



Annual report 2021



PUBLIC ROADS AUTHORITY



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Prefaces

Dear All,

working in the local government means the necessity to take up new challenges. Pandemics, failures, and now war in our neighboring country, the effects of which we are also feeling, are huge obstacles that stand in the way of a harmonious implementation of our plans. However, we are determined to consistently strive for Warsaw to become more and more modern, and at the same time to be a safe, comfortable, friendly city accessible for everyone.



Mayor of Warsaw
Rafał Trzaskowski

Investments carried out under The New Center of Warsaw program fit into this vision. The year 2020 was an introduction to changes in Śródmieście, but it was in 2021 that the works started in a full swing and everyone can already see their progress. We started the modernization of the so-called "Five Corners Sq.", which is being transformed from a place dominated by cars into a pedestrianized, greener and more aesthetic space. The Dmowskiego Roundabout is also undergoing a metamorphosis, where new pedestrian crossings are being built – to make pedestrians feel more comfortable and the heart of the city a place better adapted to the needs of thousands of passers-by, including people with prams, on wheelchairs, and people with disabilities. Soon, we will dress the entire Marszałkowska St., Jerozolimskie Av. And Krucza St. in a new robe, with a large dose of green color. The most important downtown arteries will become beautiful, green spaces as in a modern city.

Similar changes are also awaiting Praga, which has been consistently revitalized in recent years. We are starting the construction of the first pedestrian and bicycle bridge in Warsaw, which will connect the left and right bank of the capital city center, bringing Praga closer to Powiśle and contributing to its further positive changes. Along with the construction of the bridge, the most important streets of Praga, in the lead of Okrzei St. that directs us to the new Vistula bridge, are waiting for renovation.

From a financial point of view, the most awaited task in 2022 will be the replacement of all lamps on the main streets of Warsaw. Installation of nearly 40,000 energy-saving LEDs per year will allow us to leave as much as around PLN 23 million in the municipal cashbox, and then allocate this amount to other needs of Warsaw citizens. With galloping prices and inflation, this is a project that gives us special satisfaction.

A new challenge for the Public Roads Authority (ZDM) will be a closer cooperation with private investors in the reconstruction of roads. It is also part of a strict financial policy for difficult times. In the autumn of 2021, I introduced a new, simpler procedure and entrusted Public Roads Authority with the supervision of its implementation. We want investors to be able to efficiently complete the formalities, but also to guarantee their contribution to the expansion and adaptation of the road system to new buildings. This is especially important now, when the housing market is growing faster and faster.

Big tasks will not overshadow the smaller ones. We will continue to take care of the renovation of road surfaces and pavements – here I am counting on the citizens' participation regarding their needs and priorities. I am convinced that thanks to a well-thought-out strategy and consistency in its implementation, together we are creating Warsaw for everyone – a capital where you want to live, work and spend your free time pleasantly.

Dear All,

the goal of our work is clear: to provide the citizens and visitors of the capital with a safe and comfortable road infrastructure, while ensuring quality of the public space. This is our aim when we plan to rebuild and renovate subsequent road sections. In the difficult, pandemic 2021 year, we focused on ensuring that the implementation of already undertaken and new investments should continue without downtime.



Director
of the Public Roads Authority
Łukasz Puchalski

We are planning road reconstructions in such a way that they are comprehensive. The flagship example is the so-called "Beltway" of Gośćków. We extended the creation of bike lanes on Meissnera St. and Umińskiego St., which was part of the civic budget submitted by the residents, by ordering the parking. Thus, we improved safety in the area of pedestrian crossings by implementing solutions indicated during the road safety audit. We started introducing similar changes on Abrahama St. The whole project will be crowned with new and lush greenery, which for me is an inseparable element of every city street.

The changes to Sokratesa St. are also following this direction. An overriding goal is to improve safety, which we will achieve by a model traffic calming: a narrower roadway cross-section, chicane and pedestrian refuge islands. But the street will also gain new pavements and a bicycle path, as well as a line of trees and rain gardens, so important in the era of a changing climate.

Our efforts to improve road safety gained recognition not only in Warsaw. The European Commission appreciated the comprehensive road safety audit we performed, nominating Warsaw for the EU Urban Road Safety Award. Additionally, it motivates us to implement the recommendations resulting from the audit.

When renovating the next kilometers of roadways, pavements and bicycle paths, we remember to improve accessibility by lowering curbs, installing characteristic yellow tactile plates or replacing stairs with ramps. We are continuing to replace lighting with a modern one that allows not only to save energy, but most of all to improve road conditions after dark.

We are trying to use smart city solutions as much as possible. We extended the e-control system in the paid parking zone to another six cars and we already have nine of them. The zone itself was extended to include other areas in order to protect residents from the excess of parked cars. We were speaking with residents about how the zone should look like during several dozen meetings and on duty hours.

I appreciate the dialogue with citizens of Warsaw, because it is thanks to them that we know best how to conduct our works to suit the needs of users. Thank you very much for valuable tips and suggestions. I would also like to thank the employees of the Public Roads Authority and contractors, as well as councilors and city authorities. Thanks to their support, it was possible to face new challenges.

I hope that next year it will be the same, and in terms of the number of completed investments – even better. Reassuring this, I invite you to get to know our achievements of 2021.

Table of contents

1

Introduction

- 2 Introduction
- 7 ZDM in numbers
- 8 2021 in numbers

2

The New Center of Warsaw

- 12 “Five Corners Sq.”
- 14 Green Marszałkowska St.
- 16 Dmowskiego Roundabout
- 18 Jerozolimskie Av. and Krucza St.
- 20 Pedestrian and bicycle bridge to Praga

3

Renovations and modifications

- 24 “Beltway” of Gocław
- 26 The intersection of Wilanowska Av. with Kosiarzy St. and Sarmacka St.
- 28 Sokratesa St.
- 30 Idzikowskiego St.
- 32 Developer projects
- 34 Road Surface repairs
- 36 Pavement repairs
- 38 Providing streets with more greenery
- 40 We improve accessibility
- 42 New bike routes

4

We modernize the lighting system

- 46 Street lighting
- 48 Road junctions
- 50 Tunnels and underground passages
- 52 Plans for the future

Safety

- 56 Traffic speed measurements
- 58 Changes in traffic organization
- 60 Traffic lights
- 62 Integrated Traffic Management System

Routine maintenance

- 66 Emergency Breakdown Services
- 68 Bridge and engineering structures
- 70 Underground parking lots
- 72 Right of way
- 74 We remove illegal advertisements
- 75 We sell removed cars
- 76 Municipal Information System

Development and projects

- 80 Development of the MPZ
- 82 E-control
- 84 New rules of cooperation with developers
- 86 Veturilo
- 88 Winter illumination

We are available for you

- 92 Public consultations
- 94 Civic budget
- 96 Efficient handling of notifications from citizens
- 98 The Public Roads Authority behind the scenes

5

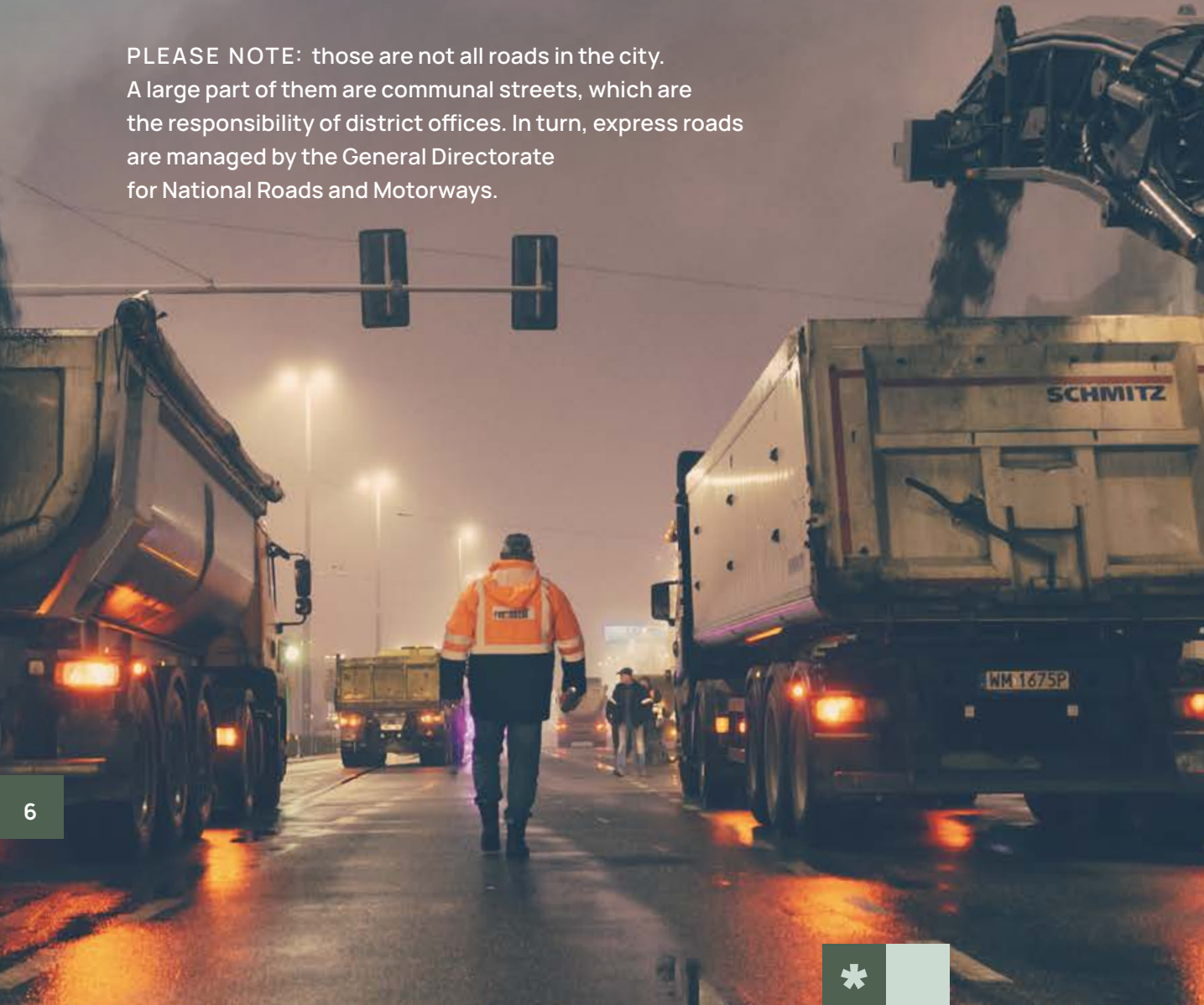
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7

8

✱ The Public Roads Authority manages 789 km of roads in Warsaw.

PLEASE NOTE: those are not all roads in the city. A large part of them are communal streets, which are the responsibility of district offices. In turn, express roads are managed by the General Directorate for National Roads and Motorways.



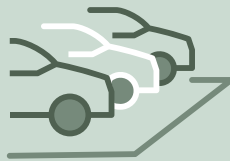
IN 2021, WE STARTED TO MANAGE THE FOLLOWING STREETS:

- a sequence of Rosnowskiego St. and Korbońskiego St. on the section from Relaksowa St. to Drewny St. – 1,430 m
- I. Gandhi St. on the section from Pileckiego St. to Płaskowicka St. – 630 m
- Relaksowa St. on the section from Rosnowskiego St. to Wąwozowa St. – 380 m
- Unicka St. (after extension to Łokietka St.) – 300 m

ZDM in numbers



862 intersections and pedestrian crossings with traffic lights



51,600 parking places in the Metered Parking Zone



95,300 signposts, boards and maps of the Municipal Information System



117,156 streetlights



121,534 luminaires



1.1 m Energy-saving eco-LED diodes in winter illumination



708 km of bike routes



539 bridge and engineering facilities



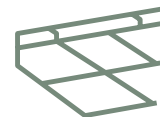
589 employees

2021 in numbers



122,100 m²

of renovated roadways



18,500 m²

of renovated pavements



38

km of built and renovated bike routes



4,636

new luminaires – on the streets, road junctions, in tunnels and underground passages



611

new streetlights



31

new or renovated traffic lights



21

intersections added to the Integrated Traffic Management System



167

planted trees



605

removed failures directly threatening the traffic safety



17,700

controls of the right of way



630

removed illegal advertisements

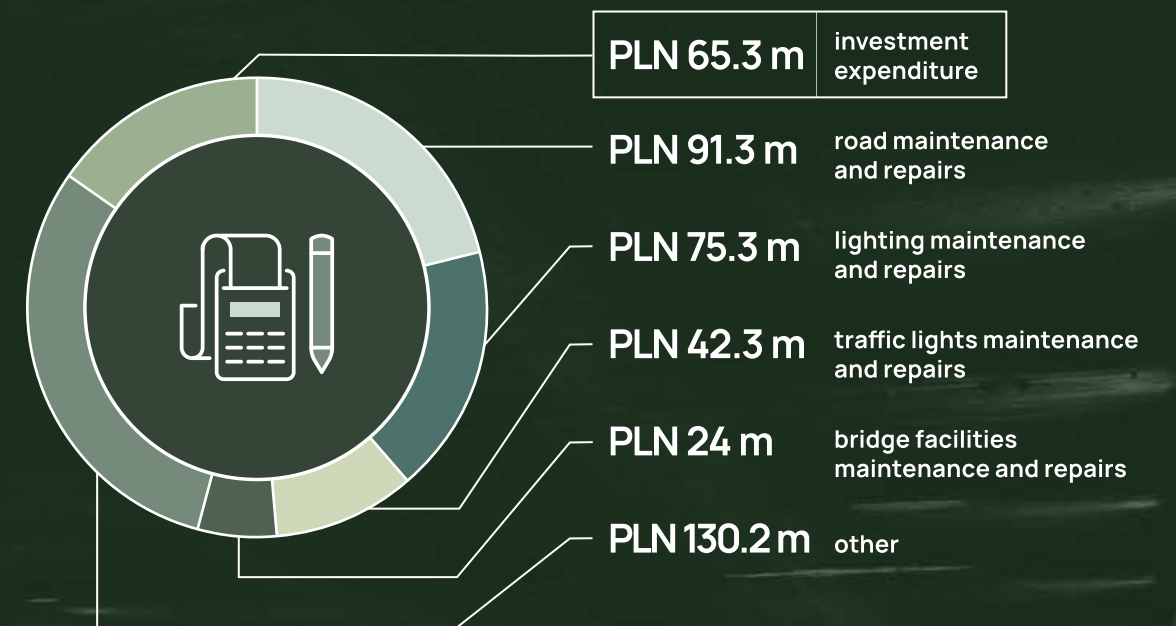


3.3 m

Veturilo city bike rentals

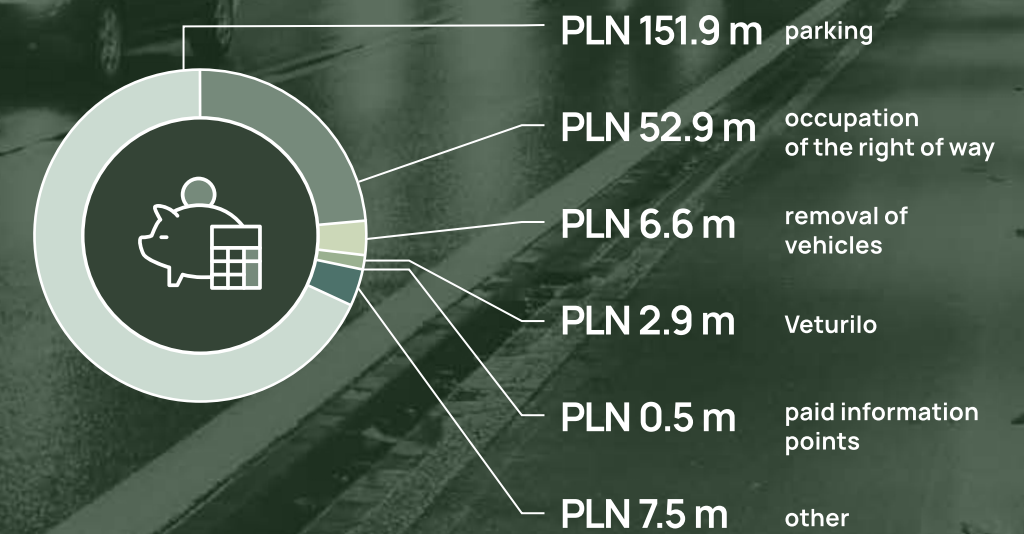
Total expenses in 2021 PLN 428.4 million

including:



Total proceeds in 2021 PLN 222.3 million

including





The New Center of Warsaw

The New Center of Warsaw is a comprehensive program which aims at making this part of the city sustainable, friendly and accessible to everyone. Investments implemented in the center improve quality of the city and its functionality for pedestrians, cyclists and passengers of the public transport. In 2021, we rebuilt several important places in the center, and preparations of next investments have started.

- 12 "Five Corners Sq."
- 14 Green Marszałkowska St.
- 16 Dmowskiego Roundabout
- 18 Jerozolimskie Av. and Krucza St.
- 20 Pedestrian and bicycle bridge to Praga



“Five Corners Square”

The intersection of Chmielna, Krucza, Zgoda, Bracka and Szpitalna St. is undergoing a metamorphosis. The place, informally called “Five Corners Sq.” [“Plac Pięciu Rogów”], is getting more beautiful and becomes a space the New Center of Warsaw is worth of.



“Five Corners Sq.” is one of the most important public spaces in Śródmieście. However, the planning of this place was not appropriate and did not fully use its potential. That is why we decided to change it and to make the square an open and accessible space for everyone.

