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TSF 2024-46

Case officer
Karin Edvardsson
Road and rail
Road engineering

Amendments to the Swedish Transport Agency's building regulations

The impact assessment was revised after the consultation phase; these revisions are marked with a line in the margin.

The Swedish Transport Agency's proposal:

That the Agency decide on amendments to the Swedish Transport Agency's regulations and general guidelines (TSFS 2021:122) on characteristics requirements for roads, streets, tramways and metros (construction rules)

Amendments are proposed in the following parts:

Chapter 1 introduces an implementing provision on temporary construction works and three new definitions.

In Chapter 2, requirements and general guidelines are amended regarding design loads for supports for road traffic signs and barriers on footpaths and cycle paths.

Chapter 4 introduces requirements for mud guards on bridges with an underlying footpath or cycle path.

Most amendments are made in Chapter 5, partly to make it clearer what rules apply to roads[1] and what rules apply to footpaths and cycle paths. In addition to some changes of a more editorial nature, the amendment to the statute means that:

- requirements or general guidelines are introduced for the minimum dimensions of verges, motorways and cycle paths, including footpaths and cycle paths;

- additional requirements are introduced which apply to the design of intersections;

- requirements and general guidelines are introduced with regard to the design and construction of delineator posts;

- requirements and general guidelines are introduced regarding suicide prevention on bridges.

The statute amendment repeals the National Road Safety Administration's regulations (TSVFS 1979:48) on delineator posts.

[1] Such a road, street, square and other section or place commonly used for the traffic of motor vehicles

Content

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A. General

1. What is the problem or the reason for the regulation?

The Swedish Transport Agency's regulations and general guidelines (TSFS 2021:122) on characteristics requirements for roads, streets, tramways and metros – i.e. the Swedish Transport Agency's building regulations – have now been in force for more than two years (since 1 February 2022) and a review of the rules has now been carried out. The Swedish Transport Agency has not received any signals that the rules are difficult to apply or similar, but we have seen that some amendments and adjustments are needed based on, for example, revised standards or new knowledge in the field.

Over the last three years the number of road fatalities has increased (source: STRADA). In 2023, 232 people died in road traffic accidents. Of these, 26 were cyclists (excluding electric-scooters) and 24 were pedestrians. In 2020, the Government adopted new milestone targets for Sweden's traffic safety work, which will reduce the number of fatalities by half and a 25% reduction in the number of serious injuries by 2030. In actual figures, this means a maximum of 133 fatalities in road traffic in 2030. Additional measures are therefore needed to increase road safety.

According to Transport Analysis data over passenger transport work, the proportion of trips that take place by walking, cycling or public transport has not increased over time. In 2022, the proportion was 22.5%[2]. We are therefore unlikely to achieve the government's interim target for sustainable urban development, which is that the proportion of passenger transport by walking, cycling and public transport in Sweden should be at least 25%by 2025, with a view to eventually doubling the proportion of walking, cycling and public transport. Important measures highlighted to promote an increased share of active modes of transport (i.e. walking and cycling) included creating a safe and secure traffic environment with safe infrastructure with good capacity, separated from motor vehicle traffic, and with direct routes that offer shorter travel times than by car.[3]

The building regulations already contain detailed rules on how roads, including paved footpaths or cycle paths, are to be designed. Among other things, there are requirements that streets and squares must be designed with the needs of pedestrians and cyclists in mind, and general guidelines that a street or square should be designed:

- with sufficient resting and waiting areas;

[2] Share of route (H5A) – Environmental Barometer (miljobarometern.se)
[3] Zukowska 2022 (Which transport policies increase physical activity of the whole of society? A systematic review - ScienceDirect) quoted in Transport Analysis 'Objective follow-up indicators and dimensions in 2023', Report Memo 2023:3 2023

- with sufficiently wide footpaths or cycle paths;
- without unnecessary inclinations; and
- with footpaths and cycle paths that are as short as possible in relation to the corresponding paths for other traffic.

On the other hand, there are currently no regulations or general guidelines on what constitutes, for example, the minimum width of cycle paths, even if there are certain width specifications in developer requirements; for example, in the Swedish Transport Administration's requirements document Design of Roads and Streets (VGU)[4]. Reference must be made to requirements in the VGU when the Swedish Transport Administration procures works on the state road network. VGU is also voluntarily applied to some extent by municipal road operators, but these may also have their own requirements or choose to apply recommendations from what is known as the GCM Handbook[5], which was jointly developed by the Swedish Transport Administration and the Swedish Association of Local Authorities and Regions. Cycle paths, including pedestrian and cycle paths and intersections with roads or other cycle paths, can thus today be very different, although for walking surfaces there are provisions and general guidelines in the National Board of Housing, Building and Planning's regulations and general guidelines (BFS 2011:5 ALM 2) on accessibility and usability for people with limited mobility or orientation capacity in public spaces and in areas for constructions other than buildings.

The current regulations on delineator posts have remained in force since the 1970s, when they were announced by the Swedish Transport Safety Agency. This means that they are not currently completely up to date and are also difficult to be or become aware of. In turn, this entails a risk that delineator posts look different and are placed in different ways in different parts of the country, that delineator posts are incorrectly used instead of road traffic signs or that other devices that can be confused with delineator posts are put up instead.

The Swedish Riksdag decided already in 2008 on a national action programme for efforts to reduce suicide[6]. There are still around 130 suicides per year in the Swedish transport system, most of which are linked to rail or metro[7]. One of the areas of action of the programme, in the field of mental health and suicide prevention, is to 'reduce the availability of agents and methods for suicide'.

[4] Swedish Transport Administration publication 2022:001. Requirements – Design of roads and streets (VGU),
[5] Swedish Transport Administration & Sweden's Municipalities and Regions (2022). Mobility for pedestrians, cyclists and moped riders – A manual focusing on planning, design, maintenance and follow-up. Publication 2022:020. ISBN 978-91-8045-007-2.
[6] A renewed public health policy — Regeringen.se
[7] Statistics on suicide — Public Health Agency of Sweden (folkhalsomyndigheten.se)

One action specifically identified in this area is ‘safety barriers at, for example, high bridges and other vulnerable places, such as railway and metro tracks’[8].

In the light of the above and the fact that the transport policy indicator linked to physically active journeys is assessed negatively and the number of fatalities in road traffic accidents and the number of suicides in road traffic has not decreased in recent years, the Swedish Transport Agency considers it urgent to continue to develop timely and balanced characteristics requirements for the construction and modification of roads and streets on the basis of our authorisation under the Planning and Building Ordinance (2011:338).

2. What is to be achieved?

In large parts, the legislative proposal refers to increased safety in the use of roads and streets, with a special focus on pedestrians and cyclists. The aim of the legislative proposal is also to update the statute on the basis of revised standards and new state of knowledge in this field, and to achieve a more comprehensive building regulation that takes better account of walking and cycling in the traffic environment and sets a minimum level of suicidal prevention at societal level.

3. What are the alternative solutions?

3.1 Impact if nothing is done?

Unless further action is taken, progress towards achieving the objectives of transport policy will stop, or in the worst case, deteriorate.

Sweden continues to be one of the countries in Europe with the least number of fatalities in road traffic accidents. After the trend over many years has continuously pointed to a reduced number of deaths, the number appears to have slowed down in 2020 at just over 200 deaths and is unfortunately now instead pointing towards an upward trend[9].

According to Transport Analysis, statistics on travel habits in Sweden show that the number of trips on foot decreased by 8% and the number of trips by bicycle by 12% in 2022 compared to 2021, while the number of trips by car increased by 1% during the same period.

Thus, in order for this trend not to continue in the negative direction, more measures are needed that can contribute to the achievement of transport policy objectives.

[8] https://www.folkhalsomyndigheten.se/livsvillkor-levnadsvanor/psykisk-halsa-och-suicidprevention/att-forebygga-suicid/nationellt-handlingsprogram/
[9] STRADA, official statistics, police data. Accident Statistics On Road Traffic – Swedish Transport Agency

3.2 Alternatives that do not involve regulation

Different road operators have their own commitments regarding characteristics requirements for their roads and streets – which are often stricter/higher than the minimum requirements that exist at societal level in the form of legislation, ordinances and regulations. In order to guarantee a minimum level of basic characteristics requirements for, for example, safety, passability and protection of human health and to ensure an equivalent design standard throughout the country, regulation is deemed to be the most effective policy instrument. This, of course, presupposes that the regulation is at a well-balanced level from a societal perspective. The Swedish Transport Agency welcomes own initiatives, which means that the road operator goes beyond these minimum requirements in cases where further measures or a higher standard are justified based on the conditions at the location in question.

3.3 Regulatory alternatives

The general conditions for the regulation continue to be the same. That is that the regulations apply to new buildings, rebuilding and other amendments, in accordance with Chapter 8 of the Planning and Building Act (2010:900). They shall be applied by the developer/road operator when designing and executing the project and, with normal maintenance, the requirements shall be assumed to be met during the reasonable economic lifetime of the construction works.

However, the regulations do not apply to winter roads and do not need to, but may be applied to roads mainly intended for forestry, roads within fenced areas, footpaths or cycle paths that are not paved, and roads where the annual average daily traffic is estimated to be less than 125 vehicles during the opening year.

We clarify through an addition to Chapter 1, Section 1, to what extent the regulations apply to construction works for temporary – that is to say not permanent – use. For such construction works, adaptations and departures may be made to a reasonable extent, taking into account the nature, scope, and duration of the measure. This is already the case in the past – as an example, a developer cannot build a temporary bridge that is not sufficiently safe for the traffic that will use the bridge. In view of the fact that the Swedish Transport Agency has received questions about the rules applicable to temporary construction works, we see the reason why this is clarified in the regulations.

The substantive amendments proposed are described below.

3.3.1 Load-bearing capacity of road traffic sign supports

We clarify the rules on verification of the load-bearing capacity of supports for road traffic signs regarding the requirement to design for ploughed snow. What is missing is information on which load from a ploughed snow should be used when the load-bearing capacity is verified. We have chosen to apply the same

loads for ploughed snow as required by the Swedish Transport Administration in *TRVINFRA-00338 Requirements Road Equipment*. The difference between our table and the table in *TRVINFRA-00227* is that road traffic signs may not be placed more than 6.0 metres from the edge of the road according to the rules in *The Swedish Transport Agency's regulations and general guidelines (TSFS 2019:74) on road traffic signs and other devices* (see the distance S in Figure 1). Our table is therefore limited to loads of ploughed snow on road traffic signs whose nearest edge is no more than 6.0 metres from the edge of the road.

