderhamns västra–Sundsvall, non-holidays week 29-31

Hour	Train type	Number of paths	Total	Comment
01–04	RST GT	3 11	14/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
04–07	RST GT	3 11	14/3h	High capacity utilisation, and very high capacity utilisation between 06:00-07:00, where some traffic may need to be moved to other hours.
07–10	RST GT	4 10	14/3h	High capacity utilisation but all traffic is expected to be accommodated.
10–13	RST GT	6 8	14/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
13–16	RST GT	7 7	14/3h	High capacity utilisation but all traffic is expected to be accommodated.
16–19	RST GT	7 7	14/3h	High capacity utilisation but all traffic is expected to be accommodated.
19–22	RST GT	6 8	14/3h	High capacity utilisation but all traffic is expected to be accommodated.
22–01	RST GT	2 12	14/3h	Normal capacity utilisation, unused train paths may be used by other traffic.

5.5.3 Sundsvall–Örnsköldsvik

Due to the slightly longer distances between meeting stations, compared to the other sections, capacity is expected to be 4 trains per hour. During certain individual hours, one additional train may be accommodated, but only at the expense of increased running time. Overall, traffic is fairly evenly distributed throughout the day with normal to high capacity utilisation with no major peaks. A larger peak occurs between 07:00-09:00 and 15:00-18:00, when capacity is fully used with 13 allocated train path channels per three-hour period, but all capacity can still be accommodated.

Table below describes the number of train paths per train type on non-holidays week 31. The reference station for the hourly division is Kramfors. Over the

weekend, total traffic is expected to be so low that no bottleneck plan is needed, and allocation can take place according to the usual principles.

Table 7 Number of train paths per train type and time interval Sundvall-Örnsköldsvik, non-holidays week 31

Hour	Train type	Number of paths	Total	Comment
00–03	RST GT	1 11	12/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
03–06	RST GT	4 8	12/3h	High capacity utilisation but all traffic is expected to be accommodated.
06–09	RST GT	5 8	13/3h	Very high capacity utilisation especially from 07:00, with long running time but all traffic is expected to be accommodated.
09–12	RST GT	5 7	12/3h	High capacity utilisation but all traffic is expected to be accommodated. Majority of freight flow are northbound.
12–15	RST GT	4 8	12/3h	High capacity utilisation but all traffic is expected to be accommodated.
15–18	RST GT	6 7	13/3h	High capacity utilisation but all traffic is expected to be accommodated.
18–21	RST GT	3 9	12/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
21–24	RST GT	3 9	12/3h	Normal capacity utilisation, unused train paths may be used by other traffic.

5.5.4 Örnsköldsvik–Umeå

With relatively short distances between the meeting stations, but also a significant speed between trains, the overall capacity is estimated at 13 train paths per hour. Freight trains arrive on the line in an uneven pattern, with very high peaks, particularly around midday when northbound and southbound flows meet near Umeå, but partly also in the morning when passenger traffic experiences its peak. Apart from this, the capacity situation is good, with relatively normal capacity

utilisation and headways for most of the day, and often only a few diversionary trains per three-hour internal. During the two most heavily loaded periods, some services may need to be cancelled or rescheduled.

Table below describes the number of train paths per train type on non-holidays week 31. The reference station for the hourly division is Nordmaling. Over the weekend, total traffic is expected to be so low that no bottleneck plan is needed, and allocation can take place according to the usual principles.

Table 8 Number of train paths per train type and time interval Örnsköldsvik-Umeå, non-holidays week 31

Hour	Train type	Number of paths	Total	Comment
02–05	RST GT	2 11	13/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
05–08	RST GT	6 7	13/3h	High capacity utilisation due to diversion trains and frequent regional trains. Regional trains may have to be reduced.
08–11	RST GT	4 9	13/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
11–14	RST GT	4 9	13/3h	Very high capacity utilisation. All traffic is expected to be accommodated, but may need to be shifted in dime due to very high freight train flow.
14–17	RST GT	5 8	13/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
17–20	RST GT	4 9	13/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
20–23	RST GT	4 9	13/3h	Normal capacity utilisation, unused train paths may be used by other traffic.
23–02	RST GT	3 10	13/3h	Normal capacity utilisation, unused train paths may be used by other traffic.

5.5.5 Umeå central–Vännäs

Fewer trains operate on the section because several freight trains arriving from the south have Umeå as their final destination, and passenger traffic is less extensive. However, the section has slightly lower capacity due to longer distances between meeting stations, which means there may be times when demand exceeds the available capacity. This mainly occurs around midday, when the northbound flow of freight trains meets the southbound flow roughly along this section. For most of the day, however, all services are expected to be able to operate on the section with normal or only slightly extended running times.

Table below describes the number of train paths per train type on non-holidays week 31. The reference station for the hourly division is Brännland. Over the weekend, total traffic is expected to be so low that no bottleneck plan is needed, and allocation can take place according to the usual principles.

Table 9 Number of train paths per train type and time interval Umeå-Vännäs, non-holidays week 31

Hour	Train type	Number of paths	Total	Comment
00–06	1/h	3/h	4/h	Normal capacity utilisation, unused train paths may be used by other traffic.
06–10	2/h	2/h	4/h	High capacity utilisation but all traffic is expected to be accommodated.
10–14	1/h	3/h	4/h	High to Very high capacity utilisation. Large amount of freight trains results in that 2 RST/h cannot be maintained.
14–20	2/h	2/h	4/h	High capacity utilisation 16.00-18.00. Normal capacity utilisation all other hours. All traffic is expected to be accommodated
20–24	1/h	3/h	4/h	Normal capacity utilisation but all traffic is expected to be accommodated.

Capacity Plans

1 Capacity plan Malmbanan (the Iron Ore Line)

1.1 Background

A track replacement will be carried out on the section Näsberg–(Boden) during annual timetable 2027. In addition, extensions of several operational sites will be made to accommodate meetings with 750-meter-long trains, track and switch changes at several operational sites, level crossing measures, and overhead line upgrades. Due to the lack of diversion options for Iron Ore Line (Malmbanan), traffic planning must be done on the section Gällivare–Boden, as not all planned traffic can be accommodated or depart at the requested times.

The capacity plan shall be used as a planning condition in the allocation process for annual timetable 2027, with the purpose of creating efficient capacity utilization and predictability at an early stage for all involved parties.

1.2 Scope

The capacity plan covers the section (Gällivare)–(Boden). Track and switch replacements will be carried out during the summer period with an 8-hour shutdown per night, approximately from 20:00 to 05:00, on the section Näsberg – (Boden). It starts on Sunday evening in week 19 and ends on Monday morning in week 41, with slight variations in start and stop times depending where the track replacement is taking place. The regular traffic that cannot operate due to the capacity restriction is also reported in the capacity plan.

Trains running Boden-Buddbyn and continuing towards Morjärv/Haparanda are not included in the Capacity Plan, but will be affected by the track switch during the first three weeks. These trains will be handled in the revision process of the annual timetable 2027.

1.3 Infrastructure conditions

The capacity plan is based on the infrastructure and conditions known in December 2025. The section (Gällivare)–(Boden) will be closed for 8 hours per night during weeks 20–40.

Murjek will lack meeting opportunities during the whole period week 20-40. Nattavaara operates with 2 of 3 tracks during the whole period week 20-40. For Nuortikon, there will only be temporary speed reduction, so train meetings will be possible throughout the entire period week 20-40.

The track replacements will be carried out during operational hours from approximately 20:00–05:00 over a total of 21 weeks. The work is being carried out from the south (Boden) and continues up to Näsberg. While the work is ongoing, no other traffic will be able to pass.

1.4 Traffic conditions

The annual timetable 2025 includes a total of 26 trains per day on the route Gällivare–Boden. For the annual timetable 2027, it is reasonable to assume that the number of trains will be the same, and therefore we have used the figures below for the 2027 annual timetable.

The table below shows the number of trains per day and the number of trains during the two peak hours of the day (05:30-07:30).

Table 1: Numbers of trains per day and the number of trains during the two peak hours of the day

Train type	Numbers of trains per day	The two peak hours of the day
Ore train	7	1
Freight train	9	3
Passenger train	10	4

1.4.1 Running time supplement

The track replacement (Buddbyn)–(Näsberg) will, during the work period, have a floating reduction of 7500 meters at 40 km/h. In addition to the track replacement, there will also be reductions in Murjek for 750 m, in Nattavaara for 1400 m and in Nuortikon for 1400 m.

At the construction, the time in Murjek will be applied on the section Murjek–Polcirkeln for trains going north and, on the section, Murjek–Tolikberget for trains going south. For Nattavaara, the time will be applied for trains going north on the section Nattavaara–Kilvo and for trains going south on the section Nattavaara–Koskivaara. The reduction in Nuortikon will be applied for trains going north on the section Nuortikon–Ripats and for trains going south on the section Nuortikon–Kilvo.

During some weeks, the restricted section may be longer for operational reasons, which has been managed by introducing a quality supplement of 1–2 minutes

depending on the train type. This means that the trains will have an extended running time by a number of minutes according to the table below:

Table 2: Running time supplement due to temporary speed reduction

Train type	Running time supplement track switch + Murjek	Running time supplement Nattavaara+ Nuortikon	Total running time supplement
Ore train loaded	7 min	2+2 min	11 min
Ore train unloaded	9 min	2+2 min	13 min
Passenger train	12 min	3+3 min	18 min
Freight train	11 min	3+3 min	17 min

These minutes are included in the capacity plan's timetables. Deviations in the number of minutes may occur due to construction conditions.

1.4.2 Other works and reductions

A small number of works occur in other parts of Iron Ore Line (Malmbanan) that are not included in the capacity plan, but these are not expected to have any significant impact on the operational conditions.