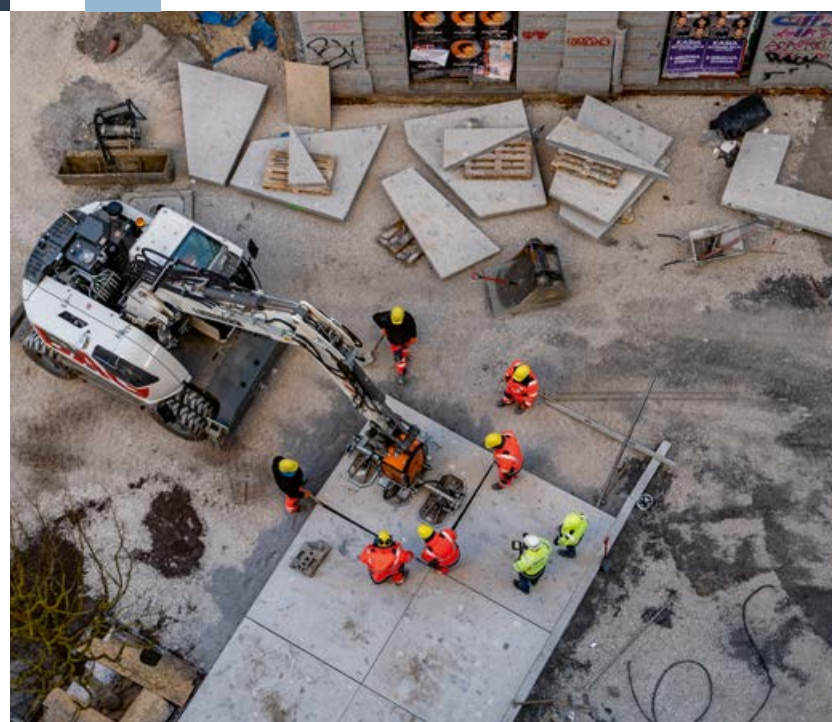
By the end of 2021, the eastern part of the square was successfully rebuilt. We put the entire floor there, including architectural concrete slabs with stones of various sizes embedded in them. We rebuilt Szpitalna St., which now has an aesthetic concrete surface, and at the intersection with Górskiego and Brokła St. – new asphalt. We also planted ten of the twenty two planned field maples.

A winter break arrived during the reconstruction of the western part of the square. We demolished old road infrastructure there and managed to relocate underground installations. The next steps are the preparation of the substructure and laying of the board surface. In turn, in the south, near the mouth of Widok to Krucza St., the only thing left to do is to finish the pavement and place asphalt on the road.

The modification began in March 2021. It took a long time for the investment to take off. Numerous finds of potential archaeological value stood in the way. In order to examine them, in the spring and summer a monument conservator stopped works for several times. Therefore, the work schedule was significantly postponed, and the first effects became visible only in September.



22
maples
are planned
for the square





Green Marszałkowska St.

Marszałkowska St. is to become a green avenue crossing the city center. The first stage of works was to reconstruct a section along Defilad Sq. and intersections with Królewska St. We also started designing changes in greenery from Bankowy Sq. to Konstytucji Sq.

Marszałkowska St., along with Jerozolimskie Av., is the most important artery of Śródmieście. Therefore, after the reconstruction of the central section of Jana Pawła II Av. and Czterdziestolatka Roundabout, it is its metamorphosis that is the next step towards the New Center of Warsaw.

At first, we renovated a fragment on the west side along Defilad Sq. We built a bike path there and renovated the pavement. Some old paving blocks were replaced with elegant slabs. We also moved parking from the pavement to the road by marking out parallel parking spots on the currently too wide right lane. The final touch was greenery. We planted thirty four silver linden 'Varsaviensis' in the company of numerous shrubs and perennials.

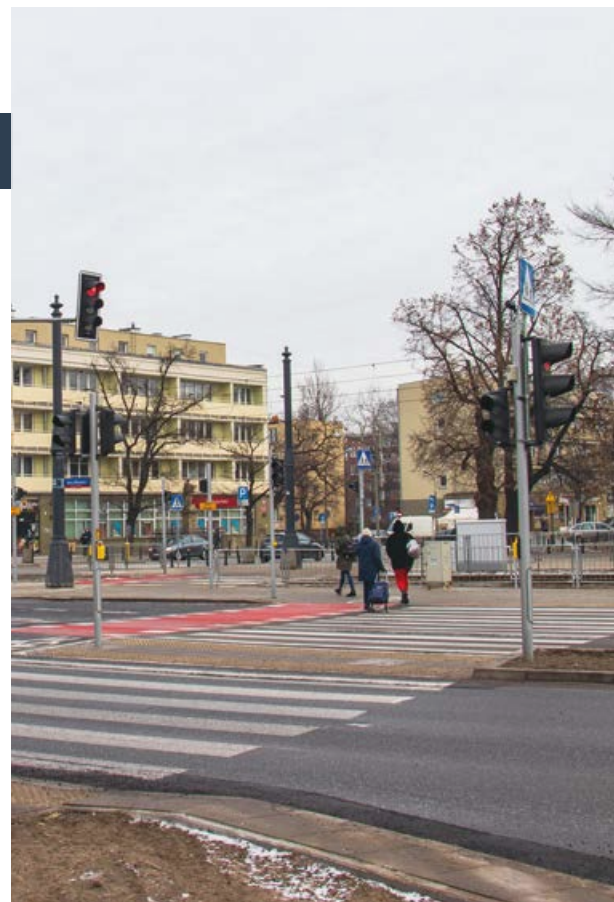
We also took care of the intersection with Królewska St. Here, we modernized traffic lights, replaced road surface and pavement, and decorated corners with plants.

A new signalling was built a bit further, at the pedestrian crossing at Senatorska and Elektoralna St. It was the last pedestrian crossing without traffic lights on Marszałkowska St. It is safer now, and pedestrians have gained a wider pavement at the southwest corner.

We are already preparing next sections. In 2021, we signed a contract with two studios which, by the end of 2022, are to prepare an executive reconstruction project for Marszałkowska St. on the sections from Konstytucji Sq. to Nowogrodzka St. and from Królewska St. to Bankowy Sq. The changes will be based on the concept of "Green Marszałkowska", developed by the Greenery Council and consulted with residents.



2319 m²
of renovated and new
pavement along
Defilad Sq.





Dmowskiego Roundabout

We are improving safety and accessibility at the Dmowskiego Roundabout. We are designating ground crossings for pedestrians, extend tram stops and add greenery. We entered the 2022 at the halfway point of works.

We are introducing changes at the Dmowskiego Roundabout bearing non-motorized traffic users in mind. At the height of Poznańska, Widok, Parkingowa and Nowogrodzka St., we are designating four pedestrian crossings that will make it easier to get to the other side of the roadway. Zebra crossing locations are already visible, and the construction of traffic lights started there.

Drivers have already gained a new surface at the mouth of Marszałkowska St. to the roundabout. For the spring, we have planned similar works at Jerozolimskie Av., when the investment will be nearing its end.

The reconstruction also means amenities for cyclists. We are designating bike paths at three of the crossings and are building a bicycle lane that bypasses the main exit from the metro Centrum station from the west and north. The last element is greenery, which will improve aesthetics of the roundabout. We have planted over 20,000 shrubs and perennials and 56 trees – plane trees, oaks and lindens – on the island and around it. The area occupied by new plants is 6.600 m² and is similar to that of a football pitch.



Each of new crossings will lead to the extended and widened tram stops. Passengers will be able to easily enter the platforms with gentle ramps. We are not liquidating an existing underground passage – due to the numerous shops and service points, it will continue to function.

Thanks to these changes, persons with disabilities, seniors and caregivers with children in prams will comfortably and safely reach the other side of the street, and passengers will not have to go underground to get out of the stop. This place will become more accessible comparing to what it is today.



6,600 m²
of green areas



Jerozolimskie Av.

Jerozolimskie Av. and Krucza St.

Two important streets in the center of Warsaw will undergo a complete transformation. Jerozolimskie Av., on the occasion of reconstruction of a cross-city railway line, will gain wide pavements, bike paths and greenery, and a pedestrian passage will be built on Krucza St. In 2021, we started design and concept works.

Today, Jerozolimskie Av. lacks character of a big city avenue. There is no greenery, no pedestrian crossings and bike paths. Pavements are narrow and filled with parked cars.

Thanks to the New Center of Warsaw program, this will change. A railway investment involving reconstruction of a cross-city tunnel will be an opportunity for the modification, planned to be implemented in the coming years.

After the reconstruction, the avenue between Czterdziestolatka Roundabout and the entry to the Poniatołowski Bridge viaduct will have wider pavements with space for catering gardens. There will be more greenery and the trees planted in four rows will also be back. The roadway will have two lanes in each direction, including one for, i.a., buses and taxis. There will be parking bays for parallel parking, and on both sides of the roadway there will be 3 m wide bike paths.

Two large roundabouts will go down in history: at the junction with Marszałkowska and Nowy Świat St. They will be replaced by ordinary intersections, which will allow to regain space for pedestrians and improve connections. A set of ground pedestrian crossings will be built at both intersections. Tram and bus stops will be moved, lengthened and widened.

An executive project will provide us with an answer to the question of how a new Avenue will look in detail. Its preparation began in the autumn of 2021 and will take 30 months – except for the documentation for the section from Poznańska St. to the de Gaulle'a Roundabout, which will be known for public after 16 months. This is because the project will be developed in coordination with PKP PLK, which is planning to reconstruct a cross-city tunnel using an opencast method and build a new station in the area of Nowy Świat St.

We also want to change Krucza St. Its current width becomes redundant in the face of reconstruction of the Five Corners Sq., which is why we will give it a typical downtown character. The center of the road will be occupied by a wide pedestrian passage, and car traffic will be calmed down. Some missing pedestrian crossings, bicycle infrastructure and greenery will be built.

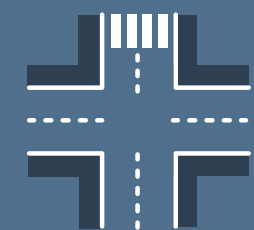
A thorough design of the street modernization was preceded by an area traffic survey. It shall let us assess which variant of the reconstruction will be the best, as well as how to organize the traffic on Krucza St. itself and its cross-streets.



Krucza Street



Jerozolimskie Av.



**ordinary intersections
instead of two
roundabouts and
new above-ground
pedestrian crossings**

Pedestrian and bicycle bridge to Praga

A pedestrian and bicycle bridge will connect Śródmieście with Praga. Thus, it will be the first step to change a urban layout of the capital and develop the New Center of Warsaw towards the east. In 2021, we chose the contractor for the bridge and signed a contract with him.

Śródmiejskie Vistula Boulevards are one of the most popular places to relax in the city. Especially citizens of the southern part of Praga have to make some extra efforts in order to get there. In addition, Śląsko-Dąbrowski Bridge, which is difficult to be accessed by pedestrians, does not encourage to cross the river.

The solution will be a new bridge. It will connect the Vistula Boulevards with Praga at the level of Karowa St. on the left bank and Okrzei St. on the right bank of the river. Thanks to it, those walking along the latter street from the east will find themselves on the other side of the Vistula within a few minutes, and going further west, they will quickly reach an area of Krakowskie Przedmieście St.

The bridge will also be an important link in the development of Warsaw towards the east. City's business center is moving to the west, towards Wola, which is why the city authorities are balancing this tendency – e.g. by reconstructing the Vistula Boulevards. The bridge will follow this trend, as it will be a missing part of the axis that leads from the Old Town, through the vicinity of the university campus and the University of Warsaw Library, to the very center

of the densely built Praga. The bridge will force further changes on its side – after the subway reached it, and main streets of the district, i.e. Wybrzeże Szczecińskie and Helskie St., have recently undergone renovation.

At the beginning of 2021, the project of the bridge was completed; it was prepared by the Schuessler-Plan Inżynierzy architectural studio selected in an international architectural competition. Then we announced a tender. It enjoyed a great interest, because representatives of as many as 15 companies interested in the contract met during an on-site inspection in places that will be connected by the new bridge. Ultimately, five companies and consortia applied. We chose Budimex's offer worth approximately PLN 120 million, nearly PLN 60 million cheaper than the cost estimate. According to the schedule, preparatory works should have started in the beginning of 2022.

The construction will take two years and will be carried out in the least invasive way for the nature. The works will be completed by creating in the vicinity of the bridge a green area of 5,300 m², including plantings of trees and shrubs.



the lenght
of the bridge
will be
452 m

The most important technical data



16,3 m

width
at the **WIDEST**
point

6,9 m

width at
its **NARROWEST**
point

A planned **minimum usable space** is 6 m, and on narrower ramp on the left bank side – 3.5 m.

There will be two **“relaxation zones”** with wooden seats on the bridge

Lighting of the object will be provided by light sources placed in the railings. The bridge will also be **monitored**.

Against a background of other bridges

Currently, there are 11 bridges in Warsaw – 9 road and 2 rail ones. **The longest one is Anny Jagiellonki south bridge**, 1555 m long.

The bridge to Praga **will be one of the longest for pedestrians and cyclists in Poland**. The longest is still 785-meter long bridge in Siekierki (west Pomeranian voivodeship).

In the world, it will overtake, among others, **a 325 m long London's Millennium Bridge**, one of the most famous of its kind.



Renovations and modifications

The principal task of the Public Roads Authority is to maintain the road infrastructure. Every year we modify and renovate consecutive kilometers of streets. In 2021, we carried out a number of investments that improved the comfort and safety of road users and also made the urban space more aesthetic.

- 24 "Beltway" of Gocław
- 26 The intersection of Wilanowska Av. with Kosiarzy St. and Sarmacka St.
- 28 Sokratesa St.
- 30 Idzikowskiego St.
- 32 Developer projects
- 34 Road Surface repairs
- 36 Pavement repairs
- 38 Providing streets with more greenery
- 40 We improve accessibility
- 42 New bike routes



Meissnera St.



Umińskiego St.



Meissnera St.

“Beltway” of Gocław

We improve safety on what is known as the beltway of Gocław. In 2021, we made parking arrangements and prevented standing in the immediate vicinity of pedestrian crossings at Meissnera St. and Umińskiego St.; we also marked out bike lanes there. Similar modifications began at Abrahama St.

The beltway of Gocław consists of a sequence of dual-roadway streets: Meissnera, Abrahama and Umińskiego St. As the right-hand lanes were used for parking purposes and some drivers stopped dangerously close to pedestrian crossings, we decided to change traffic arrangements to improve safety. The need was also identified in a safety audit zebra crossings through the entire city. As many as 21 of 24 pedestrian crossings in those three streets of the “beltway” scored 0 or 1 on a six-point scale (0-5).

In 2021, we maintained Meissnera St. and Umińskiego St. along their entire lengths as they were but in an more orderly form. A parking lane and bike lanes were marked out. Thus, we set up new parking places while eliminating parking before pedestrian

crossings. 125 car places were arranged on each right-hand lane of both roadways of Umińskiego St. and Meissnera St. We also replaced the road surface at Meissnera St.



Bike lanes were marked out on both roadways of the “beltway”. Both that and the new parking places were an idea put forward by city citizens and chosen as part of the civic budget. Relevant projects got a total of 1,594 votes.



250
new parking
places in two
streets

In the autumn of 2021, we started to carry out similar modifications at Abrahama St. 145 parking places will be set up in the right-hand (outer) lane. All the modifications will culminate in greening, as we will adorn the entire “beltway” with greenery. For 2022, we are planning to plant 210 new trees and several dozen thousand new plants, many of which will form 20 rain gardens.



The intersection of Wilanowska Av. with Kosiarzy St. and Sarmacka St.

Together with the district council and a developer, we gave Miasteczko Wilanów [Wilanów Housing Development] a new road connection. We connected an extended section of Sarmacka St. to Wilanowska Av. and modernized the traffic lights at the intersection which is also joined by Kosiarzy St. We built a new pedestrian crossing and bike crossings.

Residents used to have few possibilities to get to Miasteczko Wilanów. Those who drove along Przyczółkowska St. from Konstancin-Jeziorna could turn left into the housing development at one spot only. It was equally difficult to leave the housing development, especially if one wanted to drive towards the city center. One needed to take Branickiego St. and Rzeczypospolitej Av., as the other exits only allowed drivers to turn right (and take Kieślowskiego St. and Klimczaka St.).

2021 brought about a change. The developer Robyg and the Wilanów District Council extended Sarmacka St. to the intersection. To this end, the developer built an overpass on the Służewiecki Stream in the place of a footbridge that used to serve pedestrians there.

In the meanwhile we handled the intersection. We connected Sarmacka St. to the intersection, which required an extensive scope of roadworks. First of all, we rebuilt the traffic lights to support the newly connected road. The traffic lights are upgraded as they are traffic sensitive now. They are also equipped with movement detection.

We implemented a left turn in the northern roadway of Wilanowska Av. and a right turn lane in the southern roadway. Thus, it is possible now to take any turn you want at the intersection, where we also replaced the road surface. Two new zebra crossings were marked out: on the eastern side of the avenue and across Sarmacka St. Similarly to the other pedestrian crossings at the intersection, they have a refuge island and tactile paving slabs for the visually impaired. We also built two bike crossings.



2
new pedestrian crossings marked out





Sokratesa St.

We are rebuilding Sokratesa St. in Bielany. We are providing it with new infrastructure to make the street safer and more convenient for residents. In 2021, we conducted works on the southeastern side of the street and moved to the northwestern roadway in December.

Twenty years ago, Sokratesa St. ran at the boundaries of Warsaw. Today, it is a center of a densely populated neighborhood. It is surrounded by housing developments full of stores, facilities and recreation areas. The modifications are aimed at adapting the road to its new surroundings.

The street will become safer and the fatal accident that occurred in the autumn of 2019 could not happen again. Speed bumps were installed right after the accident, but it was a temporary solution. Although it prevented overspeeding, it did not prevent drivers from e.g. overtaking at pedestrian crossings.

The street modification began in June 2021. Asphaltting of the southeastern roadway lasted until the end of November. In December, work moved to the northwestern roadway. It started with laying curbs where future lanes would divide the roadway before junctions with neighborhood streets; afterwards two partially constructed roundabouts were completed.

Once work is completed, all the existing pedestrian crossings at Sokratesa St. will be shortened and secured with a refuge island. A new crossing will also be built at building no. 13. Residents will get a wider pavement on the northwestern side, where all the stores and facilities are gathered. It is very narrow now and an equally narrow bike path runs along without any separation. When modified, the bike path will run closer to the roadway and will be divided by a greenery belt from pedestrians. New trees will be added to those already there and rain gardens will be installed.

