

### **The manner of determining the categories of railway lines for the purpose of calculating the unit rate of the basic fee for the minimum access to railway infrastructure**

The rules for determining the categories of railway lines remain unchanged with respect to the rules applicable within the train timetable 2016/2017.

The category of a railway line is determined for each section of a railway line specified in the appendix to the instructions "List of lines Id-12 (D-29)". The category of a railway line was determined on the basis of permissible technical speed taking into account permanent restrictions and average daily train traffic.

The weighted average maximum speed (separately for passenger and freight trains) taking into account permanent restrictions, calculated for a section of a railway line, was assumed as the permissible technical speed of a railway line, characterising the technical standard of the section of a railway line which was made available. Average values of permissible technical speed for a section taking into account permanent restriction, separately for even and odd directions, are calculated on the basis of data included in the POS database (Running Network Specification) for the train timetable 2017/2018 and the adopted algorithm taking into account the nature of the restriction (permanent or local) as well as the assumed average length of a passenger and freight train. For the purpose of determination of the category of a section, the lower value of the calculated values of average permissible technical speed is selected, i.e. in case of a single-track line the lower of the 2 calculated values for even and odd directions, and in case of a double-track line the lower of the 2 calculated values taking into account the speeds for track 1 and 2 for even and odd directions.

After determining the average permissible technical speed we evaluate whether the speed constituting the lower limit of the determined range is applicable for at least half of the length of tracks of the selected direction for which a speed was assumed for the purpose of determining the category. If the above conditions is not met, the category resulting from the speed is lowered by 1 category, and then the condition is re-evaluated.

Average daily train traffic is determined taking into account the average daily load of railway lines sections in 2016 and it is specified per 1 km track.

The category of a railway line is determined separately for passenger and freight trains as a weighted average from the range of  $\langle 1.5 \rangle$ , rounded down to the nearest whole number, of the following:

- the category resulting from the maximum speed for passenger or freight trains taking into account permanent restrictions - weight: 60%,
- the category resulting from an average daily passenger and freight train traffic per 1 km track - weight: 40%.

**Ranges of values for individual categories have been summarised in the tables below:**

#### **Passenger trains**

Parameter determining the category of railway line	Values of parameters				
	1	2	3	4	5
Average permissible technical speed for passenger trains	$0 < V_{max} \geq 40$	$40 < V_{max} \geq 80$	$80 < V_{max} \geq 100$	$100 < V_{max} \geq 120$	$V_{max} > 120$
Average daily traffic of passenger and freight trains per 1 km track	$0 < N \geq 6$	$6 < N \geq 10$	$10 < N \geq 20$	$20 < N \geq 40$	$N > 40$

**Freight trains**

Parameter determining the category of railway line	Values of parameters				
	1	2	3	4	5
Average permissible technical speed for freight trains	$0 < V_{max} \geq 40$	$40 < V_{max} \geq 60$	$60 < V_{max} \geq 80$	$80 < V_{max} \geq 100$	$V_{max} > 100$
Average daily traffic of passenger and freight trains per 1 km track	$0 < N \geq 6$	$6 < N \geq 10$	$10 < N \geq 20$	$20 < N \geq 40$	$N > 40$