Between Gällivare and Kiruna, no works are underway that restrict meeting opportunities at the operational sites.

1.4.3 Basis for timetable construction 2027

The combination of temporary speed reductions, track replacement work during non-operating hours, and several stations not available for train meetings results in significant traffic disruptions.

During the period from March 2025 to September 2025, the Swedish Transport Administration has held meetings with all affected railway undertakings, gathered feedback, and, in consultation with them, devised various traffic arrangements for each operator

Discussions have taken place with representatives from Cargonet, Railcare, Green Cargo, LKAB Malmtrafik, Norrtåg, Onrail, TMTOG and SJ AB. These discussions have been constructive, and timetable construction issues have been addressed throughout the process.

1.4.3.1 Trains that will not be offered capacity

Freight train: 9951 Koskullskulle–Luleå

9965 Koskullskulle–Luleå malmbangård

9964 Luleå malmbangård–Koskullskulle

9956 Luleå malmbangård–Koskullskulle

45691 Narvik–Malmö on the subsection Gällivare–Boden

45691 Malmö–Narvik on the subsection Boden–Gällivare

Despite being requested by The Swedish Transport Administration, the operator TM Togdrift has not submitted any request for capacity on the relevant line section in the upcoming timetable 2027.

1.4.3.2 Trains that have changed significantly compared to allocated capacity in annual timetable 2026

Passenger trains:

All of Norrtåg's departure trains in train number series 7150-7155, have received changed departure times.

For train 3993, the timetable has been brought forward Gällivare–Boden, boundary train to the track replacement. As of today, the train lacks operator since no procurement of the traffic has been carried out.

Freight train:

For Green Cargo train 59193, the timetable has been brought forward from Kiruna.

Hector Rail train 48191 is extended to Polcirkeln. Since Murjek lacks meeting opportunities, terminal looping is not possible there. The train is therefore extended to Polcirkeln where terminal looping takes place. The train is then driven back to Murjek and reverses into the terminal.

Railcare: All departure times has been changed compared to timetable 2026.

Ore trains: Some trains have been changed to ensure vehicle circulation.

1.5 Construction solution during the track replacement period

As far as possible, The Swedish Transport Administration has avoided impacting train timetables north of Gällivare and south of Boden. A new traffic arrangement has been devised for LKAB Malmtrafik. For other freight trains and long-distance passenger trains, an outlook has been made north of Gällivare to ensure accessibility. Between Gällivare and Kiruna malmbangård, there are no restrictions regarding meeting opportunities in annual timetable 2027.

1.6 Planning conditions for application for annual timetable 2027

In this Capacity Plan, the trains have been designed and allocated based on demand. A coordination process has taken place with each railway company. On the Ore line, it is not possible to have recurring schedules every hour, as the traffic is irregular and has large differences in speed and train length. The times that govern the Capacity Plan are the times in Gällivare and Boden, with the exception of trains with the final destination Aitik and Murjek.

It is important that the time in Boden is applied for trains going north, primarily for long-distance trains, so that this time becomes the determining factor for the entire train's timetable, ensuring that it is properly positioned within the Capacity plan.

Four ad hoc-paths have been established in the capacity plan to facilitate more efficient handling of the ad hoc-process in the annual timetable 2027. These paths will not be allocated in the capacity plan and are instead reserved by the Swedish Transport Administration as reserve capacity, in order to potentially be utilised in the ad hoc-process in the annual timetable 2027.

Train 9953 in the morning and train 3993 in the evening are boundary trains to the track replacement.

Table 3 presents the times that are to be applied for week 20-40.

Table 3: The following times are to be applied for during week 20–40

Train number	Station, time	Station, time
3993	Gällivare 18.47	Boden 21.05

3994	Boden 06.00	Gällivare 08.28
3995	Gällivare 15.25	Boden 17.45
3996	Boden 11.15	Gällivare 13.32
4374	Boden 05.11	Aitik 08.56
4375	Aitik 13.20	Boden 16.50
7150	Boden 06.33	Gällivare 09.36
7151	Gällivare 06.25	Boden 08.54
7152	Boden 10.36	Gällivare 12.40
7153	Gällivare 12.40	Boden 15.10
7154	Boden 17.23	Gällivare 19.55
7155	Gällivare 16.14	Boden 19.04
9552	Boden 05.03	Gällivare 08.11
9954	Boden 05.20	Gällivare 08.23
9958	Boden 11.46	Gällivare 14.19
9960	Boden 14.36	Gällivare 17.22
9962	Boden 17.48	Gällivare 21.28
9953	Gällivare 03.14	Boden 07.53
9955	Gällivare 06.45	Boden 10.39
9957	Gällivare 10.45	Boden 14.28
9959	Gällivare 17.44	Boden 20.55
41890	Boden 07.40	Polcirkeln 09.31, Murjek 10.00
41891	Murjek 17.30	Boden 19.36
59190	Boden 06.15	Gällivare 09.23
59193	Gällivare 17.35	Boden 20.20
41911	Gällivare 04.35	Boden 06.56
41901	Gällivare 04.52	Boden 07.33
41912	Boden 13.09	Gällivare 16.13
41902	Boden 15.37	Gällivare 18.30
59740	Boden 08.18	Gällivare 11.54
59731	Gällivare 16.32	Boden 20.02
Adhoc northbound	Boden 09.20	Gällivare 12.15
Adhoc northbound	Boden 12.45	Gällivare 15.51
Adhoc southbound	Gällivare 09.38	Boden 12.20

Adhoc southbound	Gällivare 14.20	Boden 17.22

2 Capacity plan Alingsås–Olskroken

This capacity plan regulates the utilisation of capacity on the section Alingsås–Olskroken during the annual timetable 2027, 13 December 2026 until 18 July 2027.

2.1 Background

In 2025, work will begin to replace the catenary system between Olskroken and Alingsås, which has reached the end of its technical lifespan and needs to be fully replaced. The work continues during 2026 and will end after week 29, 2027. This means that the section, as previous years, will be affected by single-track operation and several total closures.

The work has been classified as having a major impact on traffic according to the SERA Directive, and therefore, a capacity plan has been developed for the section. During the first part of 2027, the Capacity plan from 2026 will continue; however, from 14:00 on 28 February, the single-track operation will be relocated, and revised timings will then be required for the trains operating on the section.

2.2 Purpose

The Swedish Transport Administration has established the following capacity plan with the aim of maximising capacity to, in accordance with Chapter 7, Section 12 of the Railway Market Act, accommodate applications as much as possible during the works on the Alingsås–Olskroken. Point 17 of Annex VII to the SERA Directive 2012/34/EU applies due to the scope of these works. In the capacity plan, the Swedish Transport Administration presents the preliminary distribution of the remaining capacity among different types of train traffic in accordance with point 17. When traffic is to be operated according to a capacity plan, the timetables should be constructed according to the applicable construction rules and with the restrictions and possible time additions specified in the capacity plan, unless otherwise indicated. The time additions and limitations on the number of trains in the plan correspond to the capacity loss that occurs during the engineering work. This means, among other things, that a time addition according to the capacity plan cannot offset an addition according to other construction rules. The capacity plan is not a substitute for but a supplement to the construction rules applicable to the track.

2.3 Scope

The total scope of the engineering work is Alingsås–Olskroken. During the annual timetable 2027, the traffic impact of the work is limited to the section Alingsås–Floda.

From the start of the annual timetable 2027 until Friday week 8, covers the section Bryngenäs–Floda.

From Sunday week 8 until Sunday week 28, covers the section Alingsås–Norsesund västra.

The capacity plan covers the section Alingsås–Göteborgs central during periods when the line is affected by temporary speed reductions and/or single-track operation. Trains not operating on the subsection Alingsås–Partille are not covered. The capacity plan does not cover periods when the line is completely closed to traffic.

2.4 Infrastructure conditions

The following stages show the infrastructure conditions known as of November 2025 that apply for 2027:

In 2026, the work to upgrade the catenary system will be carried out with single-track operation around the clock between Lerum and Bryngenäs. The work continues in 2027 and will be relocated at a later stage to the section Alingsås–Norsesund västra. Some parts of the work require total closures, which are planned to occur over several weekends.

2.4.1 Staging of available infrastructure during 13 December 2026 – 26 February 2027

From the start of the annual timetable 2027 until Friday week 7, the section Bryngenäs–Floda is covered by single-track operation and temporary speed reductions to 70 km/h.

From Sunday week 7 until Friday week 8, both tracks can be used with temporary speed reductions.

2.4.2 Staging of available infrastructure during 28 February 2027 – 18 July 2027

From Sunday week 8 until Sunday week 28, the section Alingsås–Norsesund västra is covered by single-track operation and temporary speed reduction to 70 km/h.

From Monday week 29, both tracks can be used with temporary speed reductions, sth 70 km/h (Bryngenäs)–(Floda).

2.5 Traffic conditions

This section covers conditions and possible traffic operations during the annual timetable 2026. This applies to both applications for the established timetable and applications for rest capacity after the timetable for 2026 has been set.

Train paths that have not been requested can be used by trains in another category, on the condition that this does not affect other train paths according to the capacity plan.

2.5.1 Requested traffic conditions

Traffic along the section can be divided into six different train categories.

- Passenger trains with few stops, speed category S
- Passenger trains with few stops, speed category C
- Passenger trains with few stops, speed category B
- Passenger trains with many stops, speed category B
- Freight trains
- Transport for maintenance and inspection of the line (Trafikverkstransporter).

To get an overview of the requested traffic, an evaluation of high-speed and freight traffic during annual timetable 2024 has been conducted. As regional and commuter traffic is relatively constant, these types of traffic have not been evaluated in detail on an hourly basis.