The modifications have already been supplemented by the modernization of the lighting. In 2021, we replaced concrete street lamps with steel ones. We installed fixtures pointing towards the roadway and pavement on most of the lamps, 140 LED fixtures in total. The lighting modernization was conducted under the „SOWA – oświetlenie zewnętrzne” [OWL – external lighting system] program.



7
safe pedestrian crossings – six existing crossings and one new crossing





Idzikowskiego St.

New road surface, replaced pavements and a new bike path. These are the effects of modernization of Idzikowskiego St. in Lower Mokotów.

Idzikowskiego St. provides a connection between two major urban arteries – Jana III Sobieskiego St. and Puławska St. – and is one of the few streets between Upper Mokotów and Lower Mokotów. On account of its condition, it had not been a fully convenient short-cut or access road for residents.

We carried out roadworks on the section from Imielińska St. to Jana III Sobieskiego St. Drivers drive on a new road surface now. As regards pedestrians, they have a renovated pavement (from Imielińska St. to Pory St.) constructed in line with applicable design standards. We installed new curbs on both sides of the street and built gate exits using paving stone. We also carried out law restoration works.

We built a bike path on the northern side of the street. It occupies a section between Jana III Sobieskiego St. and Piaseczyńska St. which is nearly 1 km long. In the east, it is connected to the

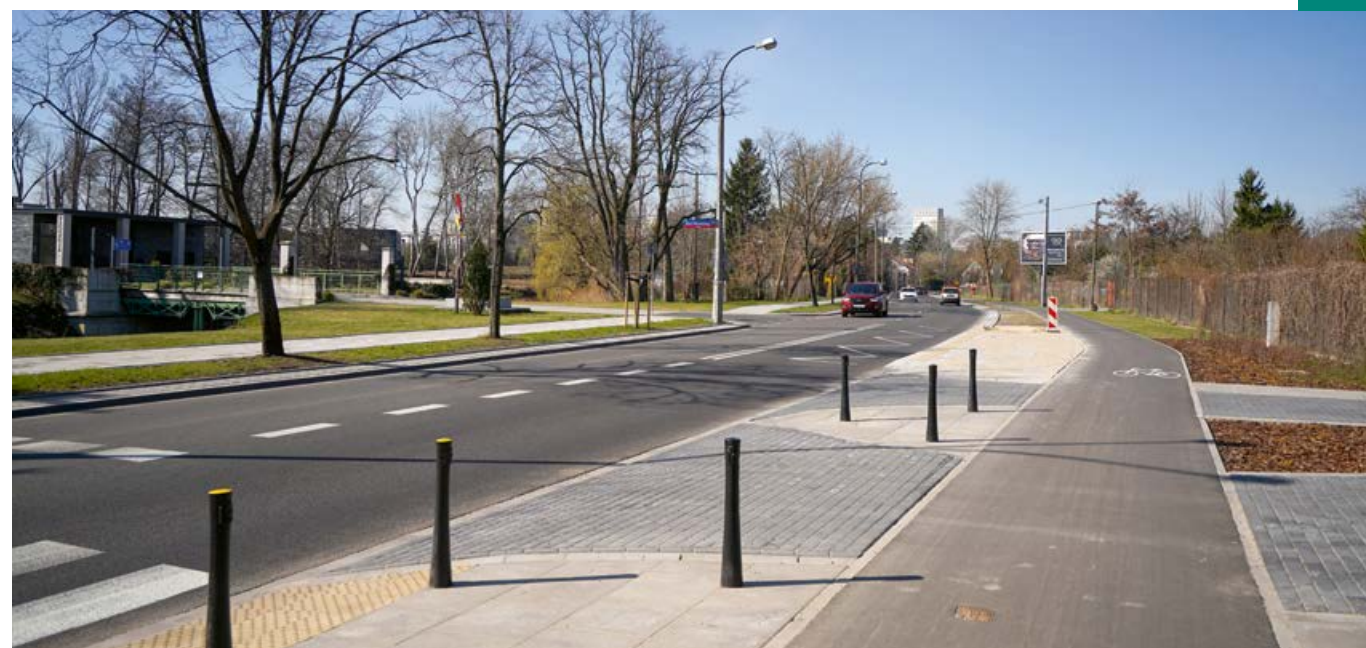
existing bike route network at Jana III Sobieskiego St., and in the west, it joins the intersection with Piaseczyńska St. Cyclists may keep on riding forward on the roadway towards Puławska St. or head north towards the Arkadia Park.



Plans for 2022 provide for directing city buses to Idzikowskiego St., which will connect Upper Mokotów and Lower Mokotów. To this end, a total of six new bus stops are planned to be built. You can already see the ones on the southern side of the street; they were built during the pavement repair.



a new bike route on the northern side of the street





Developer projects

The construction of new housing developments or office buildings result in heavier traffic nearby. Therefore, developers are obliged to modify the road layout around their sites. The effects of works they carried out in 2021 in Warsaw include a new roundabout in Mokotów and traffic lights in Białołęka.

The road network needs to be functional. Thus, the construction of new residential, commercial buildings and/or office buildings virtually always implies changes in the surrounding road layout. It needs to be adapted to handle the heavier car and passenger traffic while improving safety. To this end, streets are extended, traffic lights are installed and/or conventional intersections are converted into roundabouts.

The last solution was employed in Mokotów. A private investor rebuilt a three-way intersection of Konstruktorska St. and Postępu St. into a roundabout. This solution made drivers drive in a safer manner, reduced the risk of accidents and also made it easier to turn left into Postępu St.

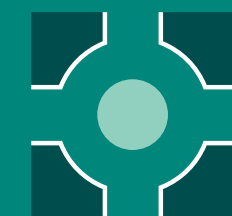
Pedestrians gained better protection. They used to have two crossings only, but they gained another one and each crossing was provided with a refuge island. To add a finishing touch, a bike path was constructed on the southern side of Konstruktorska St.

Another major development project was to improve safety at the intersection of Płochocińska St. and Spedycyjna St. It involved the connection of Krzyżówki St. to the intersection and the construction of traffic lights. The intersection was widened on the western side and drivers got right and left turn lanes. New pavements and four pedestrian crossings were also constructed. Due to the project, residents of the housing development over the Żerański Canal got another exit towards Modlińska St., i.e. the main artery in Białołęka.

The Public Roads Authority imposed more road-related tasks on developers, but they were much less significant. Another task that will have a significant impact on the road layout in the vicinity

began in the autumn of 2021. The task is to construct a roundabout at the intersection of Żupnicza St. and Chodakowska St. The completion of works is planned for summer 2022.

A new procedure has been introduced to ensure smooth cooperation with investors and guarantee their contribution to the road network development. For details, see Chapter "Development and projects" pages 84-85.



**a roundabout
at the intersection
of Konstruktorska St.
and Postępu St.**

The new roundabout at the intersection of Konstruktorska and Postępu St.



intersection of Płochocińska, Spedycyjna and Krzyżówki St.



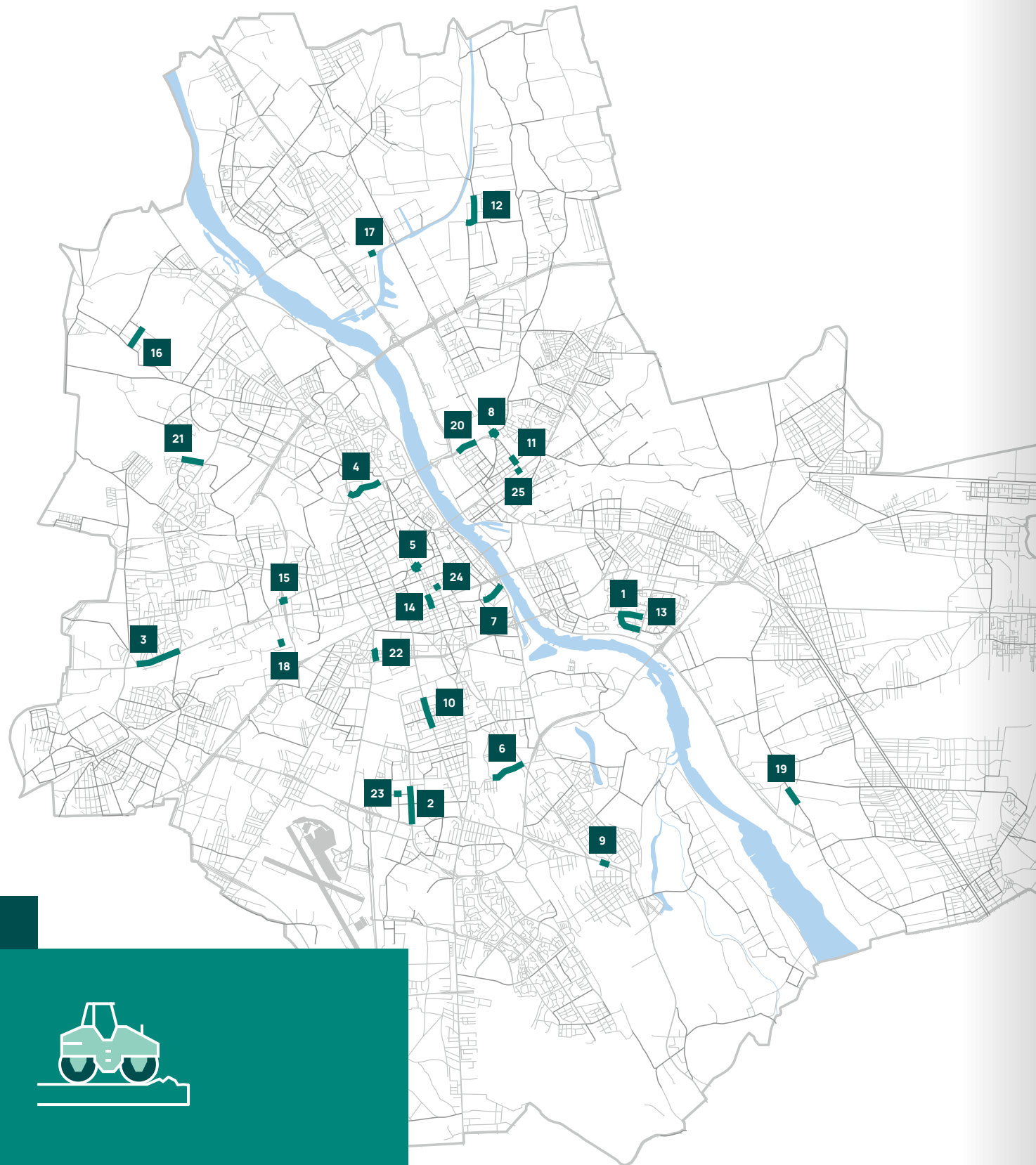
Road surface repairs

One of our major tasks is to maintain the road infrastructure in good condition. As we are committed to ensuring that the road infrastructure in Warsaw is functional, safe and sustainable and satisfies road users' needs, we renovate thousands of meters of road surface each year.

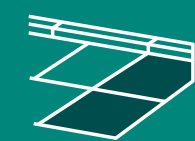
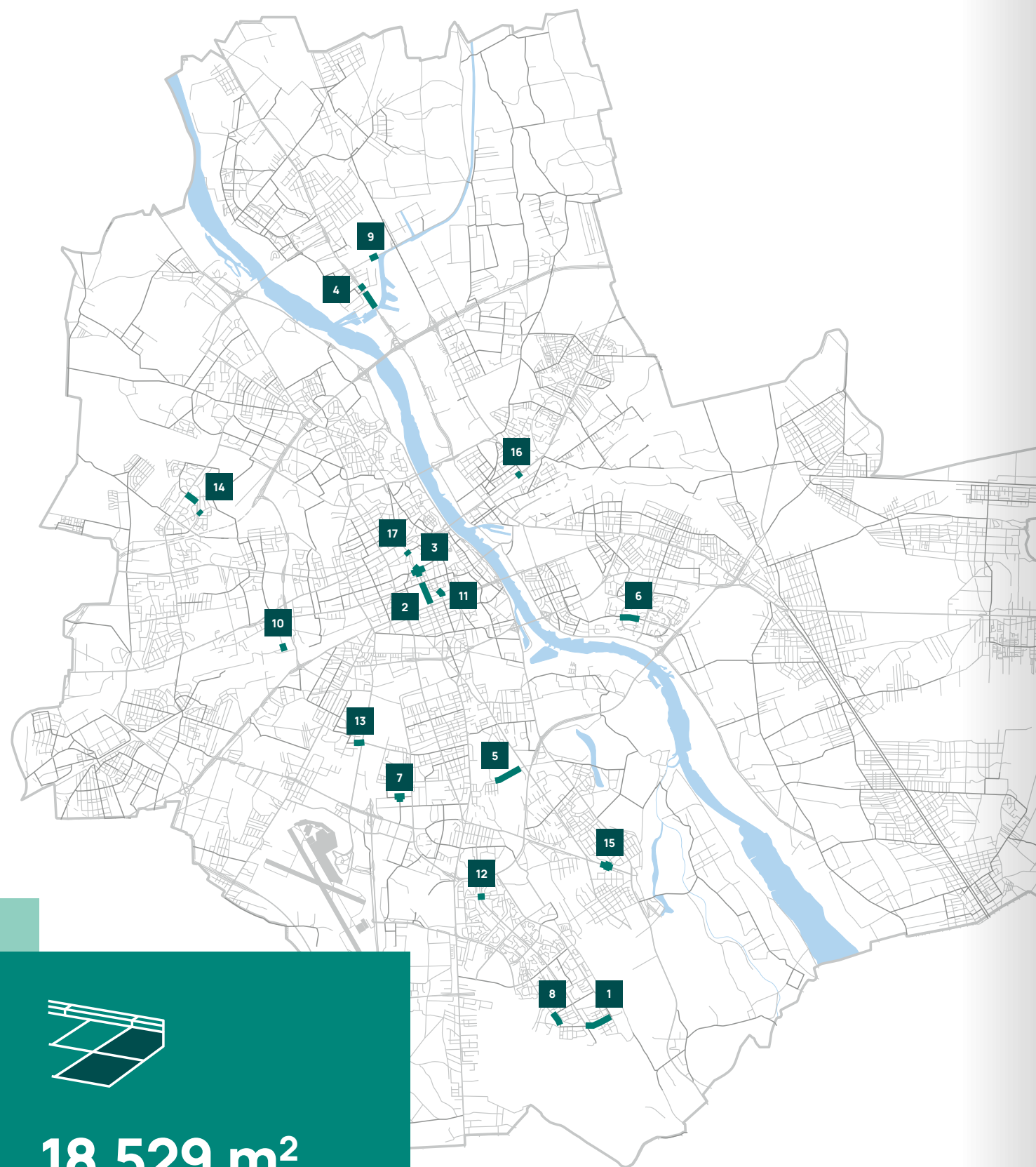
Maintaining the road infrastructure in proper condition requires more than just large-scale modernization and modifications. It also involves road surface repairs and replacements done as required. In 2021, we did such repairs in consecutive streets. Those were e.g. **Lubomirskiego** and **Żaba** Roundabouts and **Meissnera**, **Ludna**, **Połączyńska**, **Trakt Lubelski**, **Idzikowskiego** and **Białołęcka** Streets. We remedied ruts and holes at the intersections of **Marszałkowska St.** and **Królewska St.** and at the intersection of **Wilanowska Av.** with **Kosiarzy St.** and the extended **Sarmacka St.**

ROAD SURFACE REPAIRS:

1. **Meissnera St.** – 11,250 m²
2. **Wołoska St.** (eastern roadway) on the section from Unii Europejskiej Roundabout to Bagażowa St. – 10,710 m²
3. **Połączyńska St.** (western roadway) on the section from Powstańców Śląskich St. to Szeligowskiej St. – 10,512 m²
4. **Słomińskiego St.** (northern roadway) on the section from the Gdański Railway Station to Zgrupowania AK "Radosław" Roundabout with a portion of the roundabout – 9,343 m²
5. **the intersection of Marszałkowska St. and Królewska St.** – 8,439 m²
6. **Idzikowskiego St.** on the section from Imielińska St. to Jana III Sobieskiego St. – 6,159 m²
7. **Ludna St.** on the section from Czerniakowska St. to Wioślarska St. – 5,773 m²
8. **Żaba Roundabout** – 5,692 m²
9. **the intersection of Wilanowska Av. with Kosiarzy St. and extended Sarmacka St.** – 5,591 m²
10. **Niepodległości Av.** (eastern roadway) on the section from Dąbrowskiego St. to Rakowiecka St. – 5,233 m²
11. **Szwedzka St.** on the section from Strzelecka St. to Równa St. – 4,770 m²
12. **Białołęcka St.** on the section from Przykoszarowa St. to the "Dobka z Oleśnicy 02" stop – 4,190 m²
13. **Bora-Komorowskiego St.** on the section from Fieldorfa "Nila" St. to the intersection with Meissnera St. and Abrahama St. – 4,045 m²
14. **junctions of Marszałkowska St. with Dmowskiego Roundabout** – 3,961 m²
15. **Lubomirskiego Roundabout** – 3,619 m²
16. **Opłotek St.** on the section from Wólczyńska St. to Palisadowa St. – 3,568 m²
17. **the intersection of Płochocińska St. and Spedycyjna St. and extended Krzyżówki St.** – 3,097 m²
18. **Ordona St.** from its end to Stańczyka St. – 2,940 m² of replaced surface: 2,330 m² of stone blocks and 610 m² of concrete blocks
19. **Trakt Lubelski St.** on the section from Borowiecka St. to Fiołków St. – 2,852 m²
20. **Starzyńskiego St.** on the section from the viaduct over Starzyńskiego Roundabout to Namysłowska St. – 2,621 m²
21. **Piastów Śląskich St.** on the section from Żołnierzy Wyklętych St. to Powstańców Śląskich St. – 2,614 m²
22. **Krzyckiego St.** – 2,224 m²
23. **the roundabout at the intersection of Konstruktorska St. and Postępu St.** – 1,660 m²
24. **Szpitalna St.** on the section from the intersection with Brokła St. and Górskiego St. to "Five Corners Sq." – 1,020 m²
25. **"Solidarności" Av.** at the "Szwedzka 01" bus stop – 222 m²



122,105 m²
of new road
surface



18,529 m²
of new
or renovated
pavements

Pavement repairs

The road infrastructure is more than roadways. It also includes pavements, the condition of which we gradually improve. In 2021, we laid further kilometers of new aesthetic pavement slabs.

