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Adaptation of working conditions for vehicles drivers on public transport lines on the example of Wrocław

Abstract: City policy focuses on prioritizing public transport. Actions related to the improvement of infrastructure, as well as modernization and replacement of rolling stock, are being implemented. However, improving the quality of public transport means not only investing in facilities and modern solutions for passengers but also ensuring the comfort of work for people directly carrying out transport tasks. The regulation in force from 2022 imposes on carriers the obligation to provide toilets and social points for drivers and tram drivers. The legislator has defined general guidelines. The article presents a possible interpretation of the introduced regulations on the example of tram and bus infrastructure in Wrocław. The need to install toilets and social points in selected locations was analyzed and the costs of the above project were estimated.

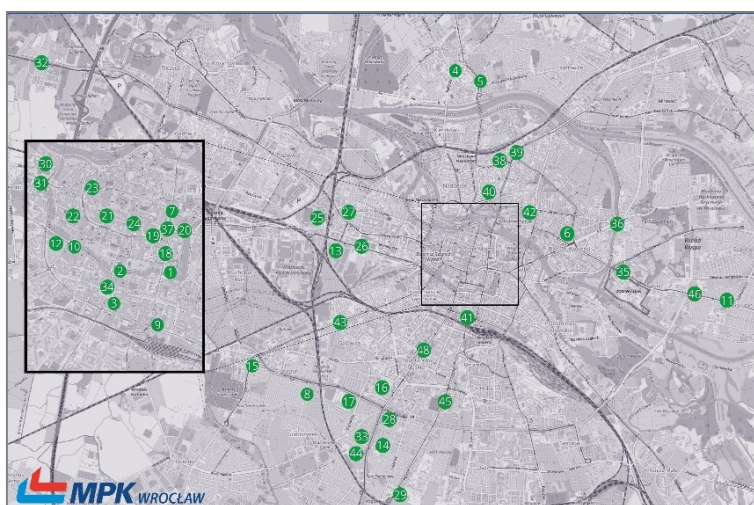
Keywords: Public transport; Social points

Introduction

Wrocław is continuously taking actions aimed at broadly improving public transport, including infrastructure, rolling stock, and functionality. The scope of activities classified as Smart City initiatives in the transportation sector is highly complex and is being continuously developed. The goal is to encourage all users—both residents and tourists—to utilize public transport.

Improvement of Public Transport Infrastructure

Following a 2020 tram track audit commissioned by the municipality [9], which identified several irregularities, a tram track modernization program has been implemented. The program involves year-round efforts to improve tram infrastructure, ranging from routine maintenance to major overhauls [17], as illustrated in Figures 1 and 2.



1. Location of 48 investment activities undertaken in the field of tram infrastructure in Wrocław in 2020-2022 [3]



2. Location of the 8 planned investment tasks in the field of tram infrastructure in Wrocław for 2023 [3]

The Municipal Public Transport Company (MPK Sp. z o.o.), responsible for public transport in Wrocław, is striving for a complete modernization of its fleet. The recently introduced fully low-floor tram model Moderus Gamma LF 07 AC includes several features to enhance passenger comfort and accessibility, such as:

- Passenger space adaptation to accommodate a person in a wheelchair, a parent with a stroller, and a designated area for a guide dog,
- Handrail markings with orange LEDs to help visually impaired passengers locate them more easily,
- Ergonomic driver's cabin with well-positioned buttons and partial integration with the armrest for a more comfortable operation,
- Full air conditioning for improved passenger comfort,
- Wheel flange lubrication system to reduce wear and noise,
- Modern event recorder for enhanced safety and monitoring,
- Dynamic passenger information system provided by SiMS,
- Energy-efficient SiC (silicon carbide) drive system, which is lightweight and reduces energy consumption.

Thanks to funding from the National Fund for Environmental Protection and Water Management and favorable agreements made earlier, MPK Sp. z o.o. in Wrocław signed a contract in 2022 for the purchase of 13 electric vehicles. The planned Mercedes-Benz e-Citaro is a fully electric bus. It is worth noting that electromobility in public transportation, particularly with electric buses, is a key topic for the future.

In terms of functionality and passenger convenience, Wrocław has introduced several improvements, including:

- Real-time vehicle tracking (Figures 3 and 4) [2],
- Park & Ride facilities located near transport hubs, allowing free parking for users with a valid public transport ticket (e.g., a daily pass),
- Increased accessibility of public transport, including the construction of Viennese-style tram stops and better-organized transfer hubs [16],
- Priority for public transport, supported by the Intelligent Transport System (ITS) for more efficient traffic management).