The ambition has been to create at least one train path for each category in both directions every hour. When there is no demand for a specific category, more train paths for other traffic with high demand have been sought. This applies to both direction and time of day as well as different weekdays.

Trains that can operate via the Norway/Vänern Line (trains starting or ending in Kristinehamn, Karlstad, Kil, Ludvika, Borlänge, or further north) and which does not have traffic exchange between Göteborg och Laxå, should apply via the Norway/Vänern Line as a first option.

2.5.2 Weekly overview – operations

Since the demand for traffic varies depending on direction, time of day, and different weekdays, the allocation of train paths has been adjusted as much as possible to meet demand. This is based on previously implemented traffic, requested traffic, and feedback on the proposed train distribution in the consultation draft.

The table below shows the number of trains in each category that have priority in each direction. If a train path in a certain train category has not been applied for, the train path may instead be allocated to another category, provided this does not affect other traffic according to the capacity plan. This can occur both in the annual timetable and through ad hoc applications after the timetable has been established. Such an additional train must be applied for under the correct category, and the minutes are adjusted during the construction phase. In the ad hoc process, this additional train can only be created if it fits without affecting other traffic.

During certain hours, the number of trains in different categories has changed based on variations in demand. This is shown in the tables below. During these hours, the minute values for trains in the column may be adjusted during the construction phase.

If several train paths are applied for in the same channel, train paths are allocated according to the regular allocation process based on socioeconomic benefit if no agreement can be reached through consultation.

The trains's arrival time to the single-track section determines which hour the train channel is counted towards.

Table 4: Trainpaths on single-track section, Monday – Thursday

Timeperiod		**Monday - Thursday**									
		Northbound					**Southbound**				
To	From	Few stops cat S	Few stops cat C	Few stops cat B	Many stops cat B	Freight trains	Few stops cat S	Few stops cat C	Few stops cat B	Many stops cat B	Freig-ht trains
00:00	01:00				1*	3	1			1*	3
01:00	02:00					3					3
02:00	03:00					3					3
03:00	04:00					3					3
04:00	05:00	1			1*	3				1*	3
05:00	06:00	1	1	1	1*	1			2	1*	1
06:00	07:00	1	1	1	1*	1			2	1*	1
07:00	08:00	1	1	1	1*	1			2	1*	1

08:00	09:00	1	1	1	1*	1	1	1	1	1*	1
09:00	10:00	1		1	1*	2	1	1	1	1*	1
10:00	11:00	1	1	1	1*	1	1	1	1	1*	1
11:00	12:00	1		1	1*	2	1		1	1*	2
12:00	13:00	1	1	1	1*	1	1		2	1*	1
13:00	14:00	1		1	1*	2	1	1	1	1*	1
14:00	15:00	1		1	1*	2	1		1	1*	2
15:00	16:00	1	1	1	1*	1	1	1	1	1*	1
16:00	17:00	1		2	1*		1		2	1*	1
17:00	18:00	1	1	2	1*		1	1	1	1*	1
18:00	19:00	1		2	1*	1	1		1	1*	2
19:00	20:00	1	1	1	1*	1	1	1	1	1*	1
20:00	21:00	1	1	1	**	2	1	1	1	**	1
21:00	22:00			1	**	5	1	1	1	**	1
22:00	23:00			1	**	3	1		1	**	2
23:00	00:00			1	**	3	1	1		**	2

* One extra trainpath on section Floda–Göteborg

** Two trainpaths on section Floda–Göteborg

Table 5: Trainpaths on single-track section, Friday

Timeperiod		**Friday**									
		Northbound					**Southbound**				
To	From	Few stops cat S	Few stops cat C	Few stops cat B	Many stops cat B	Freight trains	Few stops cat S	Few stops cat C	Few stops cat B	Many stops cat B	Freig-ht trains
00:00	01:00				1*	3	1			1*	3
01:00	02:00					3					3
02:00	03:00					3					3
03:00	04:00					3					3
04:00	05:00	1			1*	3				1*	3
05:00	06:00	1	1	1	1*	1			2	1*	1
06:00	07:00	1	1	1	1*	1			2	1*	1
07:00	08:00	1	1	1	1*	1			2	1*	1
08:00	09:00	1	1	1	1*	1	1	1	1	1*	1
09:00	10:00	1		1	1*	2	1	1	1	1*	1
10:00	11:00	1	1	1	1*	1	1	1	1	1*	1
11:00	12:00	1		1	1*	2	1		2	1*	1
12:00	13:00	1	1	1	1*	1	1		2	1*	1

13:00	14:00	1		1	1*	2	1	1	1	1*	1
14:00	15:00	1		2	1*	1	1		2	1*	1
15:00	16:00	1	1	1	1*	1	1	1	1	1*	1
16:00	17:00	1		2	1*		1		2	1*	1
17:00	18:00	1	1	2	1*		1	1	1	1*	1
18:00	19:00	1		2	1*	1	1		2	1*	1
19:00	20:00	1	1	1	1*	1	1	1	1	1*	1
20:00	21:00	1	1	1	1*	1	1	1	1	1*	1
21:00	22:00			1	1*	2	1	1	1	1*	1
22:00	23:00			1	1*	2	1		1	1*	2
23:00	00:00			1	1*	2	1	1		1*	2

* One extra trainpath on section Floda–Göteborg

Table 6: Trainpaths on single-track section, Saturday

Timeperiod		**Saturday**											
		Northbound						**Southbound**					
To	From	Few stop-s cat S	Few stop-s cat C	Few stop-s cat B	Many stops cat B	Freight trains	Trafikverks transporter	Few stop-s cat S	Few stop-s cat C	Few stop-s cat B	Many stops cat B	Freight trains	Trafikverks transporter
00:00	01:00			1	1*	2	1	1			1*	2	1
01:00	02:00				1*	2	1				1*	2	1
02:00	03:00				1*	2	1				1*	2	1
03:00	04:00				1*	2	1				1*	2	1
04:00	05:00				1*	2	1				1*	2	1
05:00	06:00				1*	1				1	1*	2	
06:00	07:00	1	1	1	1*	1				1	1*	1	
07:00	08:00	1		2	1*	1				2	1*	1	
08:00	09:00	1	1	1	1*	1		1		1	1*	1	
09:00	10:00	1		2	1*	1		1		1	1*	1	
10:00	11:00	1	1	1	1*	1		1	1	1	1*	1	
11:00	12:00	1		2	1*	1		1	1	1	1*	1	
12:00	13:00	1	1	1	1*	1		1		2	1*	1	
13:00	14:00	1	1	1	1*	1		1	1	1	1*	1	
14:00	15:00	1		2	1*	1		1		2	1*	1	
15:00	16:00	1	1	1	1*	1		1	1	1	1*	1	
16:00	17:00	1		2	1*	1		1		2	1*	1	
17:00	18:00	1	1	1	1*	1		1	1	1	1*	1	

18:00	19:00	1		2	1*	1		1		2	1*	1	
19:00	20:00	1	1	1	1*	1		1	1	1	1*	1	
20:00	21:00	1		1	1*	2		1		2	1*	1	
21:00	22:00			1	1*	2		1	1	1	1*	1	
22:00	23:00			1	1*	2		1		1	1*	1	
23:00	00:00			1	1*	2		1	1	1	1*	1	

* One extra trainpath on section Floda–Göteborg

Table 7: Trainpaths on single-track section, Sunday

Timeperiod		**Sunday**											
		Northbound						**Southbound**					
To	From	Few stops cat S	Few stops cat C	Few stops cat B	Many stops cat B	Freight trains	Trafikverkstransporter	Few stops cat S	Few stops cat C	Few stops cat B	Many stops cat B	Freight trains	Trafikverkstransporter
00:00	01:00			1	1*	2				1	1*	2	
01:00	02:00				1*	3	1				1*	3	1
02:00	03:00				1*	3	1				1*	3	1
03:00	04:00				1*	3	1				1*	3	1
04:00	05:00				1*	3	1				1*	3	1
05:00	06:00			1	1*	2				1	1*	2	
06:00	07:00			1	1*	1				1	1*	2	
07:00	08:00	1		1	1*	1				1	1*	2	
08:00	09:00	1	1	1	1*	1				1	1*	1	
09:00	10:00	1		2	1*	1				1	1*	1	
10:00	11:00	1	1	1	1*	1		1		1	1*	1	
11:00	12:00	1	1	1	1*	1		1	1	1	1*	1	
12:00	13:00	1		2	1*	1		1		2	1*	1	
13:00	14:00	1	1	1	1*	1		1	1	1	1*	1	
14:00	15:00	1		2	1*	1		1		2	1*	1	
15:00	16:00	1	1	1	1*	1		1	1	1	1*	1	
16:00	17:00	1		2	1*	1		1		2	1*	1	
17:00	18:00	1	1	1	1*	1		1	1	1	1*	1	
18:00	19:00	1		2	1*	1		1		2	1*	1	
19:00	20:00	1	1	1	1*	1		1	1	1	1*	1	
20:00	21:00	1	1	1	1*	1		1	1	1	1*	1	

21:00	22:00			1	1*	1		1	1	1	1*	1	
22:00	23:00			1	1*	1		1		1	1*	1	
23:00	00:00			1	1*	1		1	1	1	1*	1	

* One extra trainpath on section Floda–Göteborg

2.5.3 Traffic stages

By simplifying the described stage divisions regarding the infrastructure's conditions, it is possible to operate the section with only two different timetable variants:

Timetable Variant 1 applies from the start of annual timetable 2027 to week 8 (Friday).

Timetable Variant 2 applies from week 8 (Sunday) to week 28.

However, the number of timetable variants for individual trains may increase due to changes at other locations along the train's route.