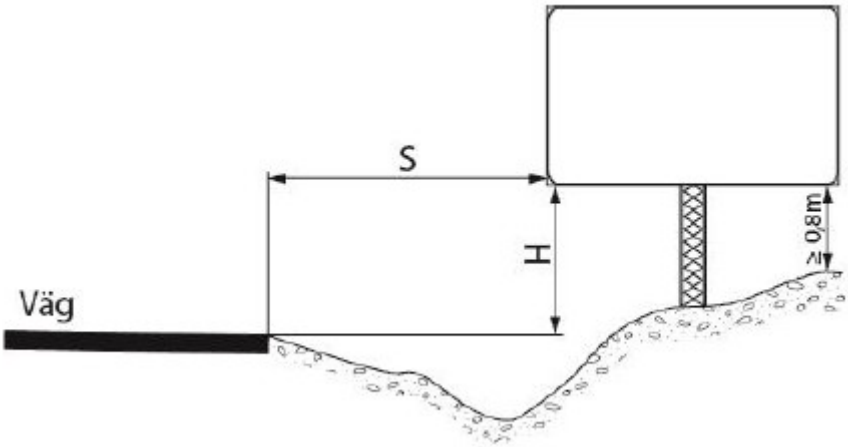

Figure 1. Distance for placing road traffic signs sideways (S) and in height (H) in relation to the road edge based on the description in the Swedish Transport Agency's regulations and general guidelines (TSFS 2019:74) on road traffic signs and other devices.

In addition, we set a lower requirement for the load, 1.5 kN/m^2, for road traffic signs that are located between 5.0 and 6.0 metres of the edge of the road when the ploughing speed is 60 km/h or higher, compared to 2.5 kN/m^2 in TRVINFRA-00338. The reason is that the load for a ploughing speed of 50 km/h is 0 kN/m^2 at a distance < 5.0 m from the roadside. It therefore seems unreasonable that the load from ploughed snow would increase so drastically if the ploughing speed increases from 50 km/h to 60 km/h.

Where the ploughing speed can be expected to be low, which the Swedish Transport Agency deems to be on roads with a maximum permissible speed of 40 km/h or lower, an exemption from the regulation's requirement that supports for road traffic signs shall be designed for ploughed snow is introduced.

We also introduce in a general guideline a reference to the harmonised construction product standard, *SS-EN 12899-1:2007, Fixed, vertical road traffic signs – Part 1: Fixed signs*, for dimensioning of loads from ploughed snow and wind load. The purpose of the advice is to facilitate compliance with the requirements of the regulation.

We also amend parts of the text of the general guidelines that supports for road traffic signs can be considered dimensioned for loads due to wind and ploughed snow if they are assigned to safety class 1 in accordance with Chapter 2 of *the Swedish Transport Agency's regulations and general guidelines (TSFS 2018:57) on the application of Eurocodes*.

As regards the application of rules in TSFS 2018:57, the eccentricity, see the dimension $e = 0.25b$ in Figure 2 below, which is indicated in the model in SS-EN 1991-1-4 for wind loads on a screen, does not need to be applied. Instead, that eccentricity can be halved. The reason for halving eccentricity is that the model produces unreasonable wind pressure conditions when all wind loads are concentrated at a point one quarter of a width from the edge of a road traffic sign. For a four metre wide location mark, with three metres between the poles, the use of the model in SS-EN 1991-1-4 would result in 5/6 of the total wind pressure being distributed on one pole and 1/6 on the other. By halving the eccentricity, 2/3 of the total wind pressure on the localisation mark on one pole and 1/3 on the other is a more reasonable distribution even in an unfavourable situation.

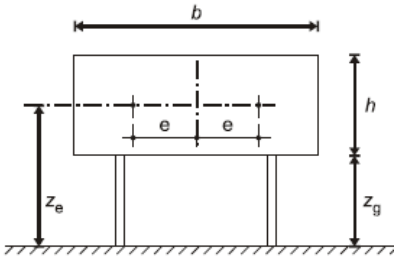

Figure 2. Model of wind load on a screen where e = eccentricity.

Another exception to the regulatory requirement applies where road traffic signs, or in fact the road sign plate on which the road sign itself is placed, are of smaller sizes. We introduce the same exemption as in *TRVINFRA-00338 Requirements Road Equipment*. Road traffic signs placed next to the roadway with a total area of not more than 0.70 m^2 and with an upper edge of the road sign not more than 3.5 metres above the ground need not be dimensioned for loads from ploughed snow or for wind loads. One condition is that the support is at least 60 mm in diameter, has a shell thickness of at least 2.25 mm and is of a steel grade with a yield strength of at least 235 MPa.

In purely theoretical terms, i.e. computationally, supports for road traffic signs with a total area of up to 0.70 m^2 and a height of up to 3.5 metres above ground do not meet the requirements for loads from ploughed snow and wind load set by the Swedish Transport Administration. Experience shows, however, that they can withstand both loads from ploughed snow and wind load. The Swedish Transport Agency therefore chooses to grant the same exemption.

Furthermore, it is not possible for the Swedish Transport Administration, or any other road operator, to make exemptions themselves that contravene rules laid down in the Swedish Transport Agency's regulations.

In addition to verification of load-bearing capacity by calculation, it is also permitted to verify it by testing, both according to the rules in TSFS 2018:57 and the rules in SS-EN 12899-1:2007. The difference between the models in the Transport Agency's regulations and in SS-EN 12899-1:2007 is how the results of a test are evaluated when determining the design load capacity.

According to TSFS 2018:57, the Eurocodes should be used when verifying the load-bearing capacity. Annex D of SS-EN 1990 *Eurocode – Basis of structural design* provides a model to derive from a test result a design value of the carrying capability by applying a statistical method. Depending on the number of samples and whether what is referred to as the coefficient of variation, the standard deviation divided by the mean, is known or unknown. If the coefficient of variation can be considered known, which may be a reasonable assumption for a steel pipe made of a common steel grade, the design load capacity can be determined as the mean value minus 3.56 times the standard deviation. If, for example, the mean load-bearing capacity of a bending moment were to be 2 kNm and the standard deviation 0.15 kNm then the design load capacity would be 2 – 3.56 0 0.15 = 1.47 kNm.

According to SS-EN 12899-1:2007, the load-bearing capacity is determined as the force that gives a residual deformation after unloading of 20% of the instantaneous deflection. Multiplying that force by the support's lever arm provides the design load capacity for bending moments. It is possible to divide the load-bearing capacity with the partial safety factor for steel, which according to the standard is 1.05. Which model, the one in SS-EN 1990 or that in SS-EN 12899-1:2007, gives the greatest load-bearing capacity is difficult to know. According to the model of SS-EN 12899-1:2007, the steel is allowed to plasticize and formal breakage is when the residual deformation is 20%of the instantaneous deformation. What is considered a failure in a test according to SS-EN 1990 is not defined. However, according to SS-EN 1990, testing shall be used in the first instance when it is difficult or impossible to calculate the load-bearing capacity. For a simple pipe, it should therefore not be tested, but calculated instead.

Verification by testing is thus permitted and if the model in SS-EN 12899-1:2007 is applied, it is highly likely that the tested design load capacity will be higher than that calculated. The average tensile stress for S235 is, according to Annex E of SS-EN 1993-1-1:2022 *Design of steel structures – Part 1-1: General rules and rules for buildings*, 294 MPa, to compare with the nominal of 235 MPa. In addition, if the material is allowed to plasticise, the plastic

bending resistance is approximately 30% greater than the elastic bending resistance of a tube with dimensions according to the derogation above.

3.3.2 Mud guards protecting pedestrians and cyclists

We propose a new provision, Chapter 4, Section 5a, concerning characteristics requirements relating to protection with regard to hygiene, health and the environment. This means that bridges that go above a footpath or cycle path shall be fitted with mud guards that, as far as possible, prevent ploughed snow or water splashes from the roadway from landing on pedestrians and cyclists passing under the bridge. We see this primarily as a measure to prevent pedestrians and cyclists from being splashed with, for example (dirty) water, i.e. primarily protection with regard to hygiene and health, but also with a connection to safety because, for example, ploughed snow could also significantly impair the road surface on the underlying footpath or cycle path and could contain ice lumps that could pose a hazard if they hit persons passing under the bridge.

We also propose to amend the wording of Chapter 2, Section 24, concerning the ability of protective devices to withstand the load of road users for whom the pedestrian or cycle path is intended. The current regulations state that they must be able to withstand the load of road users allowed to travel on the roadway. The amendment aims to clarify that the road users referred to are pedestrians, cyclists and drivers of class II mopeds, not emergency services or road maintenance vehicles – although these may also travel on the roadway in accordance with the Road Traffic Ordinance.

In the general advice to the same provision (Chapter 2, Section 24) we also amend a typographical error. In the current version, there is a zero missing in the guideline stating that ‘the value of the point loads Q_{hk} and Q_{vk} should be set at 1.0 kN’.

Based on the new requirement for mudguards, we also add requirements in Chapter 2, Section 24 on the load-bearing capacity of mudguards. Instead of listing various types of railing infills for road and bridge railings – such as mudguards – we have chosen to write ‘including railing infills with mountings’. This wording is also the one used in the National Board of Housing, Building and Planning’s building regulations[10]. Similarly, we also clarify in the general guideline to Chapter 5, Section 34, that railing infills should not detach during a collision with a design vehicle.

3.3.3 Design of roads

In Chapter 5, first paragraph, i.e. Section 1, we have changed the order of the paragraphs and propose a modified text in the first paragraph. Our intention with the provision is to clarify the relationship between the road design and

[10] PBL knowledge bank – a manual – PBL knowledge bank – Boverket

marking linked to Chapter 1, Section 3 of the Road Signs Ordinance (2007:90). That is why, as far as possible, we have tried to use the same wording. The wording on ‘efficient and safe traffic’ is taken from the Ordinance and can be seen as a slightly broader concept which, in addition to road safety, may include, for example, both passability and availability.

We propose to change the subheading ‘Obstacle-free height and width’ to ‘Obstacle-free height and width and section’ on the basis that we propose new requirements and recommendations related to the technical standard on the cross section of the road and footpath or cycle path respectively.