The comfort and safety of pedestrians are very important to us. It was no difference in 2021 and we renovated consecutive sections of pavements. We replaced old slabs (riddled with holes), and sometimes paving blocks, with a new surface of concrete slabs or terrazzo. Thus, pavements became more comfortable for pedestrians walking towards bus/tram stops or stores.

Even, safe and convenient pavements appeared e.g. at Modlińska St., Idzikowskiego St. or Bora-Komorowskiego St., at the intersection of Marszałkowska St. and Królewska St. or near pedestrian crossings, where we installed traffic lights.



PAVEMENT REPAIRS:

1. **Wąwozowa St.** (southern side) on the section from KEN Av. to Rosoła St. – 2,430 m²
2. **Marszałkowska St.** (western side) on the section from Świętokrzyska St. to Dmowskiego Roundabout – 2,319 m²
3. **the intersection of Marszałkowska St. and Królewska St.** – 2,182 m²
4. **Modlińska St.** (eastern side) on the section from the "Kanał Żerański 02" stop to the intersection with Kowalczyka St. and near the "Konwaliowa 02" stop – 1,441 m²
5. **Idzikowskiego St.** (southern side) on the section from Imielińska St. to Jana III Sobieskiego St. – 1,361 m²
6. **Bora-Komorowskiego St.** on the section from Fieldorfa "Nila" St. to the intersection with Meissnera St. and Abrahama St. – 1,346 m²
7. **the intersection of Konstruktorska St. and Postępu St.** as part of the roundabout construction – 1,340 m²
8. **Stryjeńskich St.** (eastern side) on the section from Wąwozowa St. to Przy Bażantarni St. – 1,227 m²
9. **the intersection of Płochocińska St. and Spedycyjna St.** and extended Krzyżówki St. – 771 m²
10. **Ordona St.** on the section from its end to Stańczyka St. – 687 m²
11. **Szpitalna St.** on the section from the intersection with Brokła St. and Górskiego St. to "Five Corners Sq." – 660 m²
12. **the intersection of KEN Av. with Surowieckiego St. and Bartóka St.** – 631 m²
13. **Ractawska St.** (northern side) on the section from Jasielska St. to Żwirki i Wigury St. – 622 m²
14. **Wrocławska St.** (southeastern side) from Powstańców Śląskich St. to the pedestrian crossing at the level of Błatona St. and in the northeastern corner of the mouth of Widawska St. – 485 m²
15. **the intersection of Wilanowska Av. with Kosiarzy St. and extended Sarmacka St.** – 394 m²
16. **"Solidarności" Av.** at the "Szwedzka 01" bus stop – 336 m²
17. **the area of the pedestrian crossing across Marszałkowska St.** at the level of Senatorska St. and Elektoralna St. – 297 m²

Providing streets with more greenery

Roads are not limited to asphalt and concrete. Greenery is an indispensable element. Trees and shrubs provide an aesthetic aspect and brighten up public space. Just as in the previous years, in 2021 we carried out plantings in successive streets where paving stone or slabs were unnecessary.

Road functionality is a fundamental matter. On the other hand, a complete urban street is one that both ensures comfort and safety for all road users and looks beautiful. The right appearance comes from greenery; plants in a city provide more than adornment though. They are essential for the quality of life (contributing to our well-being), absorb carbon dioxide from the atmosphere and also boost water retention.

Therefore, we seek to increase a bioactive surface in our streets. In line with Warsaw's "Adaptation Strategy for Climate Change" that was adopted in 2019, our modernizations and modifications, and some small-size repairs, involve new plantings to enrich public space. For 2021, the flagship example is Stalowa St., whose "lifting" between Inżynierska St. and Szwedzka St. was achieved by greening only. We removed superfluous paving slabs and asphalt pieces, planting instead over 8.800 plants such as Panicle Hydrangeas, Dwarf Cherries or Shiny Cotoneaster shrubs. 34 black Locust Trees were also planted to supplement tree lanes.

We started to "dress up" Dmowskiego Roundabout with a considerably higher number of trees, as greenery is part of its modification. We planted 21 out of 56 planned trees and a considerable portion of 58 plant species such as spiraeas, daylilies or snowberries on the roundabout plate and in its vicinity. We will finish plantings in 2022 and the total area will take up 6,600 m², close to what a football pitch takes up.

More greenery appears nearby, at Marszałkowska St. along Defilad Sq. The ground near the metro Centrum station got 34 trees and over 24,000 shrubs and perennials.

Other greened streets include Wrocławska St., Idzikowskiego St. and Stryjeńskich St. As we carried out projects to improve safety or streamline traffic, we also made plantings at intersection corners that had definitely too much asphalt or too many paving slabs. As an example, take the intersection of Marszałkowska St. and Królewska St.

PLANE TREES UNDER SPECIAL SUPERVISION

We installed protective domes on 18 plane trees at Świętokrzyska St. near the intersection with Marszałkowska St. Those are heap-like structures that surround the tree trunk up to the height of approx. 40 cm. They prevented salty water from flowing from surfaces nearby into their basins. Brine made trees dry out and their dry tips, i.e. leafless tops, drew attention in the summer.

The domes installed for the autumn and winter do not make trees suffocate or dry out. When dormant, plane trees stop drawing water but their root system needs to be constantly damp so that it does not dry out. Capillary rise helped, protecting the system over the winter time.

"Green" projects

Planted trees, shrubs and perennials:



STALOWA ST.
34 trees and
8,823 shrubs and perennials



IDZIKOWSKIEGO ST.
14 trees
552 shrubs



DMOWSKIEGO ROUNDABOUT
21 out of 56 planned trees and more than a half of
19,300 shrubs



MARYMONCKA ST.
13 trees



REDUTOWA ST
360 shrubs



MARSZAŁKOWSKA ST. (along Defilad Sq.)
34 trees and
24,100 shrubs and perennials



WILANOWSKA AV.
19 trees



THE INTERSECTION OF MARSZAŁKOWSKA ST. AND KRÓLEWSKA ST.
3,500 shrubs and perennials



WĄWOZOWA ST.
5 trees



STRYJEŃSKICH ST
11 trees
2,100 shrubs



WROCŁAWSKA ST.
6 trees
1,000 shrubs and perennials



We improve accessibility

Urban space should be convenient and accessible to everyone. Therefore, in 2021, we removed architectural barriers in 65 locations in four districts. We improved the accessibility of Warsaw's infrastructure not only by implementing small projects, but also during comprehensive renovations.

Generally, renewing pavements, lowering curbs and installing warning plates or guiding lanes are rather small-scale projects. However, they are important, especially for the local community. They eliminate architectural barriers and improve the comfort and safety of the elderly and of parents with prams, cyclists and pedestrians.

Therefore, we continued relevant work in 2021. We allocated PLN 664,000 to such roadworks. With that amount, we improved many pedestrian crossings, the access to a number of sites in the city and the aesthetic aspect of public space.

Just as in 2020, last year we primarily put emphasis on citizens' reports. For the places identified by them, work began in Ursus, where we removed architectural barriers in 20 locations and then we proceeded to work in Mokotów and Żoliborz (21 locations each) and Praga-Południe. Improvements were made in 3 locations in that last district.

When removing architectural barriers, we focused on lowering curbs, replacing sections of damaged pavements and laying pavements in place of shortcut footpaths, installing new warning slabs for the blind and visually impaired and removing unnecessary steps.

Some larger scale investments were also carried out. In Żoliborz, we built a short ramp facilitating access to a pedestrian crossing across Broniewskiego St. near Włociańska St. In Mokotów, at the intersection of Jana III Sobieskiego St. and Św. Bonifacego St., we streamlined the crossing of the mouth of the latter street for cyclists by lowering curbs and widening exits from the bike path onto the roadway.

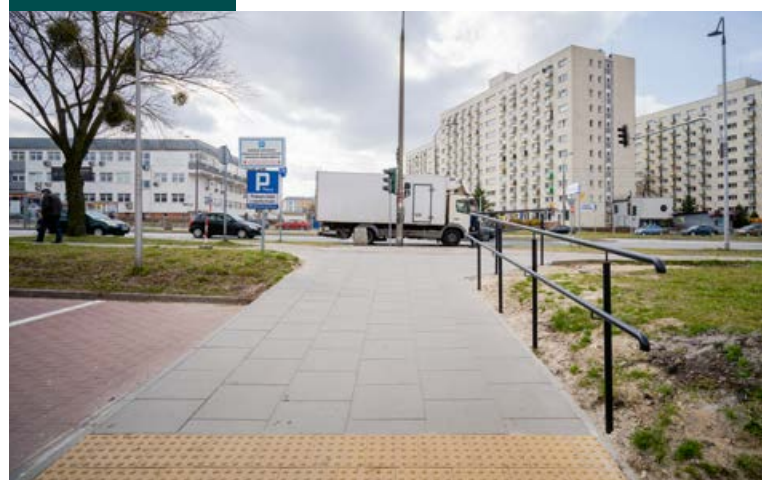
Not only do we conduct barrier removals at individual spots, but we also remove barriers during extensive repairs of roadways, pavement, bike paths or bus stops. Work at Dmowskiego Roundabout that we were halfway through at the beginning of 2022 is the best example. They will end with the construction of four ground level pedestrian crossings.

A ramp instead of stairs at the intersection of Broniewskiego and Włociańska St.

before:



after:



**a ramp built
at the intersection
of Broniewskiego St.
and Włociańska St.**

New bike routes

Year 2021 was the time of restoring the balance disturbed by the pandemic. Despite the difficulties that we still experienced, we took further important steps to develop the bike infrastructure in Warsaw. More kilometers of bike routes were built or modernized, including sections in the city center.

Towards the end of 2021, the route network length exceeded another symbolic threshold and is 708 km now. The number of places where we upgraded the existing routes grew and new routes were added to the city bike map. Those were both long and crucial sections as well as short connectors between the existing routes.

We repaired over 5 km of bike paths, replacing the cumbersome paving stone or concrete slabs with even asphalt. This kind of surface already covers over 74.5% of the network. The top priority though is to build new routes and we built over 30 km in 2021. The length of streets with contraflow lanes was increased by over 10 km, partly due to the fact that two-way bike traffic was maintained at the streets in Ochota and Żoliborz that were converted into one-way streets for cars.

Projects implemented under the New City Center of Warsaw program have been and still are a major cycling link. The construction of a route was completed on the western side of Marszałkowska St., at Defilad Sq. and the future building of the Museum of Modern Art. The construction of another portion started nearby and was at an advanced stage at the beginning of 2022: it was the construction of long-awaited bike crossings in the area of Dmowskiego Roundabout and of the next route section along Nowogrodzka St.

As construction work progresses, designs are prepared for next important sections. In 2021, we signed agreements that would be the first step to redesigning the appearance of Jerozolimskie Av., Krucza St. and further sections of Marszałkowska St. The New City Center of Warsaw project gains momentum and its successive elements will be the crowning glory of our future annual reports for years to come.

However, the largest urban project concerning the bike infrastructure was carried out on the right bank of the Vistula. In Praga-Północ, the Capital City Development Board put into use Wybrzeże Helskie St. with a short

section of Wybrzeże Szczecińskie St. after two years of comprehensive modifications. The street now has bike paths on both sides and bike crossings at all the intersections. This is a huge leap in quality. The street used to have a single route shared by pedestrians and cyclists running on an uneven surface, where it was necessary to dismount one's bike at all the traffic lights and walk the pedestrian crossing every time.

Some repairs and substantial portions of the bike routes under construction are projects chosen by citizens as part of the civic budget. The examples of projects implemented in 2021 include the construction of a bike path along Idzikowskiego St. in Mokotów, the modification of a section of the bike path along Marymoncka St. or the construction of a connector of Wólczyńska St. in Bielany.

Further, bike paths were also built as part of larger projects. For example, note the bike lanes that were set up in Meissnera St. and Umińskiego St. as part of the changes concerning the "beltway" of Gocław.

ROUTE REPAIRS

Nearly 70 km of bike routes have been renovated since 2013. This amounts to approx. 10% of the entire network. The asphalted route network has thus increased its share to 74.5%, while the number of shared-use routes for pedestrians and cyclist has dropped. As the existing old infrastructure was modified, the length of the shared routes was reduced by 1.5 km as compared to the end of 2020

708 km of bike routes

including:

515.5 km

of dedicated bike paths



79.5 km

routes for pedestrians and cyclists



51 km

of bike lanes



62 km

of contraflow lanes and contraflow streets



74.5%

of bike paths with asphalt pavement



We modernize the lighting system

Proper lighting is an indispensable element of road infrastructure. It directly affects the safety of all road users. Therefore, we have been systematically modernizing the old system and building a new one for years. We did it in 2021 and year 2022 will be even better: we have planned a record-breaking replacement of nearly 40,000 lamps.

- 46 Street lighting
- 48 Road junctions
- 50 Tunnels and underground passages
- 52 Plans for the future

Street lighting

Lighting is a fundamental component of road infrastructure. The more modern, the better visibility after dark on roadways, pavements and bike routes. Therefore, every year we replace old streetlights and lamps with new ones and get rid of dark spots in the city's lighting map.

Just as in the previous years, in 2021 we continued our work to improve the lighting system in the city. We replaced 629 streetlights and installed 816 modern energy-efficient LED luminaires (excluding tunnels and road junctions, see pages 48-51 for separate information). It usually involved renovations of supporting infrastructure, i.e. laying new cables and installing new control equipment.

LED luminaires bring substantial benefits. They are brighter than sodium lamps, emit lower amounts of harmful substances and most of all, consume less power. Savings obtained with LED luminaires are impressive. The luminaires that were replaced in 2021, excluding tunnels and masts, consumed 1,272 MWh of energy a year on average; upon modernization, the energy consumption will drop to 254 MWh. This translates into an annual saving of gross PLN 583,000, i.e. 61%. The modernization cost is PLN 10.2 million. Not only energy-efficiency will soon repay the amount; with much better light parameters, it is possible to use fewer luminaires. Seven streets that underwent lighting modernization get light from 546 luminaires, which is 48 fewer than before the replacement.

In 2021, ongoing renovations of the lighting system brought new LED luminaires e.g. to Ratuszowa St., Lubelska St. and along Grzybowska St. and Szosowa St. We also replaced sodium lamps with LEDs at Inwalidów Sq. The old concrete lamp posts gave way to new ones of the "Warsaw crosier of 1923" type. With new posts, Inwalidów Sq. became similar to its nearest neighborhood as regards the lighting system.

Missing streetlights were installed at Przyczółkowska St. We lit up the section of the street from Klimczaka St. to the intersection with Vogla St. and Branickiego St. The lighting system was also installed at the service road and shared route for pedestrians and cyclists which runs to the administrative border of the city. Thus, we erased

another dark spot in the city's lighting map – we installed a total of 323 streetlights with 362 LED luminaires mounted on them.

Further, we completed the implementation of the „SOWA – oświetlenie zewnętrzne” [OWL – external lighting system] program. Przy Agorze St. and Sokratesa St. in Bielany were the last ones to become brighter after dark under the program. We installed a total of 134 posts and 253 luminaires at the two streets. In 2020, we improved lighting at nine streets and two road junctions under the "SOWA" program. The entire project budget amounted to PLN 12.5 million, the greater part of the amount (PLN 10.8 million) was covered with a long-term loan from the National Fund for Environmental Protection and Water Management.



Street lighting

- investments in 2021



POSTS LUMINAIRES

Lubelska St. from Grochowska St. to the entry to the bus loop at the Eastern Railway Station	16	16
Inwalidów Sq.	25	25
Ratuszowa St. along the entire street	78	97
Przyczółkowa St.: roadways and the service road between Klimczaka St. and the intersection with Vogla St. and Branickiego St., and the shared route for pedestrians and cyclists from Klimczaka St. to the administrative border of the city at Drewny St.	323	362
Grzybowska St. from Działyńczyków St. to Szosowa St.	31	41
Szosowa St. from Grzybowska St. to Wspólna St.	4	4
Przy Agorze St. along the entire street (as part of implementation of the "SOWA" program)	60	113
Sokratesa St. along the entire street (as part of implementation of the "SOWA" program)	74	140
IN TOTAL	611	798

ADDITIONAL LIGHTING AT PEDESTRIAN CROSSINGS

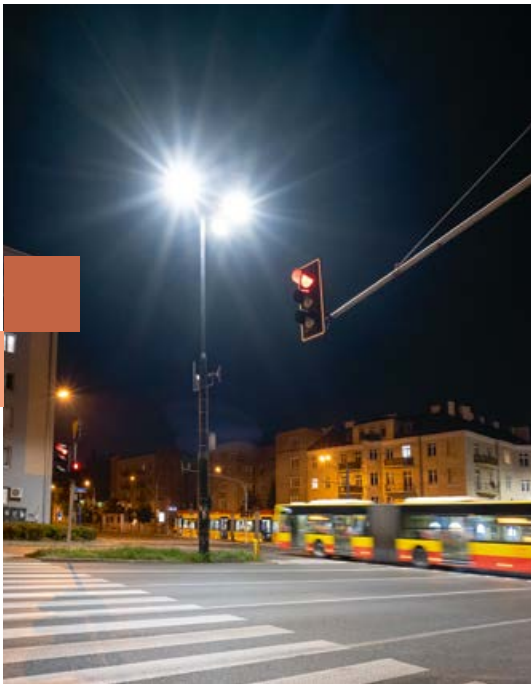
In July 2021, we issued an invitation to tender for providing additional lighting at further pedestrian crossings in the city. Unfortunately, we did not award any contract due to the raging prices on the market. All the tenders submitted were considerably higher than the budgeted amount. We are planning to provide additional lighting at those pedestrian crossings in 2022. The list contains 298 pedestrian crossings in 193 locations across 17 districts. Obviously, there is more – zebra crossings will also get additional lighting as part of the projects. Over a dozen pedestrian crossings will get additional lighting under the next edition of participatory budgeting.