An exception to the rule of arrivals and departures at even five-minute intervals at Göteborgs central is made to allow consecutive arrivals or departures.

2.5.3.1 Traffic stage 1

In traffic stage 1, a temporary speed reduction to 70 km/h is arranged on section Bryngenäs–Floda. Between Bryngenäs and Floda, the down-track is closed, which means that trains operate on the up-track.

Applications for traffic on the section Alingsås–Göteborg during stage 1 must follow the table below:

Table 8: Week 50 2026 – week 8 2027, stage 1, Göteborg C–Alingsås

	Gods 100 km/h		Snabb kat S		Pendel Kat B		Pendel Kat B		Snabb Kat C		Regional kat B	
	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Göteborgs c				XX.12		XX.16		XX.39		XX.25		XX.30
Sävenäs hst							XX.43	XX.43				
Sävenäs rbg		XX.05										
Partille		XX.12		XX.20	XX.23	XX.23	XX.47	XX.47		XX.32		XX.37
Jonsered							XX.51	XX.51				
Aspen					XX.29	XX.29	XX.54	XX.54				
Aspedalen							XX.56	XX.56				
Lerum				XX.26	XX.32	XX.32	XX.59	XX.59		XX.38		XX.43

Stenkullen	XX.23	XX.31		XX.28	XX.35	XX.35	XX.03	XX.03				
Floda		XX.35		XX.31	XX.39	XX.39	XX.07			XX.43		XX.47
Bryngenäs		XX.47		XX.42		XX.53				XX.56		XX.59
Alingsås		XX.52		XX.46	XX.57				XX.00	XX.01	XX.04	XX.05

Table 9: Week 50 2026 – week 8 2027, stage 1, Alingsås–Göteborg C

	Regional kat B		Snabb kat C		Pendel Kat B		Pendel Kat B		Snabb Kat S		Gods 100 km/h	
	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Alingsås	XX.55	XX.56	XX.58	XX.00		XX.03				XX.14		XX.08
Bryngenäs		XX.01		XX.04		XX.06				XX.17		XX.13
Floda		XX.13		XX.16	XX.20	XX.20		XX.53		XX.28		XX.24
Stenkullen					XX.24	XX.24	XX.56	XX.56		XX.31	XX.28	XX.34
Lerum		XX.17		XX.20	XX.27	XX.27	XX.00	XX.00				XX.39
Aspedalen							XX.02	XX.02				
Aspen					XX.30	XX.30	XX.04	XX.04				
Jonsered							XX.08	XX.08				
Partille		XX.23		XX.27	XX.36	XX.36	XX.12	XX.12		XX.40		XX.46
Sävenäs hst							XX.16	XX.16				
Sävenäs rbg											XX.52	
Göteborgs c	XX.30		XX.35		XX.44		XX.21		XX.47			

2.5.3.2 Traffic stage 2

In traffic stage 2, a temporary speed reduction to 70 km/h is arranged on section (Alingsås)–(Norsesund västra). One of the tracks will be closed, which means that trains operate by single-track operation.

Applications for traffic on the section Alingsås–Göteborg during stage 2 must follow the table below:

Table 10: Week 8–28 2027, stage 2, Göteborg C–Alingsås

	Gods 100 km/h		Snabb kat S		Pendel Kat B		Pendel Kat B		Snabb Kat C		Regional kat B	
	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Göteborgs c				XX.15		XX.00		XX.30		XX.24		XX.27

Sävenäs hst					XX.04	XX.04	XX.34	XX.34				
Sävenäs rbg		XX.10										
Partille		XX.15		XX.23	XX.08	XX.08	XX.38	XX.38		XX.32		XX.35
Jonsered					XX.12	XX.12	XX.42	XX.42				
Aspen					XX.15	XX.15	XX.45	XX.45				
Aspedalen					XX.17	XX.17	XX.47	XX.47				
Lerum					XX.19	XX.19	XX.49	XX.49		XX.37		XX.41
Stenkullen	XX.27	XX.32		XX.30	XX.23	XX.23	XX.53	XX.53				
Floda					XX.26	XX.26	XX.56					
Norsesund v		XX.41		XX.36		XX.31				XX.45		XX.50
Norsesund					XX.32	XX.32						
Västra Bodarne					XX.36	XX.36						
Alingsås		XX.51		XX.46	XX.44				XX.56	XX.57	XX.00	XX.02

Table 11: Week 8–28 2027, stage 2, Alingsås–Göteborg C

	Regional kat B		**Snabb kat C**		**Pendel Kat B**		**Pendel Kat B**		**Snabb Kat S**		**Gods 100 km/h**	
	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg	Ank	Avg
Alingsås	XX.58	XX.00	XX.03	XX.04		XX.16				XX.12		XX.09
Västra Bodarne		XX.11			XX.22	XX.22						
Norsesund					XX.27	XX.27						
Norsesund v						XX.28						
Floda		XX.20		XX.24	XX.33	XX.33		XX.03		XX.31		
Stenkullen					XX.36	XX.36	XX.06	XX.06			XX.27	XX.32
Lerum					XX.40	XX.40	XX.10	XX.10				
Aspedalen					XX.42	XX.42	XX.12	XX.12				
Aspen					XX.44	XX.44	XX.14	XX.14				XX.44
Jonsered					XX.48	XX.48	XX.18	XX.18				
Partille		XX.25		XX.29	XX.52	XX.52	XX.22	XX.22		XX.38		XX.44
Sävenäs hst					XX.55	XX.55	XX.25	XX.25				
Sävenäs rbg											XX.50	
Göteborgs c	XX.33		XX.36		XX.00		XX.30		XX.45			

Delay and cancellation codes

1 Introduction

To monitor what causes disruptions to operations and cancellations, the Swedish Transport Administration's staff report what they perceive is the cause. Delay codes are used in the reporting system, using a standardised code list (see Section 2 below). In the event of disruptions to operations, a report should be submitted immediately following the disturbance. The aim is to find the cause and who it is that can attend to the problems.

The code list is divided into six main groups linked to who deemed to bear the responsibility. Under these main groups, it is possible to more clearly describe the problem in a further two levels (subgroups) and provide more details.

The main groups are:

- Operational management (D)

- Consequential reason (F)
- Infrastructure (I)
- Railway undertaking (J)
- Accidents/Incidents and external factors (O)
- Further investigation (Y).

1.1 Code structure for cumulative delays

The code structure has three levels (see Section 2 below). For the first level, a letter is used for the main group in accordance with Section 1. For level 2, a combination of letters is used to describe what happened and for level 3, a number is used.

Example

DPS 1 should be interpreted as: Operations management, Personnel, mistakes or incorrect handling.

1.2 Principles for use in the event of cumulative delays

For the main groups Operations Management (D), Infrastructure (I) and Accidents/Incidents and External Factors (O), all trains affected by the incident will receive the primary delay code.

The Swedish Transport Administration's operational staff must first of all define the first two levels, while the third level can be added later within the time limit the system is open in order to allow for changes to be made. For railway undertakings (J codes) it is assumed that the railway undertakings or drivers contact the Swedish Transport Administration's operational staff when delays of 3 minutes or more arise and the codes at level 3 have been supplemented.

Exceptions

For codes in the group Railway undertakings (J) only the train that causes the incident is coded, while other trains affected by delays receive a delay code in the group Consequential reason – Disruption by other train (FAT).

1.3 Code structure for cancelled train paths

To follow the reason of cancelled trains, the perceived cause is reported. The reporting is carried out using cancelling codes according to a

standardised code list (see Section 3 below). This applies to all types of cancelled train paths.

1.4 Code structure for the need for an investigation following an accident/incident

For the codes OTÅ 01 – Derailment/collision, OTÅ 02 – Accident at level crossing, OTÅ 05 – Damaged points, IEA 01 – Catenary, and JDM03 – Pantograph, the Swedish Transport Administration or the applicant can request the code Further investigation required (YUK). This will be done through a renewed assessment in accordance with Section 5.7.6. A decision and notification regarding the final code is provided as soon as possible after the completion of the investigation.

2 Code list in the event of cumulative delays

2.1 Operational management reasons (D)

Table 1

Code level 1	Code level 2	Code level 3	Description of code level 3
D	**OG**		**Issuing of orders due to train operation**
D	**OS**		**Operative support systems**
D	OS	2	Administrative support system
D	OS	3	Reading error/Lost number
D	**PR**		**Prioritisation**
D	PR	3	Operational prioritisation
D	PR	4	Operational management prioritises
D	**PS**		**Personnel**
D	PS	1	Operational management personnel
D	PS	2	Operational management personnel, lack of resources
D	PS	4	Operational management

D	PS	5	Operational management, lack of resources
D	PS	6	Causal investigation
D	**TT**		**Suspected errors in timetable/wrong planning**
D	TT	1	Operational guidelines

2.2 Consequential reasons (F)

Table 2

Code level 1	Code level 2	Code level 3	Description of code level 3
F	**AT**		**Disruption by other train**
F	**OI**		**Turnaround/waiting**
F	OI	3	Turnaround train staff
F	OI	5	Train turn/ Turnaround/ Train chain
F	OI	7	Turnaround locomotive
F	OI	8	Turnaround wagon
F	**FT**		**Train operation**
F	FT	1	Meeting/Convergence of train routes
F	FT	2	Passing another train
F	FT	3	Train ahead/track shortage

2.3 Infrastructure reasons (I)

Table 3

Code level 1	Code level 2	Code level 3	Description of code level 3
I	**AK**		**Cut off cable**
I	AK	1	Cut off signal cable
I	AK	2	Cut off telecommunications cable
I	AK	3	Cut off power cable
I	**BA**		**Marshalling yard facilities**