In a new general guideline to Chapter 5, Section 1, we propose that verges should be designed at least 0.75 metres wide. In concrete terms, this means that roads should have verges that are at least 0.75 metres wide or no verges at all, with the risk of total traffic stoppage in the event of, for example, a vehicle breakdown on a dual road. In the case of motorways and expressways, the roadside edge is drivable, and marks the boundary between the carriageway and the verge; thus, the markings may be included in the width of the verge. However, if the road verge is intended for cycling, it is not appropriate to include the width of the edge (which can be 10–30 centimetres) in the width of the verge, as the marking is not considered to be drivable and there may be a conflict over who this surface belongs to. Thus, when choosing the width of the road verge, consideration should be given to the groups of road users expected to use the road, such as cyclists and drivers of category A tractors.

According to the Ordinance (2001:651) on road traffic definitions, *a road verge is a part of a road intended for vehicle traffic.* Thus, in the legal sense, it is only a road verge if it is intended for traffic. A narrow (for example, a 25 cm) strip of road to the right of the road edge still forms part of the road/roadway but cannot be a verge as it is clearly not intended for traffic. The main purpose of laying down minimum dimensions for verge width in the general guidelines is to advise road operators on how wide a verge should at least be in order to provide support and guidance to those road users who, in accordance with Chapter 3, Section 12 of the Road Traffic Ordinance (1998:1276), shall use the verge as if it is intended for traffic – i.e. is a road verge. In that sense, a road verge should be at least 0.75 metres wide in order not to create uncertainties and conflicts around where the road user is to travel in accordance with the Road Traffic Ordinance. If there is no space or opportunity to build the road sufficiently wide, it is better not to have a verge. We do not set any requirements or recommendations on which roads must or should have a verge, except motorways. Roads that do not have a verge may have an edge next to the roadside.

This minimum width will not accommodate all vehicle types that will use the verge but will increase their visibility. However, in order for the verge not to be

used more than temporarily by other traffic, in order to facilitate passability, we consider that it should not be made so wide that it risks being perceived as a traffic lane.

A new provision, Chapter 5, Section 4d, sets out minimum requirements for what is to be regarded as a motorway standard. The provision applies regardless of whether the motorway is state-owned, municipal or privately owned (the Öresund bridge is currently a privately owned motorway). Certain basic requirements for when a road may be declared to a be motorway can be found in Chapter 10, Section 7 of the Road Traffic Ordinance – such as that it shall be free of intersections at the same level and have two carriageways, for traffic in each direction, be separated by a dividing strip or in any other way – but we now choose to supplement with technical characteristics requirements in order to ensure a high and uniform standard on this type of road. Thus, on the basis of the rules, a motorway can never have a lower general standard. If the road operator wishes to design the road with a lower standard, the municipality or county administrative board may instead, by means of local traffic regulations, stipulate that the road should be an expressway. For expressways, the same traffic rules apply as on motorways except that there is no specific speed limit. The terms ‘road connection with acceleration lane’ and ‘with separate traffic lane’ respectively are the same as those used in Chapter 3, Sections 21 and 23 of the Road Traffic Ordinance.

As a result of the new provision in Chapter 5, Section 4d, we also propose amendments to Chapter 5, Section 51 on the possibility of emergency stop bays. We no longer see any reason to single out motorways; the provision applies to all roads with separate carriageways. We are also removing the documentation requirement, as we believe it is questionable whether it is meaningful.

It is also proposed to amend the requirement in Chapter 5, Section 15. However, the amendments are mainly editorial in nature: we have simplified the wording concerning the prevention of water layers on the surface (i.e. water pools and the risk of aquaplaning) and clarified that the provision applies to both roads and footpaths and cycle paths. The latter is judged to have been unclear before as the current provision only refers to ‘road’ in the requirement but to both road and footpath and cycle path in the guideline.

3.3.4 Footpaths and cycle paths

We propose a change to the title of Chapter 5 of the statute, which concerns the characteristic requirement ‘Safety in use of roads’. In the draft amendment, we have made more stringent attempts to keep the concepts of road and footpath or cycle path separated. For this reason, we see a need to add ‘footpaths and cycle paths’ to the heading. The purpose of the amendment is to clarify the design requirements that apply to roads (and streets) that are generally used for motor

vehicle traffic, and those that apply to footpaths and cycle paths. The reason for this is that we see that the requirements for these construction works need to be different (see, for example, Chapter 5, Sections 4 and 4a).

It is difficult to establish minimum requirements for cycle paths in a statute, as this could result in them not being built at all. This could result, for example, from a lack of space or other restrictive conditions at the location in question, or for cost reasons. A substandard surface intended for cycling could be preferred by some cyclists to cycling in mixed traffic, and a coherent cycle path network is likely to be considered more important for cycling than the network being of a high standard throughout. At the same time, a substandard surface may result in passability becoming so poor that it poses an actual risk to road safety.

There is research that suggests that increased width of cycle paths correlates with increased use of the same. Other studies also note that the wider the cycle path, the safer it is. This is because the possibility of correcting a mistake increases with greater width. As an example, it is mentioned that 10% wider cycle paths dedicated to one-way traffic have been shown to result in a 13% reduction in accidents in the Netherlands. (Duc-Nghiem *et al.*, 2018[11] & Veroude *et al.*, 2022[12] quoted in Egeskog *et al.*, 2023[13]).

The minimum width of cycle lanes in Chapter 5, Section 4b to c is based on the recommendations made in the report entitled ‘Memo Minimum widths for cycle lanes’ (Movea, 2023)[14]. Where traffic flows are low, it is proposed that the width of a cycle path intended for traffic in one direction shall be at least 0.75 metres and of a two-way cycle path, as well as a footpath and cycle path, at least 1.8 metres. Often footpaths and cycle paths are common for cyclists and pedestrians. Thus, the minimum width for cycling is also considered sufficient for pedestrians in most cases. A 1.8 metre wide track allows meeting and overtaking in most situations. In case of higher traffic flows, when the interaction between cycling and walking can become a problem, separation of pedestrians and cycling should be considered.

We have chosen not to impose requirements specifically on footpaths, such as f.ex. pavements. For pedestrian surfaces, including ramps and stairs, the Swedish National Board of Housing, Building and Planning's regulations and

[11] Duc-Nghiem, N., Hoang-Tung, N., Kojima, A. & Kubota, H. (2018). Modeling cyclists’ facility choice and its application in bike lane usage forecasting. IATSS Research, 42 (2). https://doi.org/10.1016/j.iatssr.2017.06.006
[12] Veroude, B., van Gurp, M. & van Boggelen, O. (2022). Geactualiseerde aanbevelingen voor de breedte van fietspaden 2022. https://fietsberaad.nl/Kennisbank/Aanbevelingen-breedtefietspaden-2022
[13] Egeskog, J. Niska, A. Pérez Castro, G. Kircher, K. Olstam, J. & Johansson, F. (2023). Cyclist need for space – Knowledge base for design recommendations VTI Publication 1155.
[14] Movea 2023 Memo Minimum widths for cycle lanes

general guidelines (BFS 2011:5 – ALM 2) on accessibility and usability for persons with reduced mobility or orientation capacity in public places and in areas for facilities other than buildings shall apply instead. According to Section 7, a pedestrian surface should be 2.00 m wide or at least 1.80 m wide and have turning zones at regular intervals. We consider that these turning zones correspond to intersections in the traffic environments where the minimum dimension in the amended building regulations may be used.

The minimum dimension for a combined footpath and cycle path refers to dimensions when pedestrians and cyclists have not been separated. When cycling and walking are separated, it is best to view it as a footpath and a cycle path. For the footpath part, the minimum dimensions according to BFS 2011:5 and the cycle path part shall be at least 1.8 m.

The Swedish National Board of Housing, Building and Planning is the regulatory authority with regard to accessibility and usability for persons with reduced mobility on the basis of the Planning and Building Ordinance, including for those construction works that the Swedish Transport Agency is otherwise the regulatory authority. According to, for example, the Swedish National Board of Housing, Building and Planning's regulations (BFS 2024:13) on requirements for plots of land, etc., the design width for a wheelchair is 0.70 metres (Chapter 2, Section 1, first paragraph). However, a wheelchair should only use a cycle path when travelling at a speed higher than walking pace.

On the basis of the relatively large number of referrals received, not least from private individuals (around 75), in connection with the external referral of the proposal for a regulation, we note that there is a concern that a statutory minimum level may be used, of those who have to apply the regulations, as a standard measure. As the regulations in this case are addressed to other authorities (municipal developers and the state-owned road operator the Swedish Transport Administration), we find it difficult to see that this would be the case, but in order to reduce the risk and clarify our intention, we add an overall functional requirement that the design of footpaths and cycling paths, including their covered width, should be adapted according to their surroundings as well as the road users and vehicles expected to use the track. This may include, for example, how busy the track is, whether the track is adjacent to a busy road, if it is a travel route for school children, if there are alternative travel routes that do not involve detours, if there is a need for additional wobbling space due to, for example, uphill slopes, large speed heterogeneity between cycling in different directions, etc. Developing actual widths will therefore be a task for the road operator based on the functional requirement.

We also clarify when the specified absolute minimum dimensions may be relevant to be used, to reduce the risk of them being mistakenly perceived as recommended width dimensions for all cycle paths. The minimum dimensions can only be used on a limited section where the surrounding existing built-up area means that the traffic space is small and there are no side obstacles.

The minimum dimensions are based on the fact that there is often limited space since planning and designing cycle infrastructure almost always has to relate to the already existing built environment, i.e. that there may often be a conflict of objectives around the use of the existing available traffic surface in the case of conversion in urban environments (new building of bicycle infrastructure in existing urban environments). On a cycle path with a paved width of 0.75 metres, the majority of ordinary two-wheeled bicycles will fit without conflict regarding which group of road users ‘has the right to’ adjacent trafficked surface, but a minimum width of 0.75 metres will mean that not all types of bicycles will fit. Wider bicycle types, such as bicycles with more than two wheels or bicycle harnesses, will then be referred to mixed traffic. Despite this, we consider that it is a relevant requirement for the places where the minimum dimension may be used. Requiring a wide cycling infrastructure may result in other road users having a smaller surface area and, in the worst case, that there will be no cycle path at all. Cycling with wide types of bicycles that cannot fit on a cycle path can be done in an acceptable manner in terms of traffic safety on a local street, but a bus that cannot pass (or meet) on the street cannot instead use a cycle path in an acceptable manner in terms of traffic safety. We therefore consider that it is a worse alternative to impose high standard requirements that risk preventing the construction of dedicated cycle paths, which then means that all cycling is assigned to mixed traffic – which imposes higher demands on road users’ attention, interaction and knowledge of traffic rules. We have therefore chosen to set an absolute minimum width for cycling infrastructure based strictly on safety considerations, in light of our authorisation. It is then the responsibility of the developer to make the necessary assessments – preferably based on a cost-benefit analysis – taking into account the actual conditions of the site in question and other aspects such as passability, safety and comfort.