We conducted large-scale installations of new posts and luminaires at pedestrian crossings for five years. In 2016, the project was launched in the autumn, so 78 zebra crossings got brighter only. The work was in full swing next year. We provided additional lighting at 337 pedestrian crossings in 2017, 435 in 2018 and 386 in 2019. In 2020, we improved lighting conditions in 267 locations, last year, due to the failure of the tendering procedure, barely nine (with the civic budget). We have already provided additional lighting at 1506 pedestrian crossings in total. Add those pedestrian crossings that were improved during comprehensive street modifications or smaller projects carried out by district offices at local streets in residential developments.

Road junctions

Road safety in the city depends on good visibility after dark. Therefore, in 2021, we started replacing post lamps at all road junctions. By the end of the year, we had sodium luminaires with LEDs replaced in 76 out of 83 planned locations.

The replacement of lamps on the distinctive light masts that are at least a dozen meters high started in June, as soon as we received the first batch of 306 luminaires. The installation of LEDs started at the intersection of Sikorskiego Av. and Witosa Av. We then improved lighting conditions in consecutive locations every day. By December 31, 2021, we replaced lamps at 76 sites in Warsaw.



In place of **3,140** old sodium luminaires, we installed **2,488** LED luminaires on masts along roadways, at road junctions or at bus loops. **Modern lamps give soft and uniform light diffused over a large area. Thus, we could reduce their number by 652, while still improving the lighting quality at each location.** The number of luminaires was cut by half in many places. The greatest reduction was done at the junction of Łopuszańska St., Hynka St. and Krakowska Av. 58 lamps provide the junction with light after dark, i.e. 42 fewer than before the replacement.

This will translate into substantial savings. Although they give better light, new luminaires need much less energy than old devices. With the replacement of more than 3,000 sodium luminaires with 2,500 LED luminaires, energy consumption will decrease by 57%, i.e. over 2,748 MWh. An average price of energy for 2021 was gross PLN 527 per 1 MWh, but in 2022, in line with contract signed with Veolia Energy Contracting Poland, it is gross PLN 873 per 1 MWh (the amount includes energy supply and distribution cost). This

means that savings will amount to nearly PLN 2.3 million a year under this investment, considering 76 out of the target 83 locations. When the project is completed, the forecast yearly saving will exceed PLN 2.6 million.

At the beginning of 2022, we had seven locations remaining before the replacement of lamps on masts at road junctions. This stands for 392 sodium luminaires to be demounted and 356 LED luminaires to be installed. A total of 2,844 LED lamps will be hung in place of 3,532 sodium lamps. LUG Light Factory in Zielona Góra is responsible for supplying all the luminaires. The agreement signed with the company guaranteed the delivery of planned 2,314 lamps and more. It also provided for a right of option to purchase 530 luminaires more, which we decided to exercise. The installation of the extra luminaires is planned at the sequence of Dolina Służewiecka St., Sikorskiego Av., Witosa Av. and Becka Av., as well as Łazienkowska Route to the junction with Wał Miedzeszyński St.

Lighting system replacement status

as at December 31, 2021.



Tunnels and underground passages

We replace luminaires not only on streetlights but also in tunnels and under viaducts. In 2021, we installed LED lamps in 13 locations of this type in Warsaw. This will bring huge savings – the lighting of the tunnel at 4 Czerwca 1989 r. Av. “guzzled” 358 MWh of electricity a year, it is ... 6 MWh now.

In Warsaw, the roads under our management include 76 tunnels, underpasses under viaducts and underground passages. A vast majority has a lighting system that is on 24/7. To obtain savings and care for the environment, we continue replacing old luminaires that consume a lot of energy.

At first, we concentrated on finishing the lighting replacements in the tunnels along Łazienkowska Route. In 2020, LEDs were installed in the tunnel at Na Rozdrożu Sq., and in 2021, in three tunnels more: under Marszałkowska St., under Jazdy Polskiej Roundabout and at the Statistics Poland building. As 330 sodium luminaires used so far were replaced with 114 LED luminaires, an annual energy consumption will drop by as much as 975.1 MWh – from 1,028.1 MWh to 53 MWh. The measures bring savings – PLN 851,300 a year at gross PLN 873 for electric energy in 2022.

We then proceeded to replace the lighting systems in other tunnels. New lamps ensure light for drivers e.g. in the tunnels along Kasprzaka St. (at Wolska St. and Redutowa St.) or under railway tracks along 4 Czerwca 1989 r. Av. and Cierlicka St. We achieved a record reduction of energy bills especially in the tunnel under the railway line along 4 Czerwca 1989 r. Av., while improving visibility – the energy consumption will drop from 358 MWh to as low as 6 MWh a year, which means that the amount payable for this location will decrease from PLN 193,600 for 2021 to PLN 5,200 for 2022 and the saving will be of 97%!

Altogether, we replaced lighting in 10 tunnels, excluding Łazienkowska Route. In addition, we provided one tunnel with lighting – 2 lamps were installed in the viaduct under railway tracks at Cegielniana St. Now, drivers get light from 175 LED luminaires instead of 368 sodium ones. LEDs will consume approx. 62,6 MWh of electric energy a year, which will give annual savings of approx. PLN 447,000.

Due to the replacement of lighting in 13 tunnels and under viaducts carried out in 2021, better lighting conditions are provided by a TOTAL of 289 LED luminaires (instead of 698 sodium luminaires), the annual energy consumption in those locations will drop from 1,603.4 MWh to 116.6 MWh and the annual cost of consumed energy will amount to approx. PLN 103,000. With the electric energy cost of gross PLN 873 per 1 MWh in 2022, we will save as much as PLN 1.3 million a year.



TUNNELS AND UNDERGROUND PASSAGES SINCE 2018

A large-scale replacement of sodium luminaires with LED luminaires in tunnels and underground passages started in 2018. Since then, till the end of 2020, lighting was modernized in the tunnels e.g. under Marszałkowska St. (at the level of Złota St.) and Wiśłostrada (Kraśńskiego St.), under Zesłańców Syberyjskich Roundabout and along W-Z Route, Prymasa Tysiąclecia Av. and Dźwigowa St., Pułkowa St. and Gwiazdzista St.

Tunnels and underground passages with lighting replaced in 2021

	BEFORE MODERNIZATION		AFTER MODERNIZATION		SAVINGS
	the number of luminaires	annual energy consumption	the number of luminaires	annual energy consumption	
Jerozolimskie Av. at Włodarzewska St.	3	1,9 MWh	8	1,8 MWh	6%
Jerozolimskie Av. at Jutrzenki St.	3	1,9 MWh	5	1,1 MWh	12%
4 Czerwca 1989 r. Av. at Szamoty St. (the viaduct over railway tracks)	112	358 MWh	13	6 MWh	98%
Komisji Edukacji Narodowej Av. at Dolina Służewiecka St.	16	21 MWh	16	7,4 MWh	65%
Cegielniana St. (the viaduct under railway tracks)	—	—	2	1 MWh	—
Cierlicka St. (the viaduct under railway tracks)	5	6,5 MWh	8	2,3 MWh	64%
Jagiellońska St. at FSO	46	36,3 MWh	26	5,7 MWh	84%
Kasprzaka St. at Wolska St.	15	19,7 MWh	12	5,6 MWh	72%
Kasprzaka St. at Redutowa St.	15	19,7 MWh	12	5,6 MWh	72%
Starzyńskiego St. at Żaba Roundabout	115	99,6 MWh	34	15,8 MWh	84%
Żegańska St. (the passage and underpass under Patriotów St. and Szpotkańskiego St.)	36	10,7 MWh	39	11,3 MWh	6%
along Łazienkowska Route under Marszałkowska St.	80	239,1 MWh	32	14,9 MWh	93%
along Łazienkowska Route under Jazdy Polskiej Roundabout	158	519 MWh	38	17,7 MWh	97%
along Trasa Łazienkowska at the Statistics Poland building	92	270 MWh	44	20,4 MWh	92%
IN TOTAL	698	1603 MWh	289	116,6 MWh	92%

Plans for the future

New LED lighting will appear at all the main streets of the capital city by the end of 2022. It will be ensured with SAVA luminaires specially designed for Warsaw; 38,414 SAVAs will be hung. Due to lower energy consumption, they will save as much as PLN 23 million a year.

The lighting of the majority of Warsaw streets was built several dozen years ago. Therefore, we successively replace posts and luminaires every year. The aim is to ensure better brightness after dark, while reducing electric energy consumption and minimizing the failure risk.

In 2021, we installed new lamps in successive streets, on masts at road junctions and in tunnels and underground passages; for details, see the previous pages of this chapter. Similar measures were taken in previous years; however, the scale of modernization was still small as compared to the needs. 2022 will be a landmark year, as we will replace all the luminaires on streetlights at national, regional and district roads that have not been modernized yet (except for historical luminaires at a dozen or so selected streets).

We took the first step already in 2020. We awarded a contract for the replacement of precisely 38,414 lamps. We entrusted LUG Light Factory in Zielona Góra with the greatest operation of this type in Poland. In 2021, the company designed a luminaire model called SAVA especially for Warsaw. The first three luminaires were hung in December on the façade of the Public Roads Authority building. They were installed at a press conference to show journalists what they looked like and what light they gave. The target installation started at the beginning of 2022 and is planned to take approx. 12 months. Due to a high rate of deliveries, we estimate that approx. 750 luminaires on average will be installed every week.

The total replacement cost will exceed gross PLN 32 million, where the cost of luminaires is PLN 29.1 million and the cost of replacement is PLN 3.2 million. On that account, the annual energy consumption of street lighting for roads managed by Public Roads Authority will drop by 56% – from 49.6 GWh to 21.8 GWh. When we consider the entire street lighting in the capital city of Warsaw (not all of the streets are under care of Public Roads Authority), the energy consumption will drop from 78.5 GWh to 50.7 GWh (by 35%).

In 2021, Public Roads Authority paid gross PLN 527 per MWh for street lighting energy (including distribution). In 2022, we already pay gross PLN 873 per MWh (including distribution), and the rate could be even higher next year. Thus saving is of great importance. LEDs will use 27.8 GWh less, which will give annual savings of approx. PLN 23 million.

The whole operation will not revolve around SAVA only. In 2022, we will finish the replacement of luminaires on masts at road junctions; we will also provide additional lighting at 299 crossings in 193 locations across 17 districts. We issued an invitation to tender for the project on the penultimate day of December 2021, convinced that we could award a contract the second time (repeated tendering procedure) and the task completion would start in the first half of the year.

SAVA luminaires



ENVIRONMENTALLY FRIENDLY

SAVA will allow us to reduce the emission of harmful substances. Due to the fact that it will hang on all the street lamps on our roads, which are illuminated by sodium lamps, the **emission of carbon dioxide will decrease by 30,000 tons per year.**



SAVING

The LED luminaire consumes almost three times less electricity than a sodium one. **In terms of energy efficiency, it is second to none.**



PRECISION

The structure of the luminaire's mounting allows us to set the direction of the light beam. Street lamps will not shine into the windows.



EASIER MAINTENANCE

The model is **extremely easy to repair**. To open luminaire and replace a worn part, a service technician does not need to use specialized tools. All this thanks to, i.a., the use of a durable hinge (does not require any tools) and an automatic disconnection system (the luminaire can be opened "when energized", the power supply will turn off by itself).



BRIGHTNESS

All mounted luminaires will have a standardized color temperature set at **3000K**.



SAVA LICENSE

Warsaw has a license to freely use the SAVA model in the future. Thanks to this, we can order identical structures on the market in the coming years from any manufacturers that will apply for a tender. This will allow for a progressive standardization of lighting, which has a number of advantages, from aesthetics through easy management of lighting, to its replacement and maintenance.

The entire structure of the luminaire is made of aluminium alloys. This will allow it to endure for at least several dozen years. This is important because, together with the street lamps, they are constantly exposed to weather conditions, including precipitation and large temperature differences, especially in winter.





Safety

Road infrastructure should ensure safety of all road users. That is why we are rebuilding roads and changing organization of traffic, implementing recommendations resulting from safety audits, traffic analyzes and speed measurements.

- 56 Traffic speed measurements
- 58 Changes in traffic organization
- 60 Traffic lights
- 62 Integrated Traffic Management System

Traffic speed measurements

Speeding by drivers contributes to dangerous road situations and accidents. In order to get to know scale of the problem, we conduct speed measurements. Results show how many drivers ignore applicable restrictions and allow themselves to drive dangerously.

An instantaneous speed of vehicles and traffic volume were measured from March 30 to December 8. A total duration of measurements amounted to 101 measurement days. We checked speed of 2.42 million vehicles on 255 analyzed roadways.

Due to coronavirus-induced lockdown and emptier streets, drivers accelerated in 2020. In 2021, the pandemic situation began to improve, and subsequent restrictions and limits were being gradually removed. We assumed that an increasing traffic congestion would slow down the drivers. Unfortunately, they were still very often speeding up. We registered 1,413,000 cases of exceeding the speed limit, which means as much as 59% of all registered vehicles. Almost 525,000 of cases concerned exceeding by over 10 km/h (22% of all vehicles). Another 35,000 vehicles exceeded speed by more than 50 km/h, so their drivers should lose driving license (1.41%). This indicator is particularly noteworthy, because it is well over twice as high as a year ago and three times as high as in 2019. This is an alarming trend, because between 2018 and 2019 drivers began to drive more slowly around Warsaw. These speeds have increased again since 2020.

The "fastest" point turned out to be Armii Ludowej Av. (Łazienkowska Route) between Na Rozdrożu Sq. and the road junction with Solec St. (along Wisłostrada). An average speed of vehicles in this place amounted to 67 km/h, where the limit is 40 km/h.

The "slowest" point was Syta St. There, an average instantaneous speed for both directions was 25.7 km/h.

Measurement results were provided to police and Road Transport Inspection, which are authorized to control infringements and enforce appropriate penalties. We actively cooperate with the services in this regard. This was evidenced by e.g. additional patrols paid by the city on the Poniatowskiego Bridge until six speed cameras were installed there.



2.42 million

of measurements carried out

59% of vehicles exceeded speed



HIGHER FINES FOR ROAD TRAFFIC OFFENCES

A number of dangerous situations on Warsaw's roads resulted from a frequent speeding by drivers. In order to stop them, on January 1, 2022, new provisions of the Road Traffic Law and the Code of Offences entered into force. Fines were raised for e.g. speeding – moving **30 km/h** faster than signs allow for results in a minimum fine of **PLN 800**. If the speeding is greater, a policeman may impose a fine of up to **PLN 5,000**. However, when the case goes to court, an upper limit of the imposed fine may reach up to **PLN 30,000**. In the event of recidivism, a minimum rate is doubled.

Speed cameras guard the Poniatowskiego Bridge

2018 R. **SPEED MEASUREMENTS** carried out there, shown that:



From **47,526 drivers**, that passed the bridge during one day:

- **16%** were driven in accordance with regulations
- **84%** were going faster than the allowed 50 km/h
- **0.8%** drivers should lose their driving license, because they accelerated their cars to at least 101 km/h, and the record holder was speeding 180.2 km/h



26

accidents on the bridge in 2015-2019

16

of which were caused by an excessive speed

3

people died in this accidents

2021 R. **6 SPEED CAMERAS** installed on the bridge. The devices were placed near towers and tram stops – three on each side of the bridge. They started operating in the summer, and on September 29 we carried out the same measurements as three years earlier in order to check how they affected the drivers:



Out of **41,754 drivers** who travelled over the bridge during the measurement day:

- **73%** were driven in accordance with regulations
- **27%** of them were speeding

a vast majority of drivers exceeded the limit of 50 km/h only by a few kilometers per hour



44,5 km/h

was the average speed of vehicles on the bridge

Speed cameras, which were put into use by the General Road Transport Inspectorate.

Changes in traffic organization

Introducing changes in traffic organization is necessary to improve safety. Therefore, each year we implement new projects aimed at protecting those who use public space. This includes moving parking from pavements to roadways, designating new ground crossings or building refuge islands for pedestrians.

Many changes are related to an audit, completed in 2020, of all 4,093 crossings without signalling in the city. Checking zebra crossings against 30 criteria gave us an answer what we should improve on them. First of all, we deal with those qualified for a quick action, usually rated 0 and 1 on a five-point scale. Auditors indicated 481 such problems.

We have been implementing recommended changes since 2016, when first crossings were audited. 2021 was another year during which we managed to improve safety in other locations – we did it at 66 crossings, including 38 graded 0 and 1. Umińskiego St. was the first place where actions were taken. There, the reconstruction was carried out at nine crossings, including two graded 0 and four with a grade of 1. We shortened zebra crossings so that pedestrians can cross the road faster. We used a similar solution on Meissnera St., where we improved security in six locations (five crossings were rated 0 by auditors). In addition, we put in order parking on both streets. Drivers no longer have a physical ability to leave their cars right in front of the zebra crossings and overtake in their area. Also on Mickiewicza St. we shortened crossings. In this way, we improved safety in eight places there (three crossings were rated 0, five had a note of 1). There, we introduced changes when implementing a new traffic organization in connection with an expansion of the Metered Parking Zone.

In several places, the best way to improve safety was to build a refuge island. We used this solution at e.g. Dzieci Warszawy St. (near Szancera St.) and Chłopskiego St. (at Boremlowska St. and Makowska St.). In turn, on Płochocińska St., at the stop "Cementownia 02", an island was built as part of a development investment, and on Ostroroga St. at building no. 35 – by the Municipal Transport Authority, on the occasion of the bus terminus construction.