I	BA	1	Lighting at marshalling yards and on platforms
I	BA	2	Platform and loading bay
I	BA	3	Platform crossing
I	BA	4	Retarder system
I	BA	5	Derailer
I	BA	6	Buffer stop
I	BA	7	Brake test facility
I	BA	8	Train and locomotive heating facility
I	BA	9	Weighing machine
I	BA	10	Shunting table
I	BA	11	Water post
I	**BT**		**Engineering works/transport**
I	BT	20	Planned exceeded engineering work
I	BT	21	Maintenance
I	BT	22	Investments
I	BT	23	Major projects
I	BT	24	Market and Planning
I	BT	30	Directly planned traffic disruptive engineering work
I	BT	40	Delays by reason of planned engineering work
I	**BU**		**Ballast reinforcement**
I	BU	1	Bank
I	BU	2	Cutting
I	BU	3	Drum
I	BU	4	Bridge
I	BU	5	Tunnel
I	**BÖ**		**Track superstructure**
I	BÖ	1	Tracks
I	BÖ	2	Track switch
I	BÖ	3	Obscured visibility due to vegetation
I	**EA**		**Electrical installations**
I	EA	1	Catenary

I	EA	2	Auxiliary power line
I	EA	3	Switching station
I	EA	4	Switching centres
I	EA	5	Feeder cable
I	EA	6	Cut-out switch station
I	EA	7	Network station
I	EA	8	Power converter station
I	EA	9	Sectioning station
I	EA	10	Transformer station
I	EA	11	Electric power system
I	EA	12	Construction engineering
I	EA	13	External electricity supplier
I	**FK**		**Passability on the tracks due to the weather**
I	FK	1	Verified slippery rail
I	FK	2	Snow and ice
I	FK	3	Tree
I	**SA**		**Signalling devices**
I	SA	1	Balise group
I	SA	2	Level crossing
I	SA	3	Positioning system
I	SA	4	Signal
I	SA	5	Signal interlocking, radio block central (RBC) and blocking system
I	SA	6	Ranger switchgear
I	SA	7	Board
I	SA	8	Rail Traffic Management System – SNTL[1]
I	SA	10	Rail Traffic Management System - EBICOS 900[2]
I	SA	12	Rail Traffic Management System - ERTMS
I	SA	15	Central automation

[1] System for national rail traffic management
[2] Local control system for relays and computerised switchgear

I	SA	16	Digital time-distance graph/STEG/AEF[3]
I	SA	17	Local automatic machines
I	**TA**		**Telecommunications facilities**
I	TA	1	Detectors
I	TA	8	Dynamic sign
I	TA	9	Loud speaker system
I	TA	10	Clocks
I	TA	11	Operational telephony (MATS)
I	TA	12	Cable installation – telecommunications cable (optic or copper)
I	TA	13	Train radio MobiSIR
I	TA	14	Telecommunications transmission /Data communication
I	TA	15	Computerised signal box
I	**ÖA**		**Other facilities**
I	ÖA	1	Property
I	ÖA	2	Enclosed area
I	ÖA	3	Deducting
I	ÖA	4	Lubrication device for rails
I	ÖA	5	Snow gallery
I	ÖA	6	Drainage, pumping system
I	ÖA	7	Surveillance camera

2.4 Railway undertakings' reasons (J)

Table 4

Code level 1	Code level 2	Code level 3	Description of code level 3
J	**AS**		**Deviating formation**
J	AS	1	Excess load profile/Exceptional transport

[3] System for traffic management

J	AS	2	Unplanned train length
J	AS	3	Unplanned train weight
J	AS	6	Unplanned/deviating HPS
J	AS	7	Dangerous goods
J	**DM**		**Traction vehicle/railcar**
J	DM	1	ATC/ETCS error
J	DM	3	Pantograph
J	DM	4	Wheel damage alarm
J	DM	5	Brake error/Brake system/ Unintentional brake alarm
J	DM	6	Rebooting of the system/System recovery
J	DM	9	Door malfunction
J	DM	10	Typhoon
J	DM	11	Emergency troubleshooting
J	DM	12	Overheating alarm
J	**IA**		**Before departure**
J	IA	1	Cleaning
J	IA	2	Loading/Unloading
J	IA	4	Workshop measure
J	IA	5	Change of train set
J	IA	6	Train not prepared/completed
J	IA	7	Late shunting from contractor
J	IA	8	Awaiting wagons from customer
J	IA	9	Late report from customer center
J	IA	10	Late information from operational center
J	IA	11	IT-system error
J	IA	13	Shunting locomotive missing
J	**PR**		**Prioritisation**
J	PR	1	A railway undertaking has decided on the priority between own trains
J	PR	2	Two railway undertakings have given priority among each other’s trains

J	PR	3	Waiting
J	PR	4	Shunting/switching in addition to plan
J	PR	5	Unplanned composition
J	PR	6	Turnaround change
J	PR	7	Extra order of train path
J	PR	8	Extra stay requested
J	PR	9	Provisioning/supplying
J	PR	10	Blocking shunting movement
J	**PS**		**Personnel**
J	PS	1	Driver staff
J	PS	2	Stationary staff
J	PS	3	Onboard staff
J	PS	4	Handling error
J	PS	5	Unauthorised stop passage A
J	**RU**		**Passenger exchange**
J	RU	1	Large passenger volume
J	RU	2	Loading/unloading of accessibility-adapted equipment
J	RU	3	Loading/unloading of personal specialised equipment
J	**VA**		**Wagon**
J	VA	1	Door malfunction
J	VA	2	Brake error/Brake system/Unintentional brake alarm
J	VA	3	Wheel damage alarm
J	VA	4	Load shift/Incorrect loading /Load adjustment
J	VA	5	Self-uncoupling/Worn train
J	VA	6	Wagon inspection
J	VA	7	Damaged wagon/Emergency troubleshooting
J	VA	8	Overheating alarm

2.5 Accidents and incidents (O)

Table 5

Code level 1	Code level 2	Code level 3	Description of code level 3
O	**BÖ**		**Bridge opening**
O	BÖ	1	Bridge opening time exceeded
O	BÖ	2	Planned bridge opening
O	DJ		Animals
O	DJ	1	Hit game
O	DJ	2	Live game in track area
O	DJ	3	Hit reindeer
O	DJ	4	Hit cattle
O	DJ	5	Live cattle in track area
O	**MÄ**		**Humans**
O	MÄ	1	Person run over/hit
O	MÄ	2	Unauthorised person on the track
O	MÄ	3	Police/Acute illness/ Eviction/Threatening situation
O	MÄ	4	Sabotage/threat
O	MÄ	5	Suicidal
O	**NA**		**Natural events**
O	NA	1	Fire
O	NA	2	Flooding
O	NA	3	Storm/Snow storm
O	NA	4	Avalanche
O	NA	5	Landslide
O	NA	6	Cold
O	NA	7	Slippery rail
O	NA	8	Birds
O	NA	9	Tree
O	NA	10	Thunder/lightning
O	**NK**		**Serious incident, crisis and danger**
O	NK	1	Pandemic

O	NK	2	Act of terror
O	**ST**		**Strike**
O	ST	1	Planned strike
O	ST	2	Unplanned strike
O	**SY**		**Inspection of track/vehicle**
O	SY	1	Inspection of track
O	SY	2	Inspection of vehicle
O	**TÅ**		**Train/work movements**
O	TÅ	1	Derailment/collision
O	TÅ	2	Accident at level crossing
O	TÅ	3	ATC4-emergency brake
O	TÅ	5	Damaged points
O	TÅ	6	Test run/Test train
O	**UT**		**Late to/from abroad**
O	UT	1	Border control
O	UT	2	At the requested of a foreign authority
O	UT	3	Other infrastructure manager/Property manager

2.6 Further investigation (Y)

Table 6

Code level 1	Code level 2	Code level 3	Description of code level 3
Y	**UK**		**Further investigation required**

For more information see Section 1.5.

3 Code list for cancelled train paths

Table 7

Cancellation code	Title cancellation code	Description of situation

[4] ATC – Automatic Train Control

B	Track engineering work – established Engineering Work Plan (BAP)	The code shall be used when a train is cancelled because of established engineering works in the Swedish Transport Administration's Engineering Work Plan (BAP).
E	Track engineering work – changed/new	The code shall be used when a train is cancelled because of an engineering work being changed, displaced or cancelled after the Swedish Transport Administration's Engineering Work Plan (BAP) is established and when new engineering work is added. Engineering works owing to acute infrastructure failure/accident are reported on the respective code.
W	Inadequate planning	The code shall only be used when inadequate/incorrect planning has occurred before established annual timetable or if the application for "More efficient train path" (Effektivare tågläge) is approved by the Swedish Transport Administration.
D	Operational control	The code shall be used for cancelled trains due to shortfalls in the traffic control centre.
I	Infrastructure	The codes shall be used when it is necessary to cancel trains owing to an infrastructure failure which is disruptive to train operations. The code shall also be used for changed track standard based on the established Network Statement. In the event of cancellation, the codes "Infrastruktur" shall remain until the track has regained its original performance irrespective of the fact that track engineering works are often needed in order to restore the infrastructure. If

		an event is shown to be due to another cause, the relevant code must be used.
F	Consequential cause	To be used when trains are cancelled at short notice as a consequence of disruption from another train.
J	Railway undertaking	To be used for both cancellations and cancelled trains. The code is used when a railway undertaking wishes to cancel a train for which there is no obstacle against it not being operated and provided that it is the railway undertaking that is responsible for the cancelled train (e.g. damaged locomotive). The code shall also be use when the railway undertaking has planned incorrectly.
O	Accident/external near accident and External occurrence	The code shall be used in connection with accidents/external near-accidents. The code shall be used for cancellations due to: - Inspection of track - Inspection of vehicle - Bridge opening planned in the annual timetable - Pandemic - Accident at level crossing - Animal collision - Strike, both planned and unplanned - Derailment/collision **The O-code shall also be used in cases when the accident/near-accident in question cannot be categorised as a code OMÄ, ONA or OUT.**
OMÄ	Human	The code shall be used in connection with human-related events. The code shall be used for cancellations due to: - Acute illness on the train

		- Knowledge of a person in the track area is suicidal - Unauthorised people enter the track area - Police matters - Person hit/Suspect hit person - Sabotage/vandalism
ONA	Natural events	The code shall be used in connection with nature-related events. The code shall be used for cancellations due to: - Fire - Birds - Avalanche - Landslide - Servere cold - Snow/snow storm - Tree - Thunder - Flooding
OUT	Abroad/other infrastructure manager	Used for all events that occur abroad and at another infrastructure owner/infrastructure manager and that cause cancellation of trains.