The minimum dimensions must also be seen in the context of other requirements and recommendations; for example, that the choice of width, and the design in general, also needs to take into account that cycle paths should be designed in such a way as to minimise the risk of bicycles or cyclists hitting or getting stuck in fixed obstacles as well as that operation and maintenance measures can be done with appropriate machinery equipment. The general guidelines for Chapter 5, Section 4a state that footpaths or cycle paths should be accessible to the vehicles to be used on the road, including operating, maintenance and emergency vehicles, and should be designed in such a way

that cleaning and winter maintenance can be carried out with appropriate mechanical equipment. Not only the width of the vehicle as such has a bearing on the design, but also the turning radius of the operating vehicles. In the case of large quantities of snow, the road operator may also need to take into account the space for the snow pile and the handling of the snow. When designing the clearance height of a footpath or cycle path, it may also be necessary to take into account any need for access for emergency vehicles, such as ambulances. In practice, this will also limit how narrow a defined lane can be made – at least in most cases.

Amendments made to the guideline to Chapter 5, § 4a (which was previously in the general guideline to Chapter 5, Section 4) are of a more editorial nature. We have also removed a general guideline stating that posts should not be placed on footpaths or cycle paths, but that if they must be placed there, they should be placed close to the edge of the carriageway. We consider that this guideline is better suited to the Swedish Transport Agency's regulations and general guidelines (TSFS 2019:74) on road traffic signs and other devices, together with provisions that such posts should be marked with X10, Pole marking device in accordance with the Road Signs Ordinance.

3.3.5 Intersection design

The draft proposal contains new requirements regarding the design of intersections (Chapter 5, Sections 15a and 17a–d). These are based on the conclusions and proposals in the report 'Memo Draft Proposal TSFS 2021:122 Intersection' (Movea, 2024).

The term *intersection* is used, inter alia, in the Road Traffic Ordinance without being defined. We have chosen not to include a definition in the statute, but for the purposes of understanding this impact assessment, we can say that an intersection can be described as a place where roads, footpaths or cycle lanes of the same plane meet and courses of road users intersect, but not where at least two traffic lanes or carriageways meet (intertwine). The latter is instead defined as a road connection.

The proposal's provision in Chapter 5, Section 15a – that intersections must be designed in such a way that road users can detect them in time and adapt their speed, orientation and choice of route and that the design, function and use of the intersection must be socio-economically efficient – is conceived as a general, functional 'opening paragraph' with the main characteristics of intersection design. The requirement text "socio-economically efficient" is based on the overall transport policy objective of ensuring socio-economically efficient and long-term sustainable transport services for citizens and businesses throughout the country.

The requirement is clarified by a related general guideline that an assessment of the socio-economic effectiveness of the design, function and use of an

intersection should be based on a cost-benefit analysis that includes at least the risk of personal injury, traffic flow and composition, speed and type of intersection. For intersections, there are established socio-economic models available for comparing different alternatives, such as Capcal.

The reason for the general recommendation that the number of intersections should be minimised is that intersections in themselves generally have a negative impact on road safety, the environment and passability. For this reason, fewer intersections are better.

A conflict point is a point where at least two road users could theoretically collide. Few conflict points are generally better from a road safety perspective. For example, two 3-road intersections, where there are 10 conflict points, may be preferable to a 4-road intersection, where there are 14 conflict points.

We propose a general guideline that right angles between approaches in intersections should be pursued. Right angles lead to better visibility of the intersection and thus lead to increased road safety. General surveillance to gain an overview of the possible presence of unprotected road users is also facilitated.

Making wrong turns at an intersection or junction poses a significant traffic safety risk, especially if the vehicle ends up in the wrong direction. This may happen, for example, in a roundabout or in a ramp adjacent to a junction. Therefore, intersections and road connections should be designed in such a way as to minimise the risk of wrong turns. In addition to warning/informing road users with road markings and road traffic signs in accordance with traffic legislation, the risk may be mitigated by, for example, geometric design that makes wrong turns more difficult.

We also propose a general guideline that, in the design of an intersection, the road operator should take into account road safety, accessibility, passability and visibility. The specific reference to ‘visibility’ is based on the fact that this is considered to be an important factor in decisions on the location and design of intersections at connecting premises or similar.

We also propose a new requirement (Chapter 5, Section 17a) that a road connecting to a roundabout must be designed with a speed reduction measure if the road reference speed is above 70 km/h. Although roundabouts in themselves constitute a speed-reducing measure, the proposal assumes that in ‘70 to 110 environment’, the design should support preparatory marking and prepare the road user at the approaching roundabout. This is considered to be particularly important when moving from rural areas (over 70 km/h) to urban areas. A general guideline states that a preparatory speed-reducing measure should be placed approximately 150 to 250 metres before the roundabout,

depending on the reference speed. An example of a speed-reducing measure may be lateral displacement according to Figure 3 below.

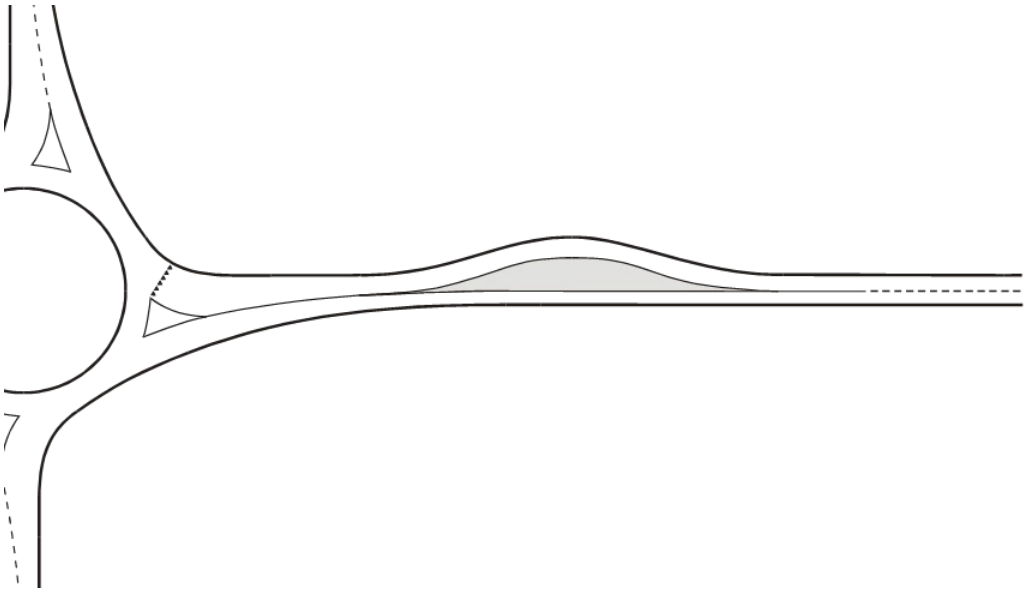

Figure 3. Lateral displacement as an example of speed-reducing measure ahead of arrival at the roundabout.

The amending statute proposes to repeal Chapter 5, Section 24 – on the design of roundabouts – and to replace it with a new Section on roundabouts, Chapter 5, Section 17b. The requirement that a roundabout, or an object placed in a roundabout, must not pose a significantly increased risk of personal injury in the event of a collision, and the associated general guidelines, are therefore proposed to remain in place – in a somewhat simplified form – but in a different location in the statute. The text of the requirement itself has been simplified to a certain extent by removing the text stipulating that objects placed in roundabouts must not have protruding parts that can penetrate vehicles during collisions. This is deemed to be covered already by the basic requirement and is then mentioned in the associated general guidelines. The basic requirement thus means that roundabouts shall be designed in such a way that, in the event of a road-run-off, they do not in themselves constitute a hazard. It is therefore a matter of avoiding that the design or layout of the roundabout itself – or objects placed in the roundabout, such as unyielding or sharp objects – could lead to high collision forces, a risk of a ‘ramp effect’ or something penetrating the vehicle. If the roundabout is designed as a speed-reducing measure so that the expected maximum speed through the roundabout is no more than 60 km/h (on all connecting roads in the roundabout), different types of unyielding roundabout decorations may however be used, provided that they do not involve a clearly increased risk of personal injury. This does not apply to any specific group of road users or vehicle type, but refers to all

types of road users expected to travel on the route, such as drivers of two-wheeled vehicles.

Under a new heading ‘junctions’ we propose new requirements (Chapter 5, Section 17c) on that:

- road connections shall be designed in such a way as to minimise the risk that road users inadvertently, and in the wrong direction of travel, enter a exit ramp; and
- intersections with roads at the end of an exit ramp shall be designed in such a way as to minimise the risk of the road user inadvertently travelling directly from the exit ramp to the approach ramp without braking or stopping.

The purpose of the requirements is that the design on the road shall support the road user in order to minimise the risk of missing road traffic signs, making wrong turns or, in the worst case, driving in the opposite direction of travel on a unidirectional road. See Figure 4 below for examples of design where the risk of unintentional travel directly from the exit ramp to the approach ramp is minimised.