In 2021, we continued the program of moving parking from pavements to the roadway. We implemented changes on several dozen streets, including Koszykowa St. (on the southern side, on the section from Lwowska St. to Konstytucji Sq.), Rozbrat St. (on the eastern side between Przemysłowa St. and Górnośląska St.) and Raszyńska St. (the western road from Filtrowa St. and Wawelska St.). Thanks to this, pedestrians no longer have to squeeze between cars and buildings, because they have an entire width of pavement at their disposal. Drivers have not lost a single parking place, but they gained convenience – to park their car, they no longer have to maneuver and avoid street lamps or trees.

The convenience of passers-by is also improved by ground crossings designated by us there, where it was impossible to cross the street so far. Especially for seniors, people with disabilities or parents with children in prams, replacing tunnels and footbridges with zebra crossings is very important. We created a total of 38 such crossings in recent years. In 2021, we designated them in three places, and in the remaining fourth, they were created as a result of development and district investments. We also started building zebra crossings in the very center – around Dmowskiego Roundabout.

We also inserted blocking posts to calm down and organize the traffic. They were placed where it was urgently necessary to secure pavements and crossings in front of parked cars – including along a local road at the height of Waszyngtona 12/14 St. and at the bus stop at Grochowska St., behind Wiatraczna Roundabout. In the long run, we are trying to separate such places with greenery to obtain an appropriate aesthetic effect. Rozbrat St. is an example of such action; instead of posts, we created a green garden with 360 bushes



58

SPEED BUMPS

In some locations, a solution is to create speed bumps next to the crossings. In 2021, we used such elements to force a slower drive at Myśliborska St. We "stuck" bumps into the road in three places there. It was a response to appeals from local residents who asked for greater safety for pedestrians.



59



Traffic lights

Traffic lights organize traffic of vehicles and significantly improve safety. That is why we build it on the busiest crossings and intersections. This happens after a careful analysis to show that it is really necessary – lights installation is an expensive solution.

Warsaw has 862 intersections and pedestrian crossings with traffic lights. Over 610 of them (apart from the oldest installations) are the so-called adaptive traffic lights that adjust length of a green signal to the traffic volume. Thanks to this, a green light comes on when it is needed, ignoring mouths and relations where no one is waiting for crossing and passage.

We systematically take care of traffic lights. As a result, safety and fluidity of traffic are as good as possible. Until recently, in light maintenance contracts, the only standard was a replacement of worn cabling, masts, signalling devices or controllers. In 2020, thanks to signing a new contract with Traffic Polska and Sprint, scope of works under the current maintenance was extended. Thanks to this, we not only repair what is broken, but also replace all obsolete elements in advance.

In 2021, we built or renovated traffic lights at 31 intersections and crossings throughout Warsaw. New masts with signalling devices were placed where it was necessary to calm the traffic and strengthen protection of pedestrians. The best example is crossing at Marszałkowska St. at the height of Senatorska St. and Elektoralna St. It was the only one on a nearly 3-kilometer section of Marszałkowska St. towards Konstytucji Sq., on which traffic was not controlled by lights. Now, pedestrians have a real comfort of walking there – also because we widened pavement at its southwestern corner. By building signalling, we also improved safety of non-motorized people at the crossing of Połczyńska St. with Lustrzana St.

We carried out repairs where the signalling was old and worn out. This is what happened, among others, at the intersections of Wołoska St. with Dąbrowskiego St. and Madalińskiego St. or Komisji Edukacji Narodowej Av. with Surowieckiego St. and Bartoka St. We replaced outdated devices there, adjusting lights to the current standards.

For example, we equipped them with acoustic guidance, which makes it easier for blind and visually impaired people to cross the roadway, as well as automatic vehicle detection and pedestrian detection.

We also modernized traffic lights at the intersection of Marszałkowska St. and Królewska St. We exchanged, among others, signalling devices, beacons and controllers, and we also put new wiring. In this location, the lights were one of the elements of a larger investment, as in Wilanów, where at the intersection of Wilanowska St. with Kosiarzy St. and extended Sarmacka St., we rebuilt traffic lights to support a new connected road.

A total amount that we spent in 2021 on the construction, reconstruction, adaptation to a new traffic organization and maintenance of the traffic lights, amounted to over PLN 42 million.



OTHERS WERE ALSO BUILDING

In 2021, traffic lights were also built by other municipal units and private investors. Board of Capital City Development (former Board of Urban Road Investment) improved safety on a newly created pedestrian crossing through Wybrzeże Helskie St., and also modernized the existing traffic lights at the intersection of this street with Kłopotowskiego St. and Ratuszowa St. In turn, a developer equipped the intersection of Płochocińska St., Spedycyjna St. and Krzyżówki St. with lights.

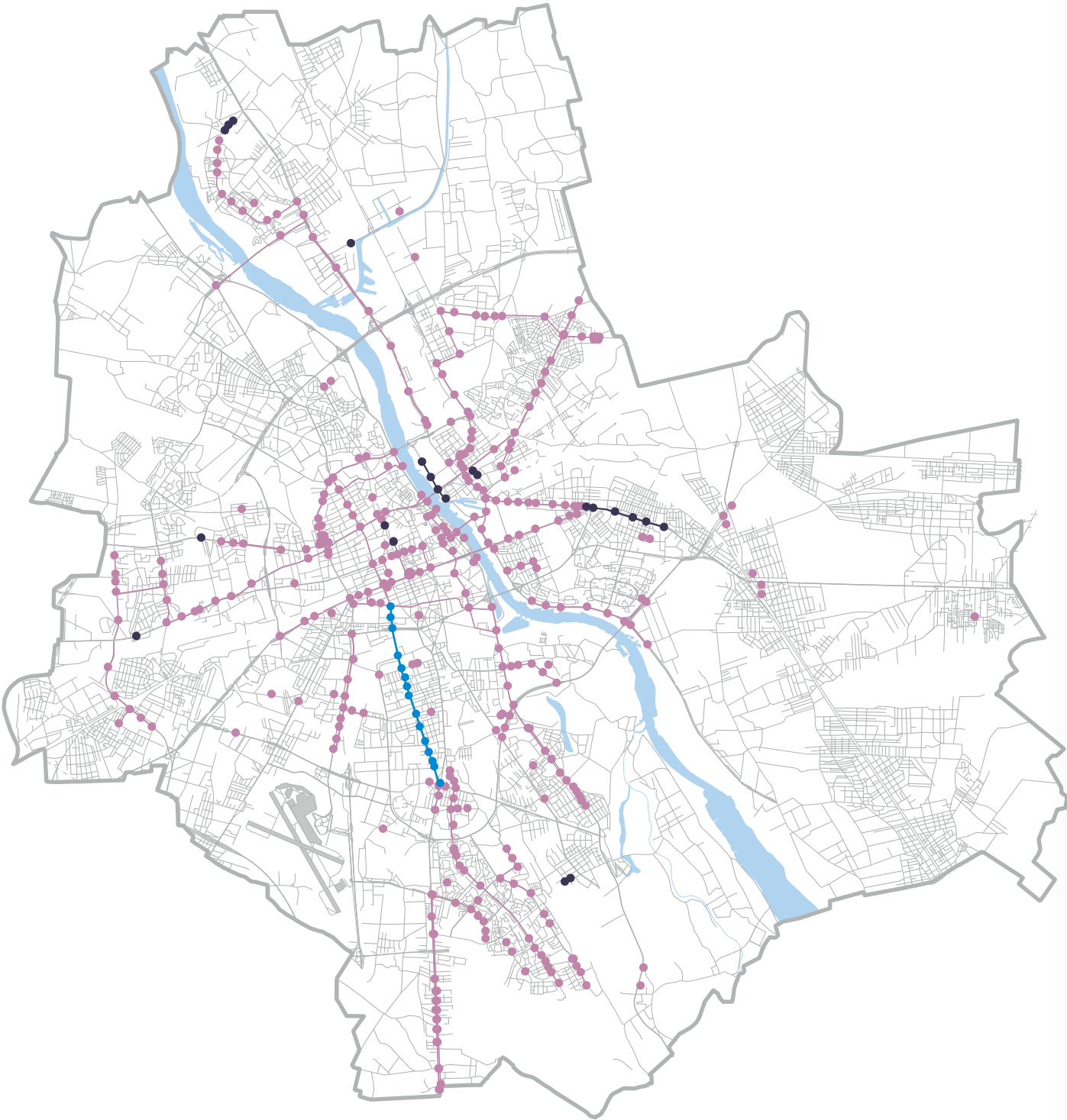


31

intersections and pedestrian crossings with new or renovated signalling devices

Intersections covered by the traffic managment system

- Legend:
- intersections covered by the system
 - intersections included in the system in 2021
 - design work



Integrated Traffic Management System

The Integrated Traffic Management System improves traffic flow at signalled intersections. Every year, more intersections are added to it, and now it has almost 400 of them.

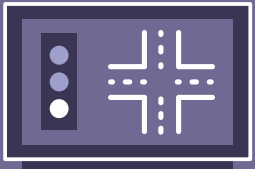
The Integrated Traffic Management System [Zintegrowany System Zarządzania Ruchem] supports moving around Warsaw. Its task is, above all, to organize and control traffic in the supervised area, ensure priority to public transport vehicles and inform road users about road incidents.

The system has been operating since autumn 2008. It is based on a network of cameras and sensors that detect traffic and adjust the traffic light cycles to it. This allows us to drive as smoothly as possible through successive coordinated intersections.

Initially, the system covered 37 intersections. Since then, we have been constantly expanding it, including new intersections every year. In 2021, it covered 21 more, including five at Grochowska St. (with Podolska St., Żółkiewskiego St., Zamieniecka

St. and Szembeka Sq., Wspólna Droga St. and Wiatraczna St.) and two along Brzeska St. (with Żąbkowska St. and Białostocka St.). There are currently 396 of them.

Soon, the ITMS will be extended to other locations. We are working on the implementation of traffic organization projects, renovation and adaptation to work in the accommodation and coordination of traffic lights at 14 intersections along Niepodległości Av. We are already implementing a similar modernization at Dmowskiego Roundabout, where the system will include four emerging ground crossings for pedestrians.



396
intersections are
already covered
by the traffic
management system





Routine maintenance

The streets are made up of hundreds of thousands of road infrastructure elements. One of our basic tasks is their day-to-day maintenance. We control a technical condition of roadways, pavements and engineering structures. We also take care of the right of way, checking it e.g. against illegal advertising.

- 66 Emergency Breakdown Services
- 68 Bridge and engineering structures
- 70 Underground parking lots
- 72 Right of way
- 74 We remove illegal advertisements
- 75 We sell removed cars
- 76 Municipal Information System

Emergency Breakdown Services

The Public Roads Authority Emergency Breakdown Services is essential for the city to function as it should. Our employees watch over streets 24 hours a day, seven days a week and they take care of a proper condition of the road infrastructure. In 2021, we secured over 600 failures that directly threatened traffic safety.

Interventions result not only from our daily patrolling of the streets. We also operate in locations indicated by citizens and other municipal units. After receiving a signal, we immediately go to the site and first secure a place of failure, and then proceed to repair it. In 2021, as in previous years, the elements we repaired most often were lighting and traffic lights.

We were called to make up road signs and remove defects in the road surface over 4,000 times. We used 18 tons of cold asphalt mix to protect the spillings. Using the easiest and fastest method, we removed damage on an ad hoc basis, and ultimately commissioned our contractors to permanently repair it using mastic asphalt. In 2021, we undertook 605 interventions regarding various incidents in the right of way that directly threatened the traffic safety.

Not all reports concerned roads managed by the Public Roads Authority. If the breakdown happened on a road under another unit, we were immediately securing the place and then notifying the road administrator.



The most popular method of reporting faults is the **Warsaw City Contact Center 19115**. More than half of the notifications reached us via this channel. In total, we received **42,819** reports on various cases.



42 819
notifications were registered in 2021

14,317
street lighting

1,306
damaged post preventing access to the pavement

6,655
traffic lights

1,124
advertisements in the right of way

4,846
damaged road surface

1,075
occupation of the right of way

4,629
deficiencies in road signs

1,017
damaged obstacle post (pylon) on islands and refuges at crossings

1,661
damaged pavement surface

555
occupation of the emergency lane

Bridge and engineering structures

The road infrastructure also includes bridges, viaducts, footbridges, tunnels and underground passages. These facilities serve millions of Varsovians and visitors every day. Therefore, our task is to take care of their proper technical condition and improve its accessibility.

In Warsaw, there are 539 bridges and engineering structures in the road infrastructure managed by Public Roads Authority, including 65 bridges. We constantly control them so that citizens can use them safely. The roadworks we carry out include maintenance and local repairs of bituminous surfaces, replacement of prefabricated beams, repair of concrete spans or energy-intensive barriers. We provide anti-corrosion protection and clean noise barriers, cornices, railings and bridge facades.

In 2021, we focused on the renovation of the most worn-out footbridges over the city's important thoroughfares. Renovation has been carried out e.g. on footbridges over Powińska St. at the height of Limanowskiego St. and over Ostrobramska St. at Polygonowa St. We renovated the stairs by replacing damaged steps. We also renovated the supports, girders and railings, which we cleaned, i.a., with quartz sand and covered with a new anti-corrosion coating.

We also carried out a number of maintenance works related to the replacement of expansion devices. The infrastructure we equipped with new expansion joints include, i.a., the eastern side of the Świętokrzyski Bridge (we also repaired the surface of the pedestrian and bicycle routes), the Łazienkowski Bridge on both sides of the Vistula, as well as viaducts along Jana Pawła II Av. (over Czterdziestolatka Roundabout).

We operated throughout the second half of 2021 on the Siekierkowski Bridge. At first, the maintenance and renovation works involved the reparation of concrete islands between the roadways at the junctions at the intersection of Siekierowska Route and Wał Miedzeszyński St. Then we took care of the expansion device – we replaced it on the eastern side of the bridge on the roadway towards Wawer. The third and last stage of the renovation was the reparation of the southern pavement surface on the approx. 120-meter-long fragment from the expansion device to the pylon on the western side of the bridge.



Cleaning of engineering facilities
577,000 m²
of surface



Number of bridges and engineering structures



ILLUMINATION AS THE ICING ON THE CAKE

At the turn of 2019 and 2020, we renovated the brick viaduct of the Poniatowskiego Bridge. We forged old joints and stone elements, which we replaced with new ones; we excavated and repaired the wings of the facility, and also renovated damaged fragments of railings. In order to fully show the effects of our activities and expose texture of the stone surface, in 2021 we installed illumination of the viaduct. We wanted to properly emphasize colors of the structure. Therefore, we used a total of seven warm white floodlights (2700-3000K) to accentuate the stone color regardless of the nearby street lighting, whose target color (4000K) better presents the joints and cement treatments on the site.

In order to achieve light display of the viaduct as it should be, we had to arrange LED spotlights accordingly. We installed three of them on the eastern side (66W each) on the lighthouse opposite the viaduct on the inlet side. We set them divergent so that the light they emit covers entire width of the viaduct. In turn, four floodlights from the west (32W each) were embedded in the ground on both sides of the facility abutment. Such a location of floodlights means that lights of the leaving cars do not affect the exposed color of the viaduct.

In 2021, we allocated **PLN 17.6 million** to the maintenance of bridges and engineering structures.

Underground parking lots

The Public Roads Authority has two underground parking lots for the public use. Both are located in the city center and available for a short-term parking. After purchasing a monthly subscription, one can also leave the car for a longer time. In 2021, we carried out a general renovation of the facility under Krasińskich Sq.

Parking in the city center is sometimes not that easy. Due to a large number of cars, sometimes it takes a lot of effort to find a free place. Therefore, underground parking lots can be helpful. The Public Roads Authority administers two, which in total are able to accommodate over half a thousand cars.

The first public garage with 130 parking places is located at Waryńskiego St. – above the ceiling of the Politechnika metro station. You enter it from Progi St., on the side of Polna St. We launched it in 1996, and carried out its major renovation in 2020. We replaced, i.a., the entire electrical installation and lighting, as well as we expanded a monitoring network with 14 new cameras.

In 2021, we renovated the second underground parking lot – located in the vicinity of the Supreme Court, with entrance from Krasińskich Sq. It was opened at the end of the 90s and has been administered by the Public Roads

Authority since 2005. As it underwent only minor conservation works as part of its current maintenance, we decided to carry out a renovation on a larger scale.

The works were mainly focused on repairing the surface. It was damaged not really because of the cars driving in and out, but water they carried. In particular, the winter seasons took their toll, during which a melting mixture of snow and salt was dripping from wheels and wheel arches of the parked cars. Chips formed in the surface concrete slabs were removed with a polymer-cement binder mortar.

We sealed walls and ceilings of the parking lot. We removed scratches caused by the water action and limited its impact on the facility destruction. We also repaired the parking lot entrance lighting. On the lintel at the entrance, we installed a display informing about the number of vacancies. As a result, the underground garage and its surroundings became even more comfortable for drivers. In the autumn of 2019, we installed four boards that indicate the number of vacancies on the roads leading towards Krasińskich Sq.

Na parkingu pod pl. Krasińskich maksymalnie może zaparkować jednocześnie **407 samochodów**.



Parking lot under Krasińskich Sq.



407
parking
places



PLN 5
for each commenced
parking hour



PLN 40



PLN 25

Cost of 24-hour parking

Cost of a weekend parking
(from Friday 7:00 pm until Monday 7:00 am)

PLN 80

PLN 40

Price of a 24-hour monthly subscription

PLN 500

PLN 190

Price of a monthly subscription for parking
during the day from 7:00 am to 7:00 pm

PLN 370

Price of a 24-hour monthly subscription
for parking at night from 7:00 pm to 7:00 am

PLN 250

Parking lot under Waryńskiego St.



130
parking
places



PLN 5
for each commenced
parking hour

Cost of 24-hour parking

PLN 40

Cost of a weekend parking
(from Friday 7:00 pm until Monday 7:00 am)

PLN 80

Price of a 24-hour monthly subscription

PLN 700

Price of a monthly subscription for parking
during the day from 7:00 am to 7:00 pm

PLN 500

Price of a 24-hour monthly subscription
for parking at night from 7:00 pm to 7:00 am

PLN 350

Right of way

We can find numerous facilities not related to the road function in the right of way – kiosks, commercial stands and advertisements. In order to make them work in harmony with urban space, we give consent to arrange them based on the clearly defined rules. Due to the pandemic, in 2021 changes to fees were still in place.