A	C	D	K	N	100	101	102	103
104	105	106	107	108	109	110	111	112
113	114	115	116	118	119	120	121	122
124	125	126	127	128	129	130	131	132
133	134	136	140	142	143	144	145	146
147	148	149	150	151	206	240	241	242
243	244	245	246	247	248	249	250	251
253	255	257	259	315	319	602	607	

1	2	3	4	5	6	7	8	9
10	11	15	16	17	20	23	31	32
33	70	74						

3. The website of the Wrocław carrier enabling viewing the location of vehicles on a given tram or bus line.



4. After selecting a given tram or bus line number, it is highlighted. On the city map, you can see the current location of the indicated line number. This is undoubtedly a helpful method when planning a trip.

One of the fundamental responsibilities of local government units is the organization of public transport to meet the mobility needs of residents. According to the law [20], the document that regulates the organization, operation, and financing of regular passenger transport within the city and metropolitan area is the Sustainable Public Transport Development Plan. However, ensuring the proper functioning of public transport is not only about passenger comfort but also about the working conditions of drivers.

The primary duty of public transport drivers and tram operators is to transport passengers according to the timetable. Their key responsibilities also include the proper preparation of the vehicle before departure and its secure parking after completing the route [7, 8]. In addition to complying with traffic regulations and internal operating procedures [4, 5, 15, 21], they are responsible for:

- Ensuring the technical condition of the vehicle,
- Assisting passengers with special needs when boarding and exiting,
- Maintaining constant awareness to provide safe and reliable transport services [10].

Similar regulations apply in other cities such as Warsaw [23], Białystok [24], Łódź [6], Siedlce [12], and Lublin [11]. Given the wide range of duties, efforts are made to provide the best possible working conditions for public transport operators.

According to Article 49a of the amended law (effective from June 9, 2023) [20], public transport drivers and tram operators are granted the same legal protection as public officials. Additionally, under the Labor Code [22] and the Drivers’ Working Hours Act [19], they are entitled to breaks as follows:

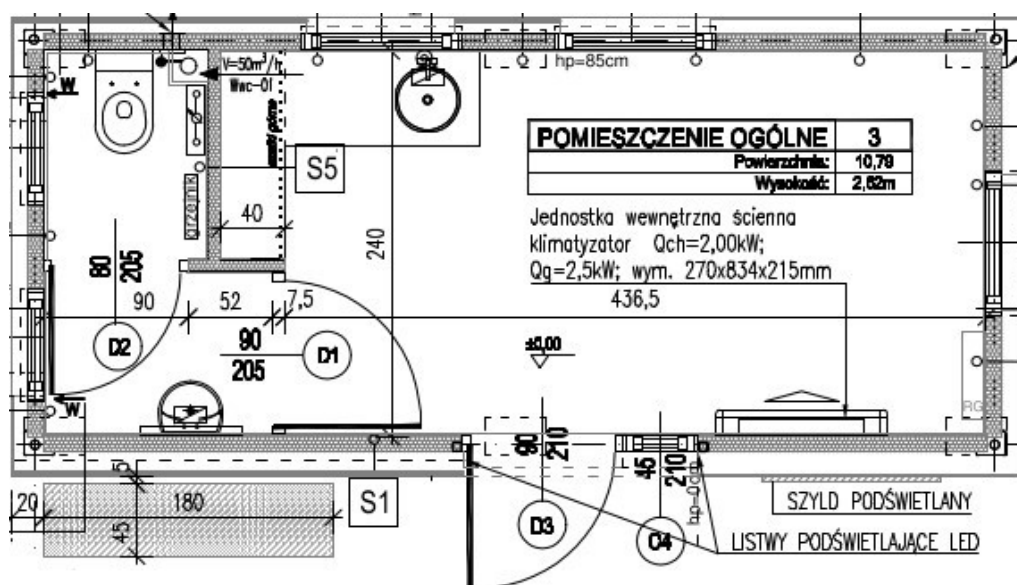
- At least 30 minutes when the total driving time is between 6 and 8 hours per day,
- 45 minutes when the total driving time exceeds 8 hours.

Previously, the law did not specify the length and frequency of breaks [1]. The newly introduced regulation clearly states that the public transport organizer must schedule timetables in a way that allows drivers to take necessary breaks to meet their basic physiological needs.

In Wrocław, there are 37 designated social facilities for public transport drivers and tram operators. These facilities primarily consist of basic restrooms, and in some cases, social rooms. They are categorized as:

- Independent facilities,
- Rented premises.

Until now, the design and equipment of these social points had not been clearly defined. The newly developed documentation, covering the planned facilities in Wrocław for the coming years, specifies basic equipment for both the social area and the restroom facilities (Figure 5).



5. The current standard project of a container social point implemented in Wrocław

The regulation that came into effect on April 20, 2022, imposed an obligation on transport operators to ensure appropriate working conditions for tram and bus drivers [14]. Under this legal act, operators have 36 months to adapt basic restrooms and social facilities to the specified requirements.