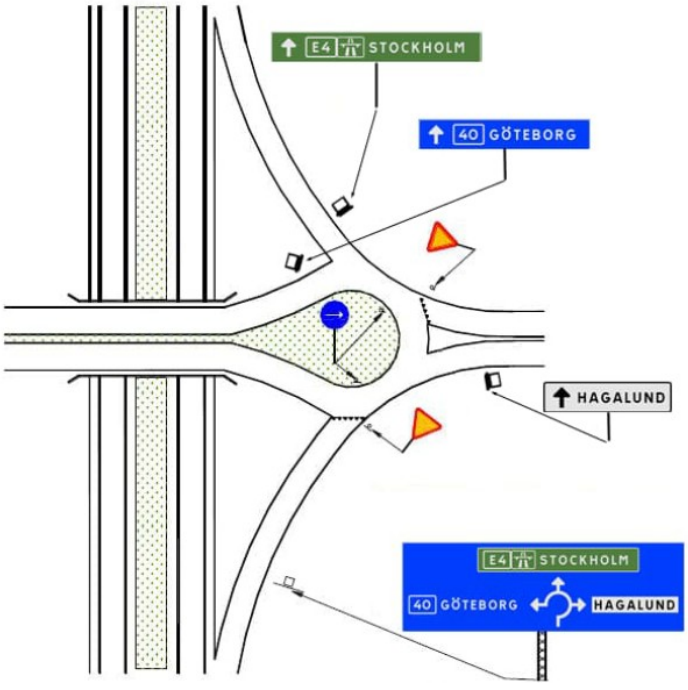

Figure 4. Examples of design that minimises the risk of unintentional travel directly from the exit ramp to the approach ramp.

We also propose an accompanying general guideline that intersections with roads at the end of exit ramps, where the reference speed is higher than

60 km/h, should be designed to reduce speed, for example with drop-down refuges or roundabouts. The aim is to provide examples of good solutions for increasing traffic safety at higher speeds on connecting ramps, which is particularly important when the exit ramp is on a downward slope, i.e. downhill.

We propose a new heading for ‘pedestrian crossings and bicycle passages and bicycle crossings’, and under a new functional provision (Chapter 5, Section 17d) that these should be designed in such a way that road users can detect each other before the location and thus be provided with the conditions to adapt their speed in time. Their design shall also support the fact that road users can orient themselves, choose the road and pass safely and effectively.

For increased road safety, passability and accessibility for pedestrians, cyclists and drivers of class II mopeds, we propose general guidelines on that:

- the number of conflict points is minimised;
- the distance that these road users need to travel over an intersection should be as short as possible or be made gradually — e.g. by designing the intersection with a splitter island — and
- the angle between the road and the footpath or cycle path should be close to 90 degrees. To be ‘close to 90 degrees’, the angle should be between 85 and 115 gon.

When designing pedestrian crossings and bicycle passages and bicycle crossings, the developer should always take into account whether the design and marking is sufficiently clear for road users to be able to use the installation safely and securely. This means that it should be clear where pedestrians, cyclists or drivers of class II mopeds are expected to place themselves in the intersection, and where they are expected to continue their journey after the intersection (see Figures 5 and 6).

Figure 5. An intersection in Hamburg and a cycle path that terminates and leads out to an intersection at Birger Jarlsgatan in Stockholm.

Figure 6. An intersection in Gothenburg.

We also propose a general guideline that traffic light-controlled intersections with bicycle traffic should be designed in such a way as to minimise the risk of entrapment between cyclist and motor vehicle traffic, e.g. with a withdrawn stop line — i.e. bicycle box — or other physical separation. Given that this only constitutes general guidelines, the road operator can decide for themselves whether it is deemed unnecessary given that the flow of cycling is low at the location in question. The advice aims to reduce the risk of serious accidents between mainly motor vehicles and cyclists. If lateral separation of these road users is not possible due to, for example, a lack of space, the bicycle box may be a good alternative. Bicycle boxes have proven to work well in Stockholm,

but there is no known documented evaluation. However, a Danish study shows that the number of accidents between right-turning cars and bicycles travelling straight ahead is reduced by more than a third with bicycle boxes, and that the number of cyclists injured in this type of accident is halved. (Herrstedt, 1979[15]). A bicycle box is marked with road marking M17a, *bicycle* box, see Figure 7.

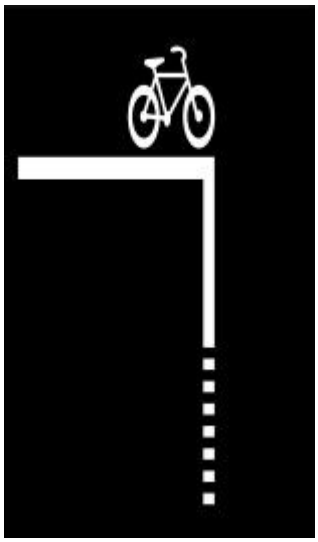

Figure 7. Road sign M17a. Bicycle box

3.3.6 Design of the safety zone

Chapter 5, Section 21 mainly contains editorial changes. We have divided the list of items that are strictly prohibited within a road safety zone into further categories to make it clearer. We are also adding an ‘o’ that was omitted from the word ‘oeftergivliga’ in the text ‘... om zonens utformning förhindrar fordon från att nå det *oeftergivliga* föremålet’ (‘if the design of the zone prevents vehicles from reaching the non-yielding object’).

In other respects, the provision is amended so that the entire fencing system is exempted from the requirement that no immovable objects may be located within the safety zone, compared with the previous requirement that only openings in wildlife and fauna fences were exempted. This facilitates the placement of fences to the extent that they need to be placed within the security zone and, in practice, they are nevertheless to be regarded as impervious.

According to data from the Swedish Transport Agency’s accident database (Strada), in recent years there has been approximately one fatal accident every two years involving vehicle collision against bridge foundations/support walls (see example in Figure 8 below). We consider this to be grounds for new general guidelines in Chapter 5, Section 21, stating that bridge foundations/support walls at the entrance to underpasses and tunnels should be

[15] Herrstedt Lene, Safety for cyclists and moped riders on main roads in the Copenhagen area, Memorandum 5, Council for Traffic Safety Research, 1979.

protected with road restraint systems. The same applies if the tunnel walls and supporting walls are not smooth, for example in the case of niches, ramp noses or similar.

Figure 8. Accident site with traces of a fatal accident (STRADA, 2023).

3.3.7 Road restraint systems

We do not propose any changes in substance concerning requirements for road restraint systems, but we make some amendments to the related general guidelines (to Chapter 5, Section 34 and Sections 39 and 39a). We also divide the provisions on energy-absorbing safety barrier terminals and crash cushions into two different sections (Chapter 5, Section 39 and 39a respectively) in order to make the regulations clearer.

In addition to a purely editorial change, from ‘where the reference speed is at least 80 km/h’ to ‘where the reference speed is 80 km/h or higher’ in the guideline to Section 34, we are amending the exception stating that guardrails on bridges with a theoretical span of up to 10 metres may have the same capacity class as the connecting road guardrail instead of capacity class H2. We add that this applies where there is no risk of accidents due to high fall or deep water. This is also more consistent with the wording of the corresponding derogations in the VGU.

We consider that damage risk class C for roadways should only be applied exceptionally in case of rebuilding or other modification. As a starting point, safety barriers should meet requirements for injury risk class A or B, which we now specify in the general guidelines for Chapter 5, Section 34.

We also amend the reference to the standard concerning the energy absorption of safety barrier terminals in the general guidelines to Chapter 5, Sections 34 and 39, on the basis that the previous standard; SS-ENV 1317-4; Road restraint systems – Part 4: Performance classes, impact test acceptance criteria and test methods for terminals and transitions of safety barriers have been lifted. The standard has been replaced by technical specification CEN/TS 1317-7:2023 Road restraint systems – Part 7: Performance characterisation and test methods for terminals of safety barriers.

3.3.8 Delineator posts

Current regulations on delineator posts, the Swedish Transport Safety Agency's (TSVFS 1979:48) regulations on delineator posts, are found in the Swedish Transport Administration's Code of Statutes and not in the Swedish Transport Agency's Code of Statutes. They are therefore more difficult to find and to be aware of. The provisions that date from the 1970s are in need of linguistic modernisation and need to be reviewed in other respects as well. We therefore propose that, following review and certain adjustments based on the current requirements in the Swedish Transport Administration's requirements document VGU, the provisions be incorporated into the Transport Agency's building regulations and that the current provisions on delineator posts be repealed at the same time.

Since the users of the regulations relating to delineator posts are the same as those for the regulations relating to building regulations – and in both cases it concerns characteristics requirements of the road infrastructure – we consider that we can make it simpler for the users by combining the two statutes and thus reduce the number of statutes.

Through the rules, we want to achieve a high degree of uniformity, so that road users can recognise and more easily understand the meaning of the devices, and thus be given clear guidance. The purpose of the rules is therefore that it should look as similar as possible and that delineator posts should be clearly distinguishable from road traffic signs and other devices. The level of detail is therefore necessarily higher than is generally required for our building regulations – more similar to the Transport Agency's other regulations concerning road signage, i.e. road traffic signs, road markings and other devices in the Road Signs Ordinance.

Delineator posts, when in use, must be mounted along both sides of the road, but for natural reasons they do not always need to be mounted opposite each other. The regulations do not contain any provisions or guidelines on the longitudinal positioning of the posts, as this needs to be adapted based on the conditions at the location in question, such as intersection, speed on the road, curvatures, etc. In Figure 3 in the Annex which shows the location of delineator posts at intersections with splitter islands, the distance indications

have been removed compared with the corresponding figure in TSVFS 1979:48. We consider that this also needs to be adapted according to the conditions at the location in question, such as speed on the road, in order to achieve good guidance for road users and that this balance is therefore best done by the road operator.

The current regulations only allow for the appearance of delineator posts, which means that on the upper part of the post there must be a black 25 cm high band that slopes 30 degrees downwards to the road and thus points out the roadway on which the road user is to travel. The same appearance of delineator posts is also used in our nearest neighbouring countries. We believe that this should continue to be the basis for the appearance of delineator posts. However, we are changing the rules to allow a black frame or horizontal black band instead of a black sloping band on delineator posts that are mounted on barriers between different carriageways. An inclined band, when placed between different carriageways, with the same or opposite direction of travel, could give the road users of the various carriageways conflicting, or in the worst case directly erroneous, information and guidance. If a frame around the reflector is used, it shall be at least 20 mm wide to create good contrast. The frame may be performed with a 30-degree inclination towards the carriageway in the respective direction of traffic or at right angles. Which alternative appearance is most suitable needs to be determined based on the position of the delineator post in relation to the design of the road and thus becomes the responsibility of the road operator.

We propose a wording that means that delineator posts, when used, should be used to mark the road edge or carriageway edge. This opens up for use, for example, in the separating strip between the carriageway edge and the cycle path, see figure in Figure 9. If the delineator post is placed in the separating strip, it should be placed in a suitable location and not pose a danger to any group of road users.