The coronavirus and the restrictions resulting from it affected mainly those who run a business. They were felt especially by those who use urban space. Therefore, in 2020, at the initiative of the Mayor of Warsaw, Rafał Trzaskowski, the city councilors reduced rates for the right of way occupation. Those who applied for a permit to set up a restaurant or a cafe garden obtained a 75% discount. In turn, the discount for permits for the organization of marketplaces, commercial pavilions, kiosks, signs and awnings, advertising poles as well as information and advertising showcases amounted to 50%.

The reduced rates were extended to 2021. Although the catering garden season usually runs from March 1 to October 31, it did not start until May 15 due to the pandemic. Nevertheless, there were many restaurateurs who decided to arrange tables in the open air. Throughout last year, we issued 581 decisions for this purpose, 83 more than in the previous year.

In total, in 2021 we issued **3,458** decisions allowing the operation of facilities in the right of way not related to its function. Most decisions concerned opening of commercial stands (630), followed by advertisements (606), and the third – catering gardens (581); kiosks came fourth (543).

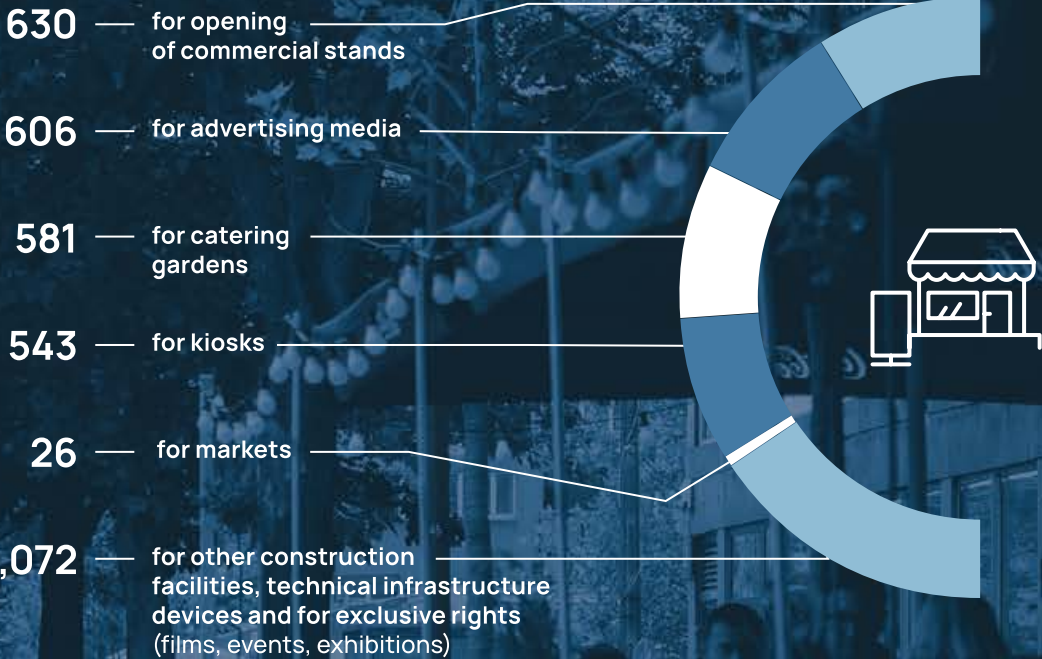
A significant part of the decisions issued concerns facilities related to the road function. These are mainly roadworks (including construction of connections and underground networks), but also commercial and social parking lots, car washes and petrol stations.



3 458

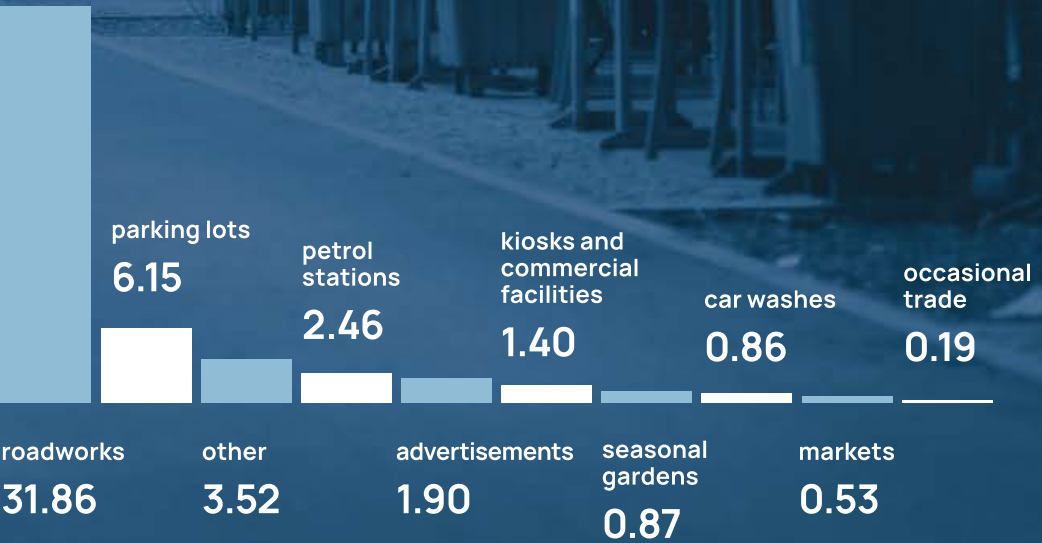
decisions we issued in 2021 allowing the operation of facilities in the right of way not related to its function

including:



PLN 49,7 million

amount of the income from the right of way occupation



We remove illegal advertisements

Illegal advertising is the bane of our roads. Therefore, we regularly inspect right of way and remove advertisements that are placed without permission. In 2021, our employees carried out over 17,500 inspections and removed nearly a thousand advertisement media and other objects.

There are plenty of roadside advertisements. Some are extremely flashy and disfigure the landscape, others are more subdued, but located in inappropriate places. Sometimes they can even be dangerous because they block visibility. They also often take the place of pedestrians, especially so-called steps placed on the pavement limit the space.

Therefore, the use of the right of way is constantly monitored by us for activities not related to the road function. We pay attention to whether the objects located there, including advertisements, are placed in such a way that they do not hinder movement. We also check whether they have an appropriate permit.

In 2021, we conducted a total of 17,658 inspections. Despite the bidding restrictions, caused by the pandemic, our employees were successively checking right of way under our control

and returned to a pre-pandemic level with the number of inspections. 13,191 advertisements were inspected, 630 of which were removed.

Additionally, thanks to our actions, we managed to remove 335 other objects in the right of way. These were, among others, containers for second-hand clothes, scooters or makeshift bicycle stands.

Seizing the right of way without our consent imposes a fine. During the year, we initiated 2,242 administrative proceedings aimed at fining owners of illegal facilities (including 1,328 proceedings related to advertisements) and issued 1,595 administrative decisions imposing fines on owners of illegal facilities (including 910 decisions concerning advertisements).

IMPORTANT

Pursuant to the Public Roads Act, a fine for occupying a right of way without the road administrator's permit is ten times the fee for the period in which the advertisement was exposed. Fees for occupying a right of way by a medium are different and depend, i.a., on the size of advertisement, time of its placement and road category. For example, a poviats right of way was occupied for 30 days by an advertisement with an area of 5 m2, and the rate of the right of way occupation was PLN 3.10. Multiplying these values, the fine would be **PLN 4,650**.

Proceeds from fines for the right of way seizures amounted to PLN 3.1 million

WE REMOVED:



630 illegal advertisements



335 facilities in the right of way, i.a. containers for second-hand clothes, scooters and bicycle stands

We sell removed cars

Not only advertisements, but also abandoned vehicles disfigure the landscape. In addition, they occupy parking places, and sometimes due to their technical condition, they are dangerous. That is why we are removing such cars – in 2021 we sold in a tender seven of them, when the owner had not come to pick them up for six months after the cars had been towed away. After such time they became the property of the city.

Vehicles from the capital's roads are removed only on the basis of instructions issued by authorized entities – municipal police, the police or persons commanding a rescue operation. This is based on Articles 130a and 50a of the Road Traffic Act [Prawo o ruchu drogowym].

In the case of Art. 130a, vehicles are removed when, i.a., they are left in a place where it is forbidden and they obstruct traffic or otherwise threaten safety, or their drivers have not shown a confirmation of concluding a compulsory third party liability insurance [OC – Liability Insurance] of the vehicle owner or premium payment proof for this insurance.

The situation is different when it comes to Art. 50a. Under this provision, vehicles left without registration plates or those whose condition indicates that they are not used are removed. Such vehicles are removed at the request of the municipal police or the police and they go to car parks of companies with whom we have signed appropriate agreements. There they wait for the owner or a person authorized to pick them up. If no one arrives to pick up a car within six months, it becomes the property of the city by the virtue of law.

In 2020, we removed 10,626 improperly parked cars (Art.130a RTA) and 1,978 wrecks (Art.50a RTA) from Warsaw's streets. In 2021, we towed 12,213 and 1,816 vehicles, respectively.

Until the last year's autumn, the cars that nobody had picked up were sent to scrap after they had become the property of the city. Usually without regret, because in most cases these were cars that were so destroyed that even a general renovation would not bring them back to the roads. There are exceptions, however, and that is why we decided that some abandoned cars, although classified as wrecks, do not have to be scrapped. Eight of such cars (including Porsche and Mercedes S-class) were put up for sale in a tender procedure. Seven of them found new owners, and the sum we got for them amounted to PLN 92,700.

The first such tender in the history of the Public Roads Authority turned out to be successful. In the future, we are planning further auctions to sell cars that will belong to the city after being towed away under Art. 50a of RTA.



Municipal Information System

Good signage is very important to move smoothly around the city. Therefore, bearing citizens and tourists in mind, every year we update, modernize and maintain over 95,000 elements that make up the Municipal Information System. This includes address plates, maps, signposts or information about important sites in Warsaw.

The Municipal Information System was introduced in 1996. It quickly gained recognition among Warsaw citizens and visitors from outside the capital. The set of characteristic signs visible on every street and building in the city has become so part of the landscape that today it is difficult to imagine moving without it. The elements that constitute MIS make it easier to reach housing estates or streets, and at the same time inform about their patrons and history of the area.

As the city is constantly growing, the Municipal Information System is constantly expanding, too. Address boards, street boards, information posts, Metered Parking Zone boards, pictograms of directional boards to districts, stations, etc., two-sided information boards, wall-mounted information modules and Paid Information Points are constantly increasing and there are already 95,350 of them.



In 2021, we installed 1,288 new markings. Repair, maintenance, update and replacement included 8,134 MIS items. In addition, we issued opinions on 251 traffic organization projects (in relation to MIS elements), and the total number of cases in the department dealing with MIS exceeded 2,200.



8 134

items that have been repaired, maintenance, replacement and updating

including:



5,585 street and pedestrian directional boards



267 vehicle traffic directional boards



1,045 illuminated information points and coffers in underground passages



494 boards informing about area monitored by the Public Roads Authority cameras



312 modules about street patrons and important historical sites



431 Paid Information Points





Development and projects

Our activities are not only limited to an ongoing maintenance of the road infrastructure. We are developing and modernizing the Metered Parking Zone and the city bike system. We are also introducing a new model of cooperation with private investors in the reconstruction of roads.

- 80 Development of the MPZ
- 82 E-control
- 84 New rules of cooperation with developers
- 86 Veturilo
- 88 Winter illumination

Development of the MPZ

In 2021, the Metered Parking Zone [Strefa Płatnego Parkowania Niestrzeżonego] expanded to Ochota and Żoliborz and had approx. 51,600 parking places. We increased the e-control fleet by purchasing six more cars to supervise parking fees. We made it possible for drivers who received a request to pay an additional fee to pay it via Internet.

The Metered Parking Zone has been operating since 1998. First of all, it is to serve the local community and make it easier for residents to park their cars near the house. Secondly, it is to give a paid parking for those commuting to the city center. Its aim is to increase rotation of places so that those who want to park there have a place to do it.

Pursuant to a resolution adopted by the capital city councilors, the zone was expanded in 2021. **From November 15, the entire district of Ochota (so far it was only partial) and Żoliborz are located in its area.** In Ochota, the changes covered 145 streets (approx. 80 km), and in Żoliborz – 121 (approx. 59 km). In the first district, the number of parking places amounted to approx. 9,600. (3,600 were already there; 6,000 were included), and in the second – 4,700. **In total, about 51,600 vehicles can park in the MPZ.**

Although the MPZ serves to protect area covered against an excessive number of parking cars, it also brings revenues that are allocated to the development of road infrastructure. In 2021, the income from parking fees in the paid zone, in underground parking lots and commercial places amounted to a total of over PLN 124 million, and additional fees for the lack of a parking ticket amounted to another PLN 26.3 million.

The total income in 2021 amounted to over PLN 151.9 million, which is PLN 58.5 million more than in 2020. This was mainly due to the extension of the MPZ, but also new fee rates applicable from the beginning of January, extension of zone operating hours, easing

further restrictions introduced due to the coronavirus pandemic and more returns from remote to stationary work gave such a result.

In order to more effectively reduce the number of drivers avoiding fees, we expanded our e-control fleet by six more cars and so we already have nine of them (more on pages 82-83). For those drivers who were caught while parking for free, we made it easier to pay an additional fee. Until recently, it could be settled in two ways: paid within 14 days from the date of receipt of the request to the general bank account number or in the payment machines at our headquarters at Chmielna 120 St. From August 30, we made it possible to pay it through the Public Roads Authority website. This new functionality is the first such solution in Poland. It is an extension of the option, introduced on November 2, 2020, of the possibility to check a detailed photographic documentation on our website that shows lack of the fee payment in the MPZ.

The popularity of the mobile payments continues to grow. The share of parking fees paid using the application increased in 2021 from 25% to 33%. From 2020, payments are already offered by two operators and we are working on further extension of this offer.

We prepared more changes to the MPZ for 2022. From January, foot patrols controlling parking in the MPZ will use the e-control system. They will no longer leave paper tickets for the non-paying drivers behind their windscreen wipers, but they will register them in the electronic system. An information about the offense and the amount due will be then sent by post.

We are also preparing to expand the MPZ with further parts of Praga-Północ (around Hallera Sq. and Szmulowizna) and Mokotów (northern part of the district) as well as Saska Kępa and Kamionek in Praga-Południe. Consultations with residents on this matter as well as analyzes regarding the occupancy of parking places took place in the autumn of 2021.

MPZ in Warsaw

area of **42.9 km²**

8.29% of the city's area

51,600 parking places

363.5 km of streets

Extended MPZ in Żoliborz

121 streets
approx. 59 km

Extended MPZ in Ochota

145 streets
approx. 80 km



PLN 6.67
average value
of the parking
ticket



PLN 6.30
average value
of the mobile fee



252 days
of validity of the
paid zone in 2021

Payment methods in MPZ



in cash



by card



mobile

year:	PLN million:			total:
2017	32.6	32.4	14.2	79.2
2018	29.4	37	17.6	84.0
2019	26.8	40.8	19.7	87.3
2020	20.1	36.8	19.2	76.1
2021	25.9	53.8	39.9	119.6

Proceeds from parking: PLN 151,943,000

including:

PLN 119,619,000
proceeds from parking
in MPZ

PLN 26,381,000
proceeds from
additional fees

PLN 2,664,000
flat fee proceeds from parking
at restricted parking places
(so-called white restricted
parking places)

PLN 2,355,000
proceeds from
resident subscriptions

PLN 923,000
proceeds from
underground car parks

average proceeds from one day of paid parking in MPZ: **PLN 602,951**



E-control

Two years ago, as the first in Poland, we launched the e-control system for paid parking. We are constantly improving and expanding it – in 2021, we increased the fleet of vehicles equipped with sensors and cameras by another six cars. In total, we already have nine of them, which allows us to maintain high effectiveness of controls.

After its extensions in 2020-2021, the area of the Metered Parking Zone increased from 17.7 to 49.2 km². In order for the zone to function properly, and thus to ensure rotation of parking places, it is necessary to eliminate dishonest drivers who do not comply with the rules that have been in force for years.

Therefore, in 2021, we expanded the e-control car fleet. We bought another six vehicles, complementing already possessed three, and thus we already have nine of them. They attract drivers' attention because they are characterized by a "box" (three older models) or a beam (six newer ones) with cameras and a number of sensors on the roof. The devices scan registration numbers of parked cars and transfer the data to our database to verify the parking fee.

All the e-control cars are electric Nissan LEAFs. When looking for drivers who have not paid for parking, they drive twice along a given street at intervals of several to several dozen minutes in order to eliminate mistakes or vehicles whose drivers are just going to the parking meter or are paying via the app. Thanks to a special RFID reader, the e-control cars automatically recognize Honor Cards, Insurgent Cards and N+ Cards left in vehicles, which entitle to park free in the MPZ.

In 2021, firstly three, then seven, and finally nine cars for e-control drove over 105,000 km and controlled 5,678,793 parked vehicles. As a result, a total of 189,124 additional fee tickets were issued. This is over two-third of all additional payment documents in 2021 – the remaining 77,094 were issued by 25 two-person foot patrols. We estimate that one car performs work comparable to one of 10 patrols.

The Warsaw e-control system, purchased thanks to the EU funding under Virtual WOF, i.e. a project

called Virtual Warsaw Functional Area [Wirtualny Warszawski Obszar Funkcjonalny], is an extremely innovative solution. It is no surprise that other Polish cities want to follow our footsteps – Poznań has started tests, and cars for e-control are also to appear e.g. in the Tri-City. On the other hand, since January 2022, our foot patrols have been equipped with the e-control system. They will no longer leave paper tickets for the dishonest drivers behind their windscreen wipers, but they will register them in the electronic system.