Calculation examples for electricity costs

Contents

1 Introduction

The following example calculation aims to provide an understanding of how the cost for traction current and electricity for holding is calculated. For current figures, see the electricity price report on our website. Also see Section 5.4.1 Provision of traction current and Section 7.3.11 Connection to electricity when holding railway vehicles.

1.1 The provision of traction current

1.1.1 General information – traction current

For vehicles that have energy meters installed, the cost is invoiced based on the actual usage (example of how a cost is reported is shown in the calculation example below). For vehicles with no meter, the charge is based on the reported transportation work and the standard values in accordance with table 1 below for passenger trains, and table 2 below for freight trains.

After each year, an annual settlement is carried out where balancing occurs between the Swedish Transport Administration's procured

electricity and the electricity that has been invoiced. Following the annual settlement, this will serve as the basis for an analysis regarding the levels of standard charges and loss surcharges. If any changes are needed, they will be adjusted at the following year-end.

1.1.2 Standard calculations (templates) for passenger trains

Table 1. Templates for charging electricity cost of passenger trains

Templates	Refeeding (%)	Net consumption (Wh/gross tonne km)	Gross consumption (Wh/gross tonne km)	Refeeding (Wh/gross tonne km)
BR185 Passenger	15%	26	31	5
BR193 Passenger	12%	29	33	4
ER1	29%	35	50	15
HR241 Passenger	15%	26	31	5
Museum vehicles	0%	20	20	0
RC Passenger	0%	36	36	0
TP69	0%	53	53	0
TP73	15%	31	37	6
TP74	21%	33	42	9
X10-14	0%	70	70	0
X10-14 Metropolitan area	0%	82	82	0
X2	12%	34	39	5
X2 Upgraded	12%	29	33	4
X3	10%	48	54	6
X31-32	20%	45	57	12
X40	15%	43	51	8
X50-54	20%	32	40	8
X50-54 Metropolitan area	20%	38	48	10

X55	17%	36	44	8
X60	36%	48	75	27
X61	21%	48	61	13
X61 Metropolitan area	30%	48	69	21
X62	16%	48	58	10
X74	16%	37	44	7

1.1.3 Standard calculations (templates) for freight trains

Table 2. Templates for charging electricity cost of freight trains

Templates	Refeeding (%)	Net consumption (Wh/gross tonne km)	Gross consumption (Wh/gross tonne km)	Refeeding (Wh/gross tonne km)
BR142	0%	19	19	0
BR161	0%	20	20	0
BR185 Freight	15%	14	17	3
BR185 Iron ore train	22%	14	18	4
BR187	17%	14	17	3
BR193 Freight	12%	16	19	3
EG	12%	20	23	3
EL14	0%	20	20	0
EL15	0%	20	20	0
EL16	0%	20	20	0
HR241 Freight	15%	14	17	3
HR243	12%	16	19	3
IORE	25%	9	12	3
MA	0%	19	19	0
MB	21%	13	17	4
Rc Mail train	0	32	32	0

Rc Freight	0%	20	20	0
RD	0%	20	20	0
RE	18%	14	17	3
RM	0%	20	20	0

1.1.4 Loss surcharge

The railway vehicles that use the Swedish Transport Administration's catenary lines are charged for the energy used and for the energy losses in the network that occur as a result of the use. The losses are distributed among the railway operators who use the Swedish Transport Administration's catenary lines in the form of a loss surcharge according to table 3.

All electricity-consuming vehicles have the normal loss surcharge (E) and for some vehicles this is supplemented with a vehicle-specific loss surcharge.

Table 3. Loss surcharge

Vehicle type	Loss surcharge *	Total
BR142	E * 1,03	1,13918
BR161	E * 1,04	1,15024
BR185 Freight	E	1,106
BR185 Iron ore train	E	1,106
BR185 Passenger	E	1,106
BR187	E	1,106
BR193 Freight	E	1,106
BR193 Passenger	E	1,106
EG	E	1,106
EL14	E * 1,04	1,15024
EL15	E * 1,04	1,15024
EL16	E * 1,07	1,18342
ER1	E	1,106
HR241 Freight	E	1,106
HR241 Passenger	E	1,106
HR243	E	1,106
IORE	E	1,106

MA	E * 1,07	1,18342
MB	E	1,106
Museum vehicle	E	1,106
RC Freight	E * 1,07	1,18342
RC Mail train	E * 1,07	1,18342
RC Passenger	E * 1,07	1,18342
RD	E * 1,07	1,18342
RE	E	1,106
RM	E * 1,07	1,18342
TP69	E * 1,07	1,18342
TP73	E	1,106
TP74	E	1,106
X10-14	E * 1,03	1,13918
X10-14 Metropolitan area	E * 1,03	1,13918
X2	E	1,106
X2 Upgraded	E	1,106
X3	E	1,106
X31-32	E	1,106
X40	E	1,106
X50-54	E	1,106
X50-54 Metropolitan area	E	1,106
X55	E	1,106
X60	E	1,106
X61	E	1,106
X61 Metropolitan area	E	1,106
X62	E	1,106
X74	E	1,106

*E = normal loss surcharge = 1,106

1.1.5 Calculation example 1 – BR185 Freight train without energy metre

Below is a calculation example to show how the cost of traction current consumption is calculated. Please note that the prices are only calculation

examples, to make a current example, see the electricity price report and tables above.

Table 4. Assumptions

Vehicle type	BR185 Freight
Reported gross tonne kilometres	55 000 000
Gross consumption (see table 2)	17
Net consumption (see table 2)	14
Loss surcharge (see table 3)	10.6 %
Electricity price, (SEK/kWh *)	0.6075 SEK
Grid fee, (price) SEK/kWh *)	0.1081 SEK

*) Electricity price and Grid fee are only calculation examples

A freight operator's locomotive fleet, consisting of BR185 locomotives, self-declares 55,000,000 gross tonne kilometres (grtkm) during a month. A BR185 locomotive consumes 17 Wh/grtkm and re-feeds 3 Wh/grtkm. The locomotive's net consumption is thus 14 Wh/grtkm (17-3=14). See table 2.

Gross consumption of the locomotive fleet kWh = 55 000 000 grtkm x (17/1000) kWh = 935 000 kWh.

Net consumption of the locomotive fleet kWh = 55 000 000 grtkm x (14/1000) kWh = 770 000 kWh

Estimated net cost = net consumption x electricity price = 770,000 kWh x SEK 0.6075 = SEK 467 775

Loss surcharge volume = Gross consumption x loss surcharge = 935 000 kWh x 0.106 = 99 110 kWh

Loss surcharge cost = electricity price x loss surcharge volume = SEK 0.6075 x 99 100 = SEK 60 209.33

Grid fee volume = Net consumption + loss surcharge = 770 000 kWh + 99 110 kWh = 869 110 kWh

Grid fee cost = Grid fee (volume) x Grid fee (price) = 869 110 kWh x SEK 0.1081 = SEK 93 950.79

Invoice amount = Net cost + loss surcharge cost + grid fee cost = 467 775 + 60 209.33 + 93 950.79 = SEK 621 935.12.

For a vehicle type that does not refeed energy back (for example RC locomotives), the same template is used for gross and net consumption. See tables 1 and 2.

In cases where there is a cost for electricity certificates, it is settled in the annual statement.

1.1.6 Vehicles with energy meters

For vehicles with energy meters that automatically report energy consumption (gross consumption - refeeding = net consumption), this is charged with an addition for loss surcharge according to table 3.

The electricity price is based on current hourly prices in the current electricity price area (SE1-SE4) where the vehicle was driven.

1.2 Connection to electricity for holding of vehicles

For vehicles with energy meters, which are parked with the pantograph raised, the electricity consumption is charged according to Section 5.4.1.1.

For vehicles without energy meters, the consumption during holding is included in the templates according to table 1 and table 2 and does not need to be reported separately. This applies regardless of whether consumption took place via pantographs or train heating post.

Both vehicles with energy meters and vehicles without energy meters need to report the fixed fee for connection to electricity for holding of vehicles, according to Section 7.3.11.4.

Information to be provided before train's departure

1 Reporting of information

It is the responsibility of the railway undertakings to submit information to the Swedish Transport Administration in accordance with the details set out below, at the latest when the train departs. The information listed here for train journeys must also be provided, insofar as it is applicable, for works train movement and shunting.

2 Information

Information must be provided either:

- by machine in accordance with the EU legislation TAF/TAP via Common Interface,

or

- manually via the Swedish Transport Administration's IT-system Topas.

2.1 By machine via Common Interface

The railway undertakings can, via Common Interface send, send the message TrainCompositionMessage or PassengerTrainCompositionProcessMessage. The information, apart from the mandatory information according to both messages, that are mandatory in Sweden are presented on the Swedish Transport Administration's website. See more information about the IT-system Topas on the Swedish Transport Administration's website https://www.trafikverket.se/topas.