Figure 9. Image showing placement in the separator strip between the carriageway edge and the footpath and cycle path. Please note, however, that the posts on the picture are not delineator posts.

We have considered opening up in the regulations for the use of delineator posts to mark safety barrier terminals. Based on the Swedish Transport Administration's response to the referral that this is not a solution that is relevant for the purpose, we have chosen not to proceed with such a change. Of course, barrier terminals can still be marked – but not with a delineator post or other retroreflector that has a appearance that can be confused with a device according to the Road Signs Ordinance (in accordance with Chapter 8, Section 4). Figure 10 shows examples of appearance that are similar to road traffic sign X3 and which must therefore not be used to mark barrier terminals.

Figure 10. "Safety barrier guard". Example of a device for which there is no legislative support because its appearance contravenes Chapter 8, Section 4 of the Road Signs Ordinance, which states that it is not permitted to erect a device that could be confused with a road traffic sign.

With these rules, we prescribe that delineator posts are a device that cannot be confused with road traffic signs and thus can be used without being contrary to the Road Signs Ordinance. If other devices are used, these must comply with the provisions of the Road Signs Ordinance. Of course, it may be necessary to use bollards, cones or other devices with reflectors other than delineator posts, but they must not be able to be confused with road traffic signs. Such use is contrary to Chapter 8, Section 4 of the Road Signs Ordinance. Surfaces which are unsuitable for driving on shall be marked with road traffic signs and other devices in accordance with the Road Signs Ordinance (see Chapter 8, Section 4 and Chapter 9, Section 1 in connection with Chapter 1, Section 3).

Instead of specifying fixed dimensions, we have chosen to specify the dimension ranges for the height and width of the delineator post and the lateral position of the post in relation to the roadside. We consider that there may be practical reasons why the dimensions may need to vary, for example if the delineator post is ground-based or barrier-mounted.

It follows from Chapter 5, Section 23, of TSFS 2021:122 that road devices such as delineator posts must be yielding.

3.3.9 Suicide prevention

Reducing the availability of physical suicide approaches in specific vulnerable locations has proven to be an effective way of preventing suicide. One reason for this is that suicide is often impulsive. A significant proportion of suicide attempts take place with a short time span between thought, suicide plan and suicide attempt. Several studies have shown that the time span for about 50% of cases was as short as 10 to 15 minutes[16]. This suggests that even if a person has suffered from mental health problems for a longer period of time, the decision to perform the suicide action could be triggered by something specific in their life. If it is then difficult to carry out the action in one place, the person will probably not search for another location. There is scientific support for the fact that specific bridges that have been equipped with effective suicide protection do not create a corresponding increase in suicide on adjacent bridges, even though in several cases they are within walking distance[17]. Other scientific studies carried out even show that a significant proportion, up to around 90%, of people who tried to take their lives and survived do not die as a result of suicide later in life[18].

[16] Deisenhammer *et al.*, 2008; Millner *et al.*, 2017 & Paashaus *et al.*, 2021, cited in Fredin-Knutzén *et al.*, 2023.
[17] Berman and others 2022, Sinyor and others 2017 and Perron and others 2013, quoted in Fredin-Knutzén *et al.*, 2023.
[18] Seiden, 1978 & Probert-Lindström *et al.*, 2020, cited in Fredin-Knutzén *et al.*, 2023.

A study carried out at the Swedish National Centre for Suicide Research and Prevention has mapped the bridges in Sweden with the highest number of suicides by jumping from a bridge. (see Table 1). It is mainly men who have died by suicide at these bridges. In total, 236 people, of whom 174 (74%) were men, died by suicide in the period 2008-2021. However, the distribution is similar to that of all suicides in the country as a whole, where 70% of all suicides are committed by men. Compared to overall suicide figures, most of those who die at bridges are younger, with an average age of 20–24, and the number decreases gradually with increasing age. This differs compared to suicide rate in general, where the most common age group dying by suicide is instead 45-64 years old.[19]

Table 1. Bridges which have had more than one suicide during the period 2008-2021.[20]

Bridge	Number of suicides
Älvsborgsbron	24
Västerbron	23
Angeredsbron	10
Götaälvbron	10
Tjörnbron	9
Ölandsbron	7
Skanstullsbron	7
Tranebergsbron	6
Årstabron	6
Öresundsbron	5
Oskarsbron	4
Dalbobron	3
Skurubron	3
Mälarbron	3
Högakustenbron, E4	3
Ångermannabron	2
Svinesundsbron	2
St. Eriksbron	2
Kungsängen, E18	2
Huvudstabron	2

[19] Fredin-Knutzén J, Andersson A-L, Hadlaczky G, Sokolwski M (2023). Suicide at bridges in Sweden. National Centre for Suicide Research and Prevention, Stockholm Region and Karolinska Institute.
[20] Ibid.

Saltsjöbron	2
Motalabron	2
Riksbron	2
Sundsvallsbron	2
Umeå, pedestrian and cycle bridge next to the old E4 road	2

The vast majority of bridges where suicides have occurred are located in urban areas (75%) or in peri-urban centres. Just under half of all suicides involved jumping into waterways, while the remainder occurred on solid ground of various kinds, such as other infrastructure or undeveloped land.[21]

The four bridges that have suicide prevention barriers and that have been analysed in the study showed a clear suicide preventive effect with an average reduction of suicides by 83%[22]. The positive effect of suicide protection on suicidal rates has also been observed in international studies[23].

Given that the main responsibility for these bridges is in both the state, municipal and private sectors, we have chosen to propose a regulation requiring the developer, i.e. the road operator, to examine whether there is a need for devices on bridges to counter suicide and, if so, to take appropriate measures.

A good device to prevent suicides:

1. is difficult to pass and to climb up on, and creates the impression of being difficult to pass;
2. covers the entire risk source;
3. is sustainable for the loads that can be expected;
4. enables rescue operations and maintenance.

In order to take into account the cultural values of the bridges, the view and transparency, their aesthetics should also be taken into account when selecting the physical measures.

[21] Fredin-Knutzén J, Andersson A-L, Hadlaczky G, Sokolwski M (2023). Suicide at bridges in Sweden. National Centre for Suicide Research and Prevention, Stockholm Region and Karolinska Institute.
[22] Ibid.
[23] See Okolie *et al.*, 2020 & Hemmer *et al.*, 2017, cited in Fredin-Knutzén *et al.*, 2023.

As a general guideline, the draft statute states that bridges with a height of 14 metres or higher, measured from an underlying land or water surface to the carriageway, should be provided with suicide prevention protection. The same applies to other bridges crossing a railway, tramway, metro or road with the maximum permissible speed of 60 km/h or higher if they are within or adjacent to a built-up area, near emergency hospitals or other healthcare bodies and the bridge is equipped with a footpath or cycle path.

There are several reasons why the height of 14 metres has been chosen. It is also the height chosen by the Swedish Transport Administration in its governing documents. Based on a compilation of known deaths that have occurred from high state bridges, the Swedish Transport Administration has concluded that the 'lowest' was about 15 metres high (it is, however, more common for the bridges to have been significantly higher than that). International publications also support this measure. In the publication 'Preventing suicides in public places. A practice resource', published by Public Health England, it is stated that jumping from a high altitude occurs, among other things, from buildings that are four floors or higher. This is estimated to be approximately 14-15 metres. If new knowledge emerges from, for example, new research in the area, the height may be adjusted by means of an amending statute.

It is not only high bridges that are used for suicide and suicide attempts. Viaducts over roads with high speeds and heavy traffic flows, usually dual carriageways, are also used. In these cases, it is usually not the height of the fall that caused the fatal injuries, but the subsequent collisions with motor vehicles. Analyses presented by the Swedish Transport Administration[24] show that two thirds of suicides between pedestrians and motor vehicles have taken place in or near urban areas. The viaducts from which people have jumped have been easily accessible to pedestrians and have in almost all cases been equipped with footpaths or cycle paths. The choice of speed ≥ 60 km/h is based on an assessment of current speeds on the types of roads that are relevant against the basis of available national suicide statistics.

Based on the new general guidelines on suicide prevention devices, we are also adding requirements and advice in Chapter 2, Section 24, regarding the load-bearing capacity of these devices, and in Chapter 5, Section 34, regarding their ability to withstand dynamic impact from people.

4. Who will be affected?

[24] Swedish Transport Administration (2017). 'Suicide in Road Traffic 2010-2015", Publication 2017:099.

We consider that our proposal primarily concerns developers in the form of road operators, mainly the Swedish Transport Administration and Sweden's municipalities. Private road operators are also affected if they manage roads where the annual average daily traffic (AADT) is estimated to exceed 125 vehicles during the opening year. The municipalities are also affected in two ways because they are both the developer and the supervisory authority of the rules in question under Chapter 8, Section 2 of the Planning and Building Ordinance.

In the case of enterprises, it is mainly the enterprises hired by the developers to design and dimension roads that are affected by the regulation. However, the regulation is considered not to affect the enterprises' commercial competitiveness. In Sweden, a handful of different consulting companies dominate this market, including AFRY, COWI, Ramboll, Sweco, Tyréns and WSP. For certain forms of construction and procurement, for example in the case of turn-key contracts, it is normally construction companies that design and plan the construction works in question. Examples of contractors that could then be affected are NCC, PEAB, Skanska and Svevia.

Citizens are also indirectly affected, as the regulation aims to increase safety in road traffic and promote health and the environment.

5. What are the impacts of the regulation?

5.1 Businesses

(x) The regulation is not deemed to significantly impact the working conditions, competitiveness or other conditions of enterprises. All consequences for companies are therefore described under 5.1.

( ) The regulation is deemed to significantly impact the working conditions, competitiveness or other conditions of companies. Therefore, the impact assessment does not contain a description under 5.1, but all the consequences for companies are described in Section C.

In a previous consultation round on the proposals for regulations on safety in road tunnels, the Swedish Better Regulation Council considered that the proposal on characteristics requirements for the construction works road tunnels had limited effects on companies and therefore declined to comment.[25] This proposal with characteristics requirements for the surface road network has the same scope in principle in terms of impact on those concerned. Therefore, our assessment is that the proposal does not have an impact on companies' working conditions, competitiveness or other conditions.