In Wrocław, existing standards must be updated to include not only kitchen appliances but also appropriate sanitary equipment. According to the regulation, a social facility must include:

- A sink and a washbasin with running hot and cold water,
- Drinking water (dispenser),
- A kettle for boiling water,
- A microwave for heating meals,
- Seating for employees.

Adding meal-heating devices to existing and planned facilities is a new requirement, though it is unlikely to pose a significant challenge. However, compliance with this new standard must be ensured.

A more critical issue is the requirement for proper sanitary fixtures. According to the regulation, every basic restroom must be equipped with:

- A toilet seat,
- A washbasin,
- A urinal.

Existing restroom designs in Wrocław did not include urinals, and previous plans did not account for this requirement. The regulation does not clarify whether existing facilities must be adapted, and in most cases, modification is not feasible. The only practical solution may be to design and construct new facilities.

A social facility, even in the form of a container unit, is classified as a public utility building and is considered permanently connected to the ground if installed for more than 180 days. This requires:

- A building permit,
- Additional approvals from relevant authorities.

Most social facilities in Wrocław are placed within road zones or in areas protected by historical conservation laws. As a result, approval is required for:

- Water, sewage, and electrical connections (ZUDP),
- Consent from property owners,
- Approval from the heritage conservation office,
- City architect approval,
- Modification of the zoning plan (if public transport facilities are not explicitly included).

According to the regulation [14], transport operators must ensure the following:

- Basic restrooms – Available at least every 180 minutes of work,
- Social facilities – Available at least every 240 minutes of work.

Additionally, both restrooms and social facilities must be within 250 meters of the designated vehicle stop, measured along the shortest walking route.

The regulation does not specify how operators should calculate working hours when determining facility locations. As a precaution, it is assumed that these facilities must be placed at all terminal stops (loops and end stations).

The regulation does not address temporary vehicles, such as emergency transport units stationed around the city. For trams, these are typically located on reserve tracks. It is likely that § 46, section 5 applies, allowing the use of portable toilets, which should be included in planning.

The regulation does not define the term "persons" mentioned in § 46, section 4. The requirement states that separate restrooms (men's and women's) must be provided if more than 10 people are present at a transport terminal.

Since the definition of "persons" is not clarified, transport operators can interpret it flexibly to avoid unnecessary costs and infrastructure.

For example, at Oporów Terminal in Wrocław, the following vehicles are present:

- 3 trams at passenger boarding platforms,
- 3 trams waiting for platform access,
- 1 tram at the alighting platform,
- 4 buses at two double platforms.

A literal interpretation would require separate restrooms, significantly increasing costs. However, since the regulation is not explicit, a more practical approach is to count only drivers and tram operators actively present at passenger boarding platforms (Figure 7). This excludes drivers waiting at alighting platforms or in standby vehicles, thereby reducing unnecessary restroom requirements.



6. Resistance Loop, number of vehicles including the vehicle on the platform for getting off and vehicles waiting to enter the platforms, 11 in total.



7. Resistance Loop, number of vehicles without a vehicle on the platform for getting off and vehicles waiting to enter the platforms, 7 in total.

A preliminary analysis indicates that 20 bus routes in Wrocław lack dedicated social facilities. Additionally, almost all of the 37 existing facilities require adaptation to comply with new legal requirements. Some of the current facilities may no longer be suitable for use due to significant deficiencies.

The proper planning of new facility locations is essential. In some cases, a single social facility may serve multiple routes within a shared terminal.

- The average cost of installing a new container-based facility, including a restroom and all necessary documentation and approvals, is approximately 250,000 PLN (gross) per unit.
- Renting premises from third parties, as permitted under § 46, section 9, costs around 200 PLN (gross) per month. However, most of these facilities do not meet the new legal requirements.

Meeting these new regulatory obligations requires significant financial investment.

Summary

With the introduction of new regulations, public transport operators responsible for urban and intercity transport are now legally required to ensure adequate working conditions for bus and tram drivers, specifically regarding restrooms and social facilities.

To comply with the new requirements, the following actions must be taken:

1. Conduct a detailed analysis of existing and planned transport routes to determine which terminal stops require new social facilities.
2. Adapt existing facilities to meet the updated legal standards.
3. Ensure social facilities are included in temporary timetables when short-term service changes occur.
4. Modify timetables to ensure that drivers and tram operators can take their required breaks in accordance with the frequency specified in the regulation.

A major controversy surrounding these new requirements is the financial responsibility for implementing the necessary infrastructure.

- In the case of Wrocław, the Municipality of Wrocław (as the transport organizer) should be responsible for funding these facilities, not the transport operators.
- Operators provide transport services based on contracts and should not bear the costs of building supporting infrastructure [18].

This issue remains unresolved, and a clear funding strategy needs to be established to comply with the new regulations without financially burdening transport operators.

Source materials

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