2.2 Manually via the IT-system Topas

The railway undertakings can manually report information via the Swedish Transport Administration's IT-system Topas which is available on the website. Reporting in Topas is adapted to the EU regulations TAF/TAP as well as information that is nationally mandatory in Sweden. Se the IT-system on the Swedish Transport Administration's website https://www.trafikverket.se/topas.

3 Changes to information

Changes to information submitted in accordance with Section 2 must be reported to the Swedish Transport Administration. The report must state the location where the change takes place. The information must be submitted before the train departs.

4 Details on vehicle type and pantohraph model/type

Details of vehicle type used and pantograph model must be presented to the Swedish Transport Administration if the information is not specified in table 1 below. Address details on where to send the information, see Annex 1 A.

Table 1 Vehicle type and pantohraph model/type

Panthograpg Fordonstyp	DSA 200	LLXJ 235	LLXJA 135	LSFC 201/202	LSFC 204	SB 10A	SB 10 BL	SIEMENS typ 6	WBL 85/88	8WLO 120	Rickard RM 374
X31K/X32K	●										
X20			●								
X11-X14				●	●						
X10				●			●				
X3									●		
X2/X2K/X2NK	●								●		
X1				●			●				
Type 73/73B									●		
Rm		●		●							
Rc/Rd		●		●	●			●	●		
Ra			●						●		
Ma			●								
IORE									●		
EL16							●		●		
EL15	●		●								

EL14						●					
EL13						●					
EG										●	
Dm3			●								
Da			●								
Bm 68 B						●					
X420								●			
X60/X61/X62									●		
X50-X55									●		
X40									●		
BR241/RE/185	●										
BR441									●		
DOSTO ER1											●

Routines for evacuation and clearance

1 Important timeframes to relate to in the event of an incident

In the event of an incident, the train driver shall contact the train dispatcher immediately, however, at the latest within 3 minutes, for exchange of information about the incident.

If vehicle troubleshooting is needed, the train driver should come back to the train dispatcher with a status update at no later than 5 minutes after the first call ended. Status update is required to start parallel processes. The troubleshooting can continue after the call.

When the Swedish Transport Administration considers that the incident occurred may lead to an evacuation and/or clearance, the Swedish Transport Administration is responsible for updating the recorded incident partly with the words "Prepare solution proposals for evacuation and/or clearance" and partly with applicable deadlines for the current route. The update is distributed as a traffic announcement to the railway undertaking. When the traffic announcement is distributed, all parties are aware of the situation and that the deadlines specified in Section 6.3.1.1 become effective. The point in time is referred to as the "Zero Point".

From the Zero Point,

- the parties of interest must get back to the Swedish Transport Administration in writing within 15 minutes with a proposed solution for the situation, using the established form. At the same time, the Swedish Transport Administration proposes a solution for the incident.
- the Swedish Transport Administration shall within 22 minutes (at the latest 7 minutes after the proposed solution has been drawn up according to the timeframe specified above) assess the relevant solution proposals and decided what action to take according to Section 8.5.1.

2 Information to prevent spontaneous evacuation

To prevent spontaneous evacuation, internally established guidelines for safety-related information be available at each railway undertaking. The guidelines shall

be in accordance with Traffic Regulations for Railways (TDOK 2015:0309), module 6, Section 3.3.

3 On whose permit clearance carried out?

Regarding permits see Section 3.3.3. From time when the recovery vehicle and the vehicle requiring assistance have been connected, to the time when the vehicles have been disconnected at a location designated by the Swedish Transport Administration, the drive is carried out on the cleared railway undertaking's permit.

4 Checklist for preparation for clearance

Prior to a clearance, the checklist shall be reviewed, completed and sign by both train drivers (the recovery vehicle's train driver and the vehicle requiring assistance's train driver).

It is the train driver of the assisting (recovering) railway undertaker who is responsible for completing and submitting the checklist.

The checklist is mandatory in all clearance situations.

The completed and signed checklist must be saved for at least 1 year at the assisting (recovering) railway undertaker.

The checklist is provided by the Swedish Transport Administration and can be downloaded here:

https://www.trafikverket.se/for-dig-i-branschen/jarnvag/jarnvagsnatsbeskrivningen-jnb/blanketter/

In exceptional cases, the proposed solution may be communicated in writing via other channels, provided that the content is equivalent to that of the form. The form is provided by Trafikverket. In cases where the form is not utilised, equivalent information shall be submitted via email.

Safety in track area

1 Electrical safety

1.1 Damaged or fallen cables

Damaged or fallen cables and other objects in their vicinity shall always be regarded as being live, and thus dangerous. Do not approach a fallen cable or a derailed vehicle with an extended pantograph. The pantograph shall, if possible, be retracted. If this is not possible, the electrical operations engineer shall be immediately contacted for voltage disconnection.

Immediately call the emergency number 112 or the Swedish Transport Administration's traffic centre. Warn other individuals and guard, depending on the circumstances, until an electrical works supervisor or a responsible officer from the rescue services arrives on the scene and takes over responsibility.

1.2 Ladders and other long objects

Objects made of conductive material may not be handled in such a way that there is a risk of them coming into the immediate area.

A moveable ladder that is longer than 2 metres and which is handled within 4 m of a high-voltage facility shall be made of non-conductive material and be provided with a warning sign for electrical danger.

The warning sign shall be designed in accordance with the requirements of ELSÄK-FS 2022:2, Figure 3 *electrical danger* and be placed approximately 2 metres from the base of the ladder.

1.3 Switch-heat facilities

During work in low voltage systems, the rules stipulated in SS-EN 50110-1 Maintenance of electrical installations (*Skötsel av elektriska anläggningar*) must be followed.

In order to prevent the risk of damage due to an error in switch-heat facility reassuring measures must be taken so that dangerous touch voltage is prevented.

The same applies for electrically heated point machines.

For work where there is no direct contact with the rails (for example during snow clearance or the cleaning of switch rod pits with broom or other equipment of non-conductive material), switch-heat facilities do not need to be disconnected.

In risk assessments, it shall be stated whether switch-heat facilities need to be disconnected.

1.4 Access to operation rooms

In order to be allowed to stay in the operating room on their own, the personnel concerned need to be sufficiently well instructed to avoid the dangers that electricity can lead to. Personnel who are not sufficiently well instructed may only access operation rooms under the supervision of a technically competent person.

2 Safety zone

The safety zone extends at least 2.20 metres out from the nearest rail, regardless of height. The safety zones include all the area in between.

It is not allowed to be within the safety zone of a track in operation, when vehicles are passing.

Stockpiles or similar are not allowed to extend into the safety zone in a track in operation, or closer than 3.5 metres to a live infrastructure component.

3 Safety clothing

People who access the track area must wear safety clothing on the upper body that meets the requirements of Standard SS-EN 471 ISO 20471:2013, Class 3. Persons who due to size cannot meet the requirements of Class 3 must meet it by wearing jacket or vest and pants in Class 2. Logotypes or other colours that are not fluorescent may not have an influence on the area specified by the standard.

Available tracks for holding

The document is not suitable for publication in this format because it contains a large amount of rows and multiple sheets. The document is available on the Swedish Transport Administration's website.

https://bransch.trafikverket.se/contentassets/659d4c63c1e1481e87044ef957ec3812/annex-7-a---available-tracks-for-holding-2026-02-12.xlsx

Handling rules for accidents and incidents

1 Report and approval for clearance

1.1 Reporting accidents and incidents

All accidents, incidents and deviations entailing the risk of accidents and which have occurred on the railway network administered by the Swedish Transport Administration shall immediately be reported to the Administration's traffic centre. Electricity accidents and incidents can also be reported to the Swedish Transport Administration's electric operation centre.

1.2 Reporting collisions with animals

Collisions with animals is reported in the same way as set out above. These include collisions with wild animals that are covered by the duty to report in accordance with the Hunting Regulation (e.g., moose, deer, roe, wild boar, mouflon, bear, lynx, wolf, wolverine, otter and eagle) as well as domestic animals (e.g., reindeer, cow, horse, sheep and dog).

1.3 Railway undertakings and contractors, contact persons and approval for clearance

Accidents that come to the attention of the Swedish Transport Administration’s traffic centre are immediately reported to the railway undertakings and/or contractors involved. This does not apply to collisions with animals. The railway undertaking and/or contractor shall provide the Swedish Transport Administration with details of a person who can be contacted immediately in order to report incidents. The contact person will make a decision as to whether the railway undertaking or contractor shall investigate the incident. When a railway undertaking or contractor has been made aware of the occurrence of an accident or incident, any intention to investigate the incident shall be immediately reported to the Swedish Transport Administration's traffic centre.

1.4 Cooperation and access to factual data

The railway undertaking and contractor shall immediately give the Swedish Transport Administration’s investigators access to information from the vehicle's registration equipment, and generally obtain the factual data necessary for conducting the Swedish Transport Administration’s investigation, such as data about vehicles and tools, technical investigations and evidence statements from

personnel. The Swedish Transport Administration shall immediately allow the railway undertaking's and contractor's investigators access to information necessary for conducting the railway undertaking's or contractor's investigation, such as workshop registrations and registered safety conversations.

The investigation shall be conducted cooperatively between the Swedish Transport Administration and involved parties. This does not apply, however, if impartiality in the investigation is jeopardised.

A party shall, upon request, provide the other party with the written investigation report.

2 Accident site manager

The Swedish Transport Administration appoints an accident site manager. The accident site manager is responsible for the coordination of work at the accident site, including the clearance work and determining what amount of traffic can be allowed to pass by the site. The responsibility also encompasses protective measures for common work areas in accordance with the Work Environment Act. The accident site manager is also responsible for issuing clearance permits. If the accident site manager has not been summoned, the Swedish Transport Administration's operating technician issues clearance permit.