[25] The Swedish Regulatory Council's response to the Swedish Transport Agency's proposal for regulations and general guidelines on safety in road tunnels

The companies that, in our assessment, may be affected by the proposal are:

1. consultancy and contracting companies that plan and design roads and streets. It is estimated that this will be a handful of larger and another dozen smaller consultancy and contracting companies that are affected.
2. Manufacturers of road devices/equipment, such as delineator posts, mudguards or suicide prevention devices. It is unclear how many companies are affected by this as they could also be international companies.

The cost that may arise is when companies need to review the regulations to familiarise themselves with the requirements we propose and any minor updates that may be required by the developers' own regulations or procurement documents. Normally, regulations for developers change periodically so their general updating procedures are likely to take care of this. Any costs and benefits that the companies derive from the regulation have not been possible to evaluate. In general, the overall assessment is that companies are affected to a very small extent by the changes and that it is instead society’s costs that are most affected by the regulation.

Indirectly, we also see that the draft regulation concerning delineator posts can have a small impact on driving licence training courses and manufacturers of driving licence training materials who need to update their information. We have observed that driving licence training already seems to contain dated information on delineator posts.

5.2 Individuals

The regulation we are proposing ultimately aims to provide added value and increased benefits for citizens; for example, through increased accessibility and personal safety in the road system and a better and healthier traffic environment. In the long run, improved conditions for active modes of transport are expected to promote public health. The fact that society tries to prevent impulsive decisions that can lead to preventing suicide is also something that benefits both the individual and society as a whole. However, in this case it is difficult to assess the social alternative cost, which would therefore need to be further studied.

Developers for individual roads are affected by the proposal. However, the absolute majority of the individual roads are exempt from the requirements of the proposal as the regulations are voluntary to apply to roads with a traffic volume of less than 125 vehicles per day. The individual road operators who are nevertheless affected, such as the Öresund Bridge Consortium in the event that the motorway section across the Öresund is rebuilt or similar, will suffer

consequences similar to those of municipal and state road operators (as summarised in Section D).

5.3 The state, regional authorities or municipalities

We do not see any negative consequences in terms of unjustified cost increases arising from our proposed regulation as it is largely consistent with established practices already in use. We consider that it is reasonable to specify as society’s minimum requirements, in existing or adapted form, because it is based on proven experience or new and well-founded knowledge.

We further consider that without the proposed requirements there is a risk that these safety and health aspects are not given sufficient attention in design and construction. The opposite may also occur, that the requirements could be unjustifiably high, which, in turn, can lead to increased costs that are not economically justified. If there are no regulated requirements at a comprehensive level, there is a great need for investigations into the requirements that shall be set in each project. This can lead to unnecessarily long planning and construction processes.

When constructing new and amending existing infrastructure, it must be ensured that the infrastructure meets the prescribed requirements and has sufficient safety for the intended use so that it is accessible and does not pose a danger to the health and safety of persons. In order to monitor this, the municipal building board carries out supervision in accordance with Chapter 8, Section 2 of the Planning and Building Ordinance. The Building Board's supervision of compliance with prescribed property requirements when a road or street is built or modified applies regardless of whether the road is owned by the state or a municipality or whether it is a private road. The currently proposed regulation does not change that situation. The costs of supervision depend primarily on the level of ambition of the supervisory authority. The currently proposed regulation does not in itself force or give rise to any change in level of ambition. If there is any change at all in costs for municipalities in their capacity as supervisory authorities, it is reasonable that the costs reduce slightly due to a clearer regulatory framework to follow.

However, we see that road operators with their own regulations need to work on reviewing and, if necessary, amending them on the basis of the amended regulations.

5.4 Environment

The proposed amended regulation means, inter alia, an increase in the requirements on pedestrian and cycling infrastructure and aims to increase the attractiveness of, and thereby the proportion of, active journeys in the long term, i.e. journeys on foot or on a bicycle. The replacement of transport by motor vehicles with active modes of transport leads to increased public health and a better environment as a result of reducing the amount of noise, greenhouse gases and air pollutants.

5.5 External effects

The regulation we are proposing is expected to contribute to increased personal safety in road traffic with fewer deaths and serious injuries. We believe that our proposal to include requirements and general guidelines that take into account the needs of pedestrians and cyclists is a step towards improving accessibility for these groups of road users and thus increasing attractiveness, resulting in an improved environment and better health.

6. Summary of options considered and their consequences and why the draft regulation is considered the best option

6.1 Load-bearing capacity of road sign supports

We consider that the proposed amendment to Chapter 2, Section 20, concerning the load-bearing capacity of road sign supports will make it easier for municipal and private road authorities to understand how the regulatory requirements for the dimensioning of road sign supports, in terms of loads from ploughed snow and wind, can be met. It is also clearer when derogations from the rules may be made, as well as when no specific verification of load-bearing capacity needs to be carried out.

6.2 Mudguards protecting pedestrians and cyclists

The proposal for a requirement that mudguards, which prevent snow or liquid from the overlying roadway from splashing down pedestrians and bicycle users passing under a bridge, can be regarded as a relatively insignificant measure. However, the risk of getting or risk of being completely splashed by dirty storm water may be such an issue that a road user does not take the bicycle next time. The measure is also assessed as relatively simple and cheap. Corresponding rules are already contained in the Swedish Transport Administration’s requirements document for VGU[26], so for the state road network, the regulation does not have any impact. For the municipalities, VGU is not mandatory, but many still choose to follow this as design/layout practice. We consider that any cost increase in the choice of mudguards as railing infills is marginal in connection with new construction or rebuilding of the bridge or

[26] Swedish Transport Administration’s publication 2022:001. Requirements – VGU, Design of roads and streets, Section 7.3.4.7.1

the underlying footpath and cycle path, as the distance on which mudguards are to be positioned is so limited. It's a matter of a few (< 10) metres. This could possibly lead to a slightly increased need for operation and maintenance measures, but this is considered marginal overall and should be manageable within the existing frameworks.

6.3 Design of roads

The proposed regulation in this section aims to clarify the link between road design, traffic regulation and signage, which are regulated by statutory requirements in the Planning and Building Act, the Road Traffic Ordinance and the Road Signs Ordinance. In order for traffic interactions to work as efficiently and safely as possible, roads need to be built so that they are as self-explanatory and self-regulating as possible. This means that the design of the road needs to support:

- the road user – and any driver support systems – so that it is easy to understand where the further journey will take place and what interaction with other road users is expected (self-explanatory route); and
- the intended traffic regulation and marking to ensure good compliance with the speed limit and other rules (self-regulatory route).

It is difficult to predict the consequences of the proposed regulation, but we see that the level of requirements is very similar to the current construction practice/new construction standard. The requirements could lead to some road projects being more expensive and some being cheaper. However, our assessment is that the requirements can lead to increased cost-effectiveness as it will be cheaper to build correctly from the beginning. Since the regulations do not apply retroactively, i.e. the rules only apply to the construction and redevelopment of a road, the direct consequence of the amendments is primarily that road operators need to update their own regulatory framework so as to ensure compliance with the new requirements in future road projects.

6.4 Footpaths and cycle paths

The specified minimum widths on cycle paths strike a balance between setting requirements for increased safety when used for pedestrians and cyclists and not setting requirements that are so high that there will be conflicts with other objectives and societal benefits or that, in the worst case, there is a risk of creating an obstacle to new and remodelling infrastructure for pedestrians and cyclists. A continuous footpath and cycle path network is likely to be more important for increased use than a high standard on the paths. They do not in any way correspond to the standard that in many cases is desired by cyclists.

We have considered an alternative regulation with standard requirements involving broad cycle paths – which are of high standards in terms of accessibility, road safety and comfort – which the road operator would need to have special reasons for departing from. This would imply a low degree of autonomy for road operators regarding which standard fits best according to the conditions of the location, needs and economy. We believe that such a regulation is worse because it is not considered proportionate to impose the same requirements everywhere throughout the country. With a more flexible regulatory framework, more cycle paths for more people can be built, which is expected to create conditions for better accessibility and mobility for cycle traffic in terms of a coherent and comprehensive cycle infrastructure.

The proposed minimum dimensions are not considered to have a significant cost impact on road operators, as they are at the same or even slightly lower level than the current design advice[27]. Comparisons have been made against the existing design advice in the Swedish Transport Administration's VGU for the state road network and the GCM manual (2022) for municipal road operators. However, individual municipalities may have their own requirements. No inventory of the requirements in all of Sweden's 290 municipalities has been carried out. Individual road operators are not considered to be affected by the regulations. Where there is cycling traffic on a private road, it is probably mainly in the form of mixed traffic.

The development of actual bicycle infrastructure widths will be a task for the road operator on the basis of the regulations.

For the sake of completeness, we also want to point out that the regulations only set a minimum permissible level and that there can be many reasons, such as increased accessibility and comfort, to choose a higher standard.

6.5 Intersection design

We consider that the proposals for new requirements and general guidelines on intersection design have no or very little impact on the Swedish Transport Administration, given that the design is already being implemented using the proposed methodology. The design of municipalities is done in some part in the same way, but here the spread between different municipalities is greater. It may also need a greater measure of adaptation depending on the conditions at the location/within the municipality in question, for example, depending on traffic flows and location space available. Our view is that socio-economic efficiency is not always investigated by municipalities today, something that is now becoming a requirement. This is expected to lead to some additional work that is justified by increased cost-effectiveness because it will be cheaper to build correctly from the beginning. Since the majority of the text of the statute

[27] Movea 2023 Memo Minimum widths for cycle lanes

constitutes guidelines, and not requirements, we consider that for the country's road operators it mainly concerns recommendations that the developers, as well as society in general, benefit from being taken into account at the early stages of the planning and construction of the road. In this way, the need for more costly measures when the road or footpath and cycle path is already built can be prevented.

Developers who are not state or municipal developers usually do not build paved footpaths or cycle paths or roads with a traffic volume of 125 vehicles per day or more, which means that they are not covered by the regulations (under Chapter 1, Section 3).

6.6 Design of the safety zone

Our proposal provides for relief on the basis that the entire fencing system is deemed safe enough to be placed within the safety zone without a road restraint system. We consider that the vehicle fleet will be safer and do not see that this will lead to a deterioration of road safety. If anything, the change means lower costs for road operators.

With regard to new requirements that will mean that foundations, walls and concrete walls at the entrance to road gates and tunnels will need to be protected with road restraint systems to prevent fatal collisions in the event of a head-on collision with the wall, the following can be noted. According to information from the Swedish Transport Administration, there are products on the market that can be used. According to a rough cost estimate, the cost of a concrete railing (36 cm wide) for example is approximately SEK 3 000 per metre[28]. The cost is assessed as relatively small, given that these railings are set on a limited distance and represent a small part of the total cost of an infrastructure project where such a solution may be relevant. The benefit is deemed to exceed the cost in terms of the accidents we have had in recent years (see Section 3.3.6).

6.7 Road restraint systems

We do not change any requirements as regards the provisions relating to road restraint systems. On the other hand, we are making certain amendments to the associated general guidelines so that they better conform to current standards in the field. We see no consequences of this other than that the regulations become more accurate and that any questions about this, from those who are to apply the rules, can be straightened out.

[28] According to information in an email from a specialist at the Swedish Transport Administration.

6.8 Delineator posts

We have chosen not to impose requirements on when delineator posts are to be used, it is up to the road operators themselves to decide. The requirements are how they should be designed and positioned in relation to the road when they are used. The requirement level largely corresponds to the statutory requirements already in force, with adaptation based on the requirements that the Swedish Transport Administration places on delineator posts today in light of the fact that roads today are often designed with centre separation by centre railing – which was not the case in 1979 when the current regulations on delineator posts (TSVFS 1979:48) were adopted. Although the Swedish Transport Administration's requirements do not apply to municipalities, we believe that many municipalities voluntarily apply them and that the market, i.e. manufacturers of delineator posts, has adapted to these requirements.

Overall, we therefore consider that the amendments we propose do not have any consequences other than making the rules clearer and more modern. In addition, we assess that there is a reduced risk of

- differences in the appearance and placement of delineator posts in different parts of the country,
- and that other devices that could be confused with edge posts, road signs or other devices in accordance with the Road Signs Ordinance, or regulations issued pursuant to these, and for which there is no legal basis, will be erected instead.

6.9 Suicide prevention

We have chosen to propose an overall requirement that, in the case of reconstruction and new construction of bridges, an investigation should be carried out to determine whether there is a need for devices that counteract suicide. This assessment is deemed to generate a minimally increased marginal cost in light of all other investigation carried out during the design of bridges. On the other hand, any measures that may need to be taken to counter suicide will, of course, generate additional costs for the developer. Since the Swedish Transport Administration already has equivalent requirements as we propose as general recommendations in the draft regulation, the rules are not considered to have any consequences for the state road network other than making the rules clearer for those who are to apply them; in, for example, planning, design, construction and supervision. In particular, for municipal road operators, the rules may lead to cost increases in the case of the reconstruction or new construction of specific bridges. Based on the investigation that constitutes the reasons for the draft amending regulations (see Section 3.3.9), we consider that in these specific cases this is socio-economically justified and that the

developer himself best determines which measures are most suitable based on the conditions at the location in question.

We have also considered requirements for fencing to prevent people from entering motorways, expressways and similar high-traffic roads where pedestrian and bicycle traffic is prohibited, in or near urban areas. However, we see this as a smaller issue for the municipal and individual road network than for the state, and that this is therefore better addressed by the Transport Administration's own requirements than through regulations.

7. What authorisation is the Agency's right to make decisions based on?

Our decision-making right is based on Chapter 10, Section 6 of the Planning and Building Ordinance, which states that the Swedish Transport Agency may, after consulting the National Board of Housing, Building and Planning, issue the regulations necessary for applications concerning:

- load bearing capacity, stability and durability;
- safety in the event of fire;
- protection with regard to hygiene, health, and environment;
- safety in use; and
- protection against noise.

This right of decision applies to railways, metro systems, tramways, roads and streets and their associated facilities.

8. Is the regulation consistent with or does it exceed the obligations arising from EU law or other international rules?

There is no common EU regulation on the technical characteristics of construction works and therefore we provide for a national regulation based on authorisation in the Planning and Building Ordinance.

We consider that the proposal does not create obstacles to the free movement of goods, capital, services and persons under Union law.

The proposed amendments will, after consultation, be notified to the Commission in accordance with the current procedure for the provision of information in the field of technical regulations in Directive (EU) 2015/1535 of the European Parliament and of the Council, implemented in Sweden by the Ordinance (1994:2029) laying down technical rules.

9. Does special consideration need to be given regarding the date of entry into force, and is there a need for special information initiatives?

The regulations should enter into force as soon as possible in order not to delay the benefits.

We consider that no other targeted information efforts need to be undertaken other than that the external consultation is distributed widely and directed to the authorities, companies, organisations etc. that we consider to be directly or indirectly concerned or may have views on the draft regulation. We hope that these organisations, in particular the Swedish Transport Administration, the Swedish Association of Local Authorities and Regions (SKR) and the National Association of Private Roads (Riksförbundet Enskilda Road, REV), will also help us to disseminate the information. Information will also be posted on the Swedish Transport Agency's website.

B. Transport policy effectiveness

The overall goal of Swedish transport policy is to ensure a socio-economically efficient and long-term sustainable transport supply for citizens and businesses throughout the country. Under the overall goal, there are performance objectives and health, environment and safety (HES) objectives with a number of prioritised areas.

The performance objective is to create accessibility for people and goods. The design, functioning and use of the transport system shall help provide everyone with basic accessibility, with good quality and usability, as well as contribute to the development dynamic across the whole country. At the same time, the transport system must uphold the value of equality, meaning it must meet the transport needs of both men and women in equal measure.

The HES objective concerns health, environment and safety. The design, functioning and use of the transport system shall be adapted so that no one is killed or seriously injured. It shall also contribute to the overall generational goal for the environment and achieving the environmental quality goals, as well as contribute to increased health.

10. How does the regulation affect the performance objective?

We believe that the proposed regulation can contribute to better accessibility and passability, not least for pedestrians and cyclists. In addition, the regulation contributes to us having a minimum level that is common to the entire country. Women use the walking and cycling road network and public transport to a

greater extent than men, who travel by car[29]. The same applies to groups with lower incomes[30]. Therefore, increased requirements for walking and cycling infrastructure can contribute to gender equality and equality in the transport system. The ability of children to use the infrastructure themselves, in a safe way, can also be increased.

11. How does the regulation affect the HES objective?

We consider that the proposed regulation on safety in the use of roads and streets positively affects the objective of adapting the design, functioning and use of the transport system to protect human life and health. Increased requirements for the physical infrastructure, not least on walking and cycling infrastructure, are expected to lead to increased safety, security, accessibility, passability and, in the long run, improved conditions for increased active travel – which in turn can lead to environmental, climate and health benefits.

C. Businesses

The regulation is not deemed to significantly impact the working conditions, competitiveness or other conditions of companies. All impacts on enterprises are therefore described under 5.1.

D. Summary of impacts

[29] https://www.folkhalsomyndigheten.se/contentassets/9621865e6bbc4d2c94ea689596bc73e3/r200831_aktiv_transport_08111.pdf
[30] https://www.sverigesmiljomal.se/etappmalen/andelen-gang--cykel--och-kollektivtrafik/

Affected party	Impacts that cannot be quantified		Quantified impact (SEK thousands)	Bemerkung
	Advantages	**Disadvantages**	**+ / -**	
Businesses				
Individuals/citizens	Increased safety and passability, and higher perceived safety for road users			
The state, municipality, etc.	Clearer rules and advice can simplify procurement and construction	There may be some increased costs for design, construction and operation/maintenance.		We consider the proposed regulation to be balanced and cost-effective.
External effects	Safer, more secure and more accessible buildings result in lower costs for society in the long term through improved health and fewer fatalities and injuries in the transport system.			
Total score	+++	-		

E. Proportionality of the draft

We consider the regulatory proposal to be proportionate because we consider that the proposed amendments are not very far-reaching and that they focus on modernised or function-based requirements and are well-balanced and justified on the basis of the social benefits they are expected to bring.

The regulations shall apply to new construction and rebuilding and other amendments – but not to maintenance measures – and thereafter the requirements shall be assumed to continue to be met over an economically reasonable life with normal maintenance in accordance with Chapter 8, Section 5 of the PBL. In the event of an amendment, however, the requirements may be adapted and deviations from the requirements may be

made taking into account the scope of the measure and the conditions at the location in accordance with Chapter 8, Section 7 of the same Act.

F. Follow-up and evaluation

It is generally difficult to see the effects of physical measures in the transport infrastructure in the short term. Since the regulations relate to building regulations that are to be applied only in the case of new construction and rebuilding – and not existing construction – it will take extra time for the positive effects to be measurable. It is also the case that society is implementing several measures simultaneously with the aim of achieving the transport policy objective. This makes it challenging to measure the impact of an individual and isolated action.

As regards, for example, suicide prevention, and specific suicide prevention on bridges, it is possible to gather data on the frequency of suicide before and after a measure, respectively. In a way, however, this has already been done, at least in specific locations – as explained in Section 3.3.

Similarly, it would be possible to measure road safety effects (on the basis, for example, of STRADA data), to carry out travel habits or traffic surveys before and after the conversion of, for example, footpaths and cycle paths in a few different locations. However, we do not see that any such examination currently falls within the authority's financial framework.

Of course, the actual compliance with the rules is also appropriate to follow up – otherwise the rules will not have the desired effect – but it is appropriate for such follow-up and evaluation to be the responsibility of the supervisory authority, in this case the municipal building committee.

G. Consultation

In accordance with Chapter 10, Section 6 of the Planning and Building Ordinance, the Swedish Transport Agency must consult the Swedish National Board of Housing, Building and Planning before the regulations are issued. The Swedish Transport Agency has had an on-going dialogue with various interested parties, such as the Swedish Transport Administration and SKR on various issues during the development of the legislative proposal. However, formal consultation takes place in connection with an external consultation round.

If you have any questions regarding this impact assessment or any opinions you would like to share, please contact us:

Karin Edvardsson
Investigator
Email. karin.edvardsson@transportstyrelsen.se
Tel. 010-495 56 01

Björn Mattsson
Investigator
Email. bjorn.mattsson@transportstyrelsen.se
Tel. 010-495 49 85

Marie Malmenius
Investigator
Email. marie.malmenius@transportstyrelsen.se
Tel. 010-495 56 65

Jonas Malmstig
Lawyer
Email. jonas.malmstig@transportstyrelsen.se
Tel. 010-495 56 85