3 Approval and clearance permits

Before anything may be moved or before other measures are taken that may in some way affect clues regarding the sequence of events, a clearance permit (see below) must be issued. An exception is for rescue operations which can be carried out without any clearance permit.

When the gathering of facts has ended, each accident investigator provides their approval for clearance to the accident site manager. If accident site manager is not present, the Swedish Transport Administration's operating technician will take over the task to collecting clearance approvals.

When the accident site manager or the Swedish Transport Administration's operating technician, has obtained the approval of all parties, and the accident site is safe from an electricity and traffic safety perspective, a clearance permit may be issued to those leading the clearance work. In conjunction with the clearance permit being issued, the prospective directives that may be required for work environment reasons are also issued.

The approval and permit for clearance may only relate to parts of the accident site in some cases.

4 Rescue exercises

For the purposes of prevention, the railway undertaking and Swedish Transport Administration shall perform rescue exercises cooperatively in the scope agreed upon by the parties.

If several railway undertakings traffic routes of the railway in the same municipality, rescue services may make the request for coordination between the undertakings from the Swedish Transport Administration. The railway undertaking shall comply with the requirements stipulated by this.

Handling during settlement of claims

Contents

1 Introduction

Liability and compensation in the event of property damage or personal injury are specified in the Swedish Transport Administration's General Terms and Conditions. The purpose of these directions is to achieve uniform and correct management and settlement of claims. The directions do not apply to a party's claim for recourse for damages suffered by a third party.

1.1 Accident categories

Railway accidents are divided into the following categories with regard to the investigation and processing:

- Accidents during train journeys, blocked line operations or shunting.
- Collisions between railway vehicles and vehicles subject to insurance.

1.2 Reporting

When accidents occur during train journeys, blocked line operations or shunting route, the Swedish Transport Administration submits information to:

- SOS Alarm (where applicable)
- Swedish Transport Administration's traffic centre which, where applicable, will contact recovery companies and concerned railway undertakings.

In the event of collisions between railway vehicles and vehicles subject to compulsory insurance, the Swedish Transport Administration provides information to the railway undertaking. The railway undertaking acts in accordance with the following:

1. Own insured railway vehicle
    - Obtains the road vehicle's licence number through the Police or Swedish Transport Administration
    - Contacts the road vehicle's insurance provider
    - Lodges its claim for damages with the road vehicle's insurance provider.
2. Insured railway vehicle owned by another party
    - Obtains the road vehicle's licence number through the Police or Swedish Transport Administration
    - Contacts the railway vehicle owner's insurance provider or broker
    - Compiles and submits its claim, costs from a period of inactivity, extra charge to the road vehicle's insurance provider.

1.3 Investigation

1.3.1 Investigative responsibility

Accidents occurring during train journeys, blocked line operations or shunting shall each be investigated by the Swedish Transport Administration and the railway undertaking.

Note:

Investigations shall also be conducted by the Police and/or the Swedish Accident Investigation Authority.

Collisions between railway vehicles and vehicles subject to insurance are investigated by the Swedish Transport Administration and the Police, and by railway undertakings when these incidents result in extensive damages for the railway undertaking.

Collisions between railway vehicles and vehicles subject to insurance (road vehicles) shall be regulated by the road vehicle's insurance provider in the first instance. The administration is performed by the railway undertaking involved in the case of vehicle damages, and by the Swedish Transport Administration if infrastructure is damaged.

1.3.2 Investigation report

Investigation reports are produced by the Swedish Transport Administration and the railway undertaking in accordance with the directions established by the Swedish Transport Agency and other entities. So that the damage can be regulated financially, the report must include descriptions of:

1. Facility
    - Technical standard: rails, sleepers, ballast etc.
    - Age of the facility.
2. Vehicle/machine
    - Class and vehicle number,
    - Age of vehicle/machine,
    - Vehicle owner.
3. Equipment belonging to third party (including other railway undertakings).

Investigation reports must be produced as soon as possible, and may not be delayed due to uncertainty of the cost of the damage.

Note:

It is important to secure as much information as possible at the accident site in order to establish who, or what, has caused the damage. Approval for recovery or clearance may be given following a guarantee that the fact-finding is complete, in order to clarify the cause of the accident to the greatest extent possible.

1.4 Principles for damage assessment and property

1.4.1 Total damage

Total damage has arisen when the cost for replacement or repair exceeds the calculated current value (V) below.

1. Object
2. Replacement value (SEK A)

The replacement value is what a damaged object, or an object of equivalent standard and function to the damaged object, would cost to replace including all costs involved in putting it in the right location, or into production.

If the object can be replaced, the replacement value is calculated by adjusting the value of the object on the date of acquisition in accordance with the index (CPI), from the stated point of time until the date on which the damages were incurred.

3. Service life (N years)
4. Age (Y years)

Number of full years from the first time the object was put into operation.

5. Depreciation percentage (P)

The object's age is divided by its service life to obtain the depreciation percentage ((Y / N)*100) = P. The maximum depreciation, however, is limited to 80 percent, which is practice for functioning objects that are in operation or production.

Note:

The cost of repairs on tracks with concrete sleepers is compensated with the replacement value if the length of damaged track is less than 5,000 track metres.

6. Current value (SEK V)

The object's current value is equal to the replacement value multiplied by the non-depreciated value in SEK, V = (A x (100-P)).

1.4.2 Repair cost

The repair costs are the verified costs that arose during the restoration of the damaged object to the same level of function and condition that it had before the damage occurred. The repairs shall be performed using adequate measures and during normal working hours, under normal conditions.

The costs for repair may not exceed the value of total damage, in accordance with point 1.4.1 above. The cost for provisional measures to restore tracks following damages, for example, may be added under certain circumstances, such as when frozen ground prevents normal work being performed.

1.4.3 Forcing

Forcing entails overtime work, additional costs for transportation, materials and tools etc. purchased on site, meals delivered to the accident site, etc. – all with the intention of speeding up the restoration. The purpose of the supplement is that forcing is the norm; i.e., the Swedish Transport Administration restores the service as quickly as possible after an accident. The cost of forcing must be justified through savings in disrupted time, and must be reported separately to normal repair costs.

1.4.4 Minimisation of damage costs

It is the responsibility of the parties to attempt to minimise the total damage cost to the best of their ability.

1.4.5 Downtime compensation

Compensation for periods of inactivity (downtime compensation) is paid for the period of time during which the damaged vehicle or machine cannot be used for its purpose.

Daily compensation for periods of inactivity is calculated in accordance with the following formula for vehicles and machines:

$$\frac{\frac{RF * \frac{R}{2}}{100} + \frac{R}{D}}{365} \text{ [SEK/day]}$$

where RF = current reference interest rate + 2 [%]

R = replacement value [SEK]

D = depreciation period [years]

1.5 Principles for pricing of services

7. Compensation is paid out only for direct costs attributable to established damage.
8. No additional administrative costs are covered.
9. Each party is liable for its own investigation costs.
10. Purchased materials are invoiced at the charged price.
11. Reasonable costs are invoiced for machines and vehicles that are used in both train operations and track repairs, according to vouchers.
12. For machines and vehicles rented by the railway undertaking, the insurance value is that which was specified in the agreement between the railway undertaking and vehicle leaser.
13. Leased services, contractors, suppliers, transport services etc., are charged according to verified costs.

1.6 Forms for the regulation of damages (compensation rules)

Compensation is paid out for repair costs or costs for replacement, to a maximum value equalling the object's current value, in accordance with point 1.4.1. Costs shall always be verified in accordance with point 1.7.1, unless another special arrangement has been agreed upon.

If the damaged object is not repaired or replaced, compensation is paid at an amount corresponding to the costs for its restoration, to a maximum of the object's current value.

1.7 Payment

1.7.1 Presentation of compensation claims

Compensation claims made to the party that caused the accident shall be lodged using an invoice. Before the invoice is issued, the parties must be in agreement over which of them caused the damage. The agreement is made during a claims settlement meeting, and the decision is recorded in a protocol signed by both parties. is formally recorded in minutes signed by both parties. The signing will take place no later than 10 days after the agreement. The protocol constitutes the decision.

Invoicing includes the parties certifying their claims for compensation through e.g., a copy of the voucher. If the parties are in disagreement concerning parts of the invoice, the undisputed amount shall be paid within a given time frame.

The invoice shall be divided into the following individual items:

- recovery/clearance
- increasing work speed
- restoration of facility
- other direct cost (specify).

For each individual item, the reported costs are divided into:

- personnel costs (hours and rate)
- machine costs
- material costs
- external costs.

Partial invoicing can take place after agreement between the parties.

If an amount of compensation is divided up into several invoices, it shall be stated on the last invoice that it is the final invoicing.

1.7.2 Interest

Interest for the claim is paid in accordance with the Interest Act.

1.7.3 Value added tax (VAT)

Damages are settled without VAT.

1.7.4 Invoice address

Invoice address relating to property damage caused by:

1. the Swedish Transport Administration, see Annex 1 A.
   Trafikverket
   Fakturahantering
   EF 1207
   781 89 BORLÄNGE
2. Railway undertaking; sent to the address stated in the track access agreement.

1.8 Limitation period

If no invoice is issued within three years of the agreement regarding the matter of responsibility, the claim is considered to have expired.

Trafikverket, Swedish Transport Administration, SE-781 89 Borlänge.
Street adress: Röda vägen 1.
Telephone: +46 771-921 921, Text telephone: +46 10-123 50 00.
trafikverket.se

TRAFIKVERKET, SWEDISH TRANSPORT ADMINISTRATION. DECEMBER 2025. PHOTO: ADAM PALO.