Cars for e-control have not replaced and will not replace foot patrols. There are places where it is more difficult for our vehicles to enter and see registration plates. In addition, controllers are needed on the spot, where behind the desk they verify photos from e-control and send payment requests to dishonest drivers



In 2021, the e-control cars drove over **105,000 km** and controlled over **5.6 million parked vehicles**

New rules of cooperation with developers

When building new housing developments, office buildings or shops, developers are obliged to invest in the reconstruction of the road system around their investment. This means the necessity to cooperate with the road manager. In 2021, in order to improve it and guarantee the investors' contribution to the development of the road network, the mayor of Warsaw, Rafał Trzaskowski, decided to introduce a new procedure in this regard.

Warsaw is developing dynamically, new housing developments, office buildings and shops are being built. Investors have to remember that their investments have an impact on functioning of the city. Therefore, in accordance with the Article 16 of the Public Roads Act, they are obliged to reconstruct the road system so as to adapt it to an increased traffic caused by new buildings. The more new citizens, employees and parking places, the greater the impact.

Reconstruction of the road system is carried out on the basis of an agreement that investor signs with the road manager. It is the investor's responsibility to prepare a reconstruction project and then carry it out at his own expense. It is often a time-consuming procedure (lasting several months, and sometimes even several years), delaying construction of buildings.

Therefore, in the autumn of 2021, a new, uniform and simplified procedure was introduced by the decision of the mayor Rafał Trzaskowski. It can be used by investors of commercial facilities with more than 1,000 m² or other buildings with an area of more than 5,000 m². Applications submitted by investors are handled by a special consultation and negotiation team chaired by the Public Roads Authority.

The task of the new team, which includes representatives of district offices and several municipal units, is to determine the scope of the reconstruction and estimate a monetary value of the investor's contribution to adapt the road system to the needs of his investment. The guidelines are binding on the units providing opinion and indicate a further procedure of the case, including, for example, conclusion of an appropriate agreement. This enables the investor to be given an arrangement that will allow him to obtain a building permit and start the construction of cubature facilities.

This significant simplification and shortening of the procedure is expected to facilitate investments and, consequently, increase supply on the market and slow down rising prices of new flats. Cooperation of developers with the city also becomes more transparent – the investor, after receiving team's opinion, knows what scope of road construction or reconstruction is to be performed and how much time he has to fulfill his obligations.

The unified system will bring numerous benefits to the city and its citizens. Investors will financially participate in the reconstruction of the road system in proportion to the size of the investment they are planning and the size of impact it will have on the functioning of the city. The rates were set by the mayor's decree in such a way as to reward housing development closer to the center: in the suburbs, this ratio will be correspondingly higher. For example, a developer planning a housing development with a usable area of 10,000 m² in the center will be obliged to invest PLN 1.25 million in the road reconstruction. When building in the suburbs, he will have to spend PLN 1.93 million. This is due to the fact that the cost of properly communicating such housing developments in the suburbs is much higher.

The new rules are also supposed to stop promoting commuting to the city center by car. Each new parking place in a hotel, office and service building in the central area will involve an additional fee of PLN 10,000. While building an office building with an area of 10,000 m² in the center with 200 parking places, the investor has to take into account a contribution of PLN 4 million.

New contracts concluded with private investors will be properly secured. In the event of failure to comply with the statutory obligations, the city will be able to carry out works at the expense of an unreliable investor.

The most important road investments made by private investors in the years 2015-2021

YEAR	LOCATION	INVESTMENT
2015	Kłobucka St.	intersection with Jurajska St. (construction), traffic lights
2016	Sikorskiego Av.	intersection with Bergamotki St. (construction), traffic lights, pedestrian crossing, bike crossing
2017	intersection of Bora-Komorowskiego St. with Skalskiego St.	traffic lights
	Intersection of Ryżowa St. with Prystora St.	traffic lights, extension of Prystora St.
	Nowoursynowska St.	left turn to Służew Fort, traffic lights
	Puławska St.	reconstruction of the intersection with Kuropatwy St., traffic lights, pedestrian crossing, bike crossing
	intersection of Konstruktorska St. with Racjonalizacji St.	roundabout
2018	intersection of Stawki St. with Pokorna St.	traffic lights
	Cybernetyki St.	intersection with Wynałazek St. (reconstruction and connection of Komputerowa St.), traffic lights
	Obozowa St. near Gostyńska St.	traffic lights at pedestrian crossing
2019	Krakowska Av.	intersection with Instalatorów St. (reconstruction), traffic lights
	intersection of van Beethovena St. with Bobrowiecka St.	connection of Dziekońskiego St., traffic lights
	intersection of Redutowa St. with Nakielska St.	traffic lights
2020	intersection of Ostrobramska St. with Rodziewiczówny St.	U-turn lane at Ostrobramska St., reconstruction of Rodziewiczówny St.
	grupowania AK "Kampinos" St.	pavement and bike path, traffic lights, pedestrian crossing, bike crossing
	intersection of Domaniewska St. with Samochodowa St.	traffic lights, pedestrian crossing
2021	intersection of Wilanowska Av. with Kosiarzy St.	culvert on the Służewiecki Stream, connection to the intersection of extended Sarmacka St.
	intersection of Płochocińska St. with Spedycyjna St.	connection of the extended Krzyżówki St., traffic lights, pavement, pedestrian crossings
	intersection of Konstruktorska St. with Postępu St.	roundabout

Veturilo

The public Veturilo bike is ten years old. In spite of the continuing pandemic, it was still popular, and in its jubilee season it had over three million rentals.

The round anniversary season was also the second season overshadowed by the pandemic. Despite organizational and financial difficulties brought about by the coronavirus, Warsaw maintained its system. This is important because the public bike perfectly complements public transport, providing access to interchange nodes and enabling continuation of the journey after getting off the bus, tram or metro. For some, it is also an attractive alternative to owning their own bike or an introduction to the decision to buy one.

In the 10th season, the citizens had 4,945 bicycles at their disposal – 4,785 standard ones, 100 electric and 60 Veturilko children's bicycles. They could rent and return two-wheelers at 350 stations – 316 city stations and 34 sponsorship stations, set up e.g. by office buildings and shopping malls.

In 2021, the interest in Veturilo remained at the level of the previous year. Bicycles were rented 3,328,192 times – over 150,000 times more than in 2020. The best month turned out to be June with 605,428 rentals, and the best day – April 11 with 24,804 rentals. These are high numbers taking into account the circumstances, although the rental scale is

obviously smaller than before the pandemic. This is understandable bearing in mind current restrictions that affect life and work in major cities around the world. In total, since the inauguration of the system, we have recorded 32.1 million rentals.

In 2021, over 132,000 people used bicycles. An average rental time was 28 minutes, which is slightly more than a 20-minutes free ride option. The fee for the first hour is a symbolic one zloty. From March 1 to November 30, Varsovians and tourists travelled a total of 1,425,628 hours 33 minutes and 45 seconds.

A jubilee season of Veturilo was held under a bridging agreement valid for one year. Due to the pandemic situation, from the very beginning it was possible to extend it by one more year. We exercised this right, which means that in 2022 the system will return unchanged and with the same operator – Nextbike Polska. At the same time, we are planning to announce a tender for a target bicycle system for the years 2023-2028.



4 945
bikes were
at the disposal
of citizens
in 2021

Most popular routes in 2021

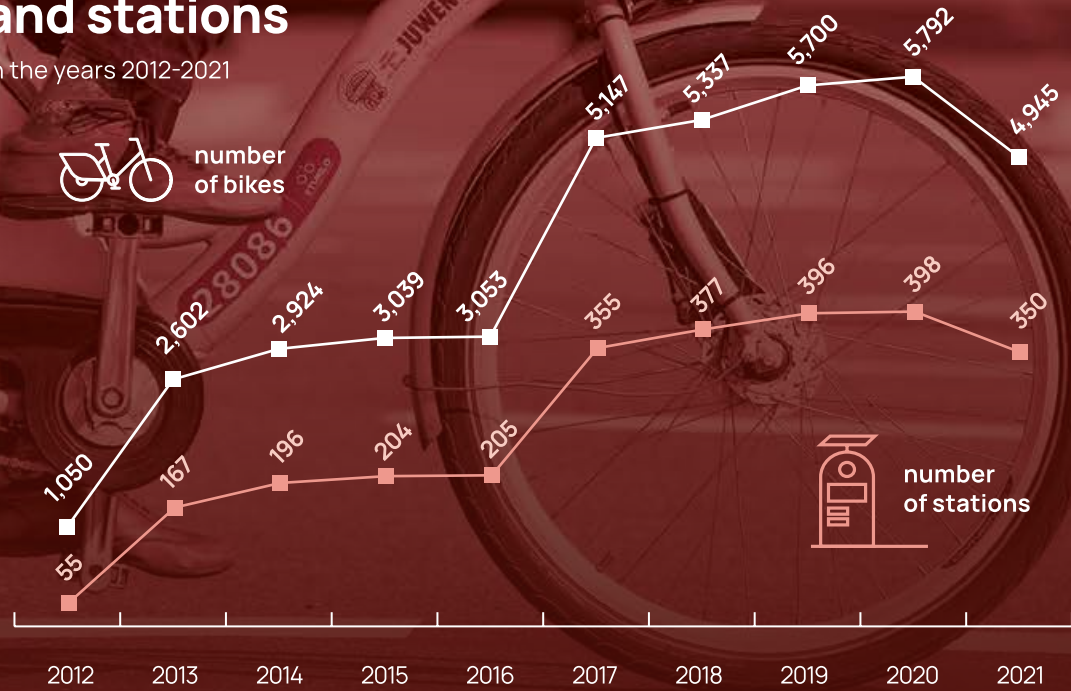
route:		number of round trips:
Niepodległości Av.-Batorego St. – Banacha St.-UW		5,010
Jastrzębowskiego St.-SGGW – Metro Ursynów		4,502
Okocimska St.-Jana Olbrachta St. – Jana Olbrachta St.-Antka Rozpylacza St.		3,840

Most popular stations in 2021

number of rentals and returns:	1. 85,013 Copernicus Science Centre	2. 73,042 Arkadia Shopping Mall	3. 58,877 Niepodległości Av. – Batorego St.
	4. 53,762 ONZ Roundabout	5. 51,427 Prymasa Tysiąclecia Av. – Kasprzaka St.	

Number of Veturilo bikes and stations

in the years 2012-2021





Winter illumination

Christmas illumination is a tradition in Warsaw. That is why every winter we decorate the city. In 2021, the decorations were the same as before.

In 2021, the city illumination decorated again only Zamkowy Sq. and Krakowskie Przedmieście St. (Nowy Świat St. was decorated with commercial lights). Its scale was smaller than in 2016-2019 and was associated with the coronavirus pandemic. Such a range of illumination is the effect of savings in the city budget.

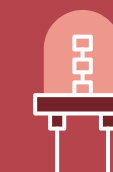
The illumination, though more modest, was still glamorous. As in 2020, nine stand-alone decorations were located at Zamkowy Sq. and Krakowskie Przedmieście St. The main one was a 27-m-high Christmas tree, which was placed near the Royal Castle. The others were a 'balloon seller', 'Warsaw barrel organ', 'horse tram', 'chess pieces on a chessboard', 'rotating carousel', 'lovers' gazebo', 'greeting card' and a 54-m-long 'light tunnel'.

Like every year, we decorated street lamps. 108 lighting poles at Krakowskie Przedmieście St. and 15 at Zamkowy Sq. were provided with Christmas decorations. We also decorated 63 trees. In total, all elements of the Warsaw decorations amounted to

1,120,000 energy-saving eco-LED diodes, which are made of the highest quality materials and consume 10 times less electricity than traditional light bulbs. As a result, the cost of supplying decorations in 2021 was around PLN 1,000 per day, and the expenditure on electricity for Christmas lights accounted for only 0.4% of the cost of powering all city street lamps.

Winter illumination not only adds charm to the city, but also brings it and its citizens measurable benefits. It provides additional lighting in the period when it is dark for almost 16 hours a day. Thus, it allows us to brighten up the streets, which contributes to the improvement of safety, comfort and well-being of citizens.

Undoubtedly, the youngest inhabitants of Warsaw appreciate most the illumination. It changes the grey, gloomy space of the winter city. It makes the walk much more pleasant despite bad weather. In the past, the Warsaw illumination was recognized many times in European rankings evaluating such installations.



All elements of the Warsaw Christmas decoration consisted of over 1.1 million energy-saving eco-LED diodes



We are available for you

Good contact with citizens is essential for us. Despite the pandemic, we managed to organize a series of face-to-face meetings, but we also consulted some cases remotely. Varsovians flooded us with ideas and applications through the platform 19115 Warsaw City Contact Center [Miejskie Centrum Kontaktu Warszawa 19115] and social media. We also implemented their ideas under the civic budget.

- 92 Public consultations
- 94 Civic budget
- 96 Efficient handling of notifications from citizens
- 98 Public Roads Authority behind the scenes

Public consultations

After the pandemic had impeded organization of direct information meetings with citizens, we returned to them in 2021. Live consultations, interspersed with those in a remote mode, concerned the extension of the Metered Parking Zone and changes in traffic organization related to them.

The Public Roads Authority relies on meetings with Warsaw citizens in person. They allow for a direct dialogue and a thorough discussion of a given problem. Unfortunately, due to the coronavirus pandemic outbreak in 2020, it was impossible to organize them for a long time. It was only in the autumn of 2021, when such a contact was possible again; however, in a limited scope. We had to keep an appropriate number of people in rooms where consultations were taking place. Therefore, we discussed an issue of extending MPZ by another part of Praga-Północ, Mokotów and Praga-Południe also in a remote form.

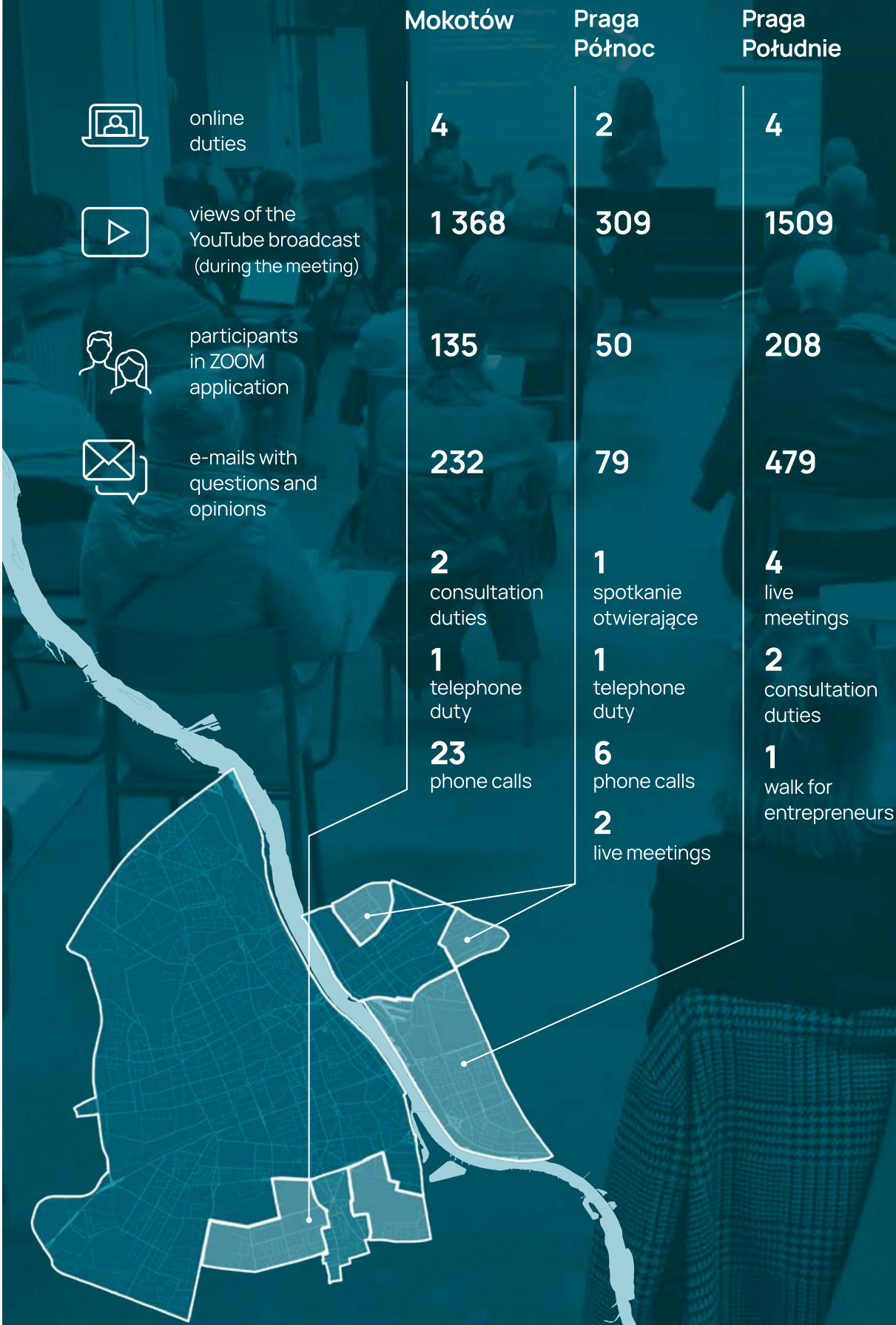


Consultations in three districts lasted from **October 29 to December 19**. We organized **24 events** in almost two months. During them, citizens could learn about the concept of changes in the organization of traffic and parking in the streets of their districts, as well as with the results of measurements of parking places and their rotation. They could also express their opinion and comment on the proposed solutions.

To facilitate the discussion, the districts were divided into smaller areas. In Praga-Północ, we talked separately with residents of Szmulowizna and the vicinity of Hallera Sq. In Mokotów, the discussion concerned the part already covered by the zone and also areas of Lower Mokotów (limited by Gagarina St. and Czerniakowska St.), Upper Mokotów (north of Madalińskiego St.) and several streets in the southern part of Śródmieście bordering on Mokotów. In turn, in Praga-Południe, we presented the concept of changes in Saska Kępa and in the part of Kamionek.



Planned extension of MPZ



29
projects
implemented
in 2021



17
bike
infrastructure

5
lighting
(including
illumination)

4
changes in traffic
organization

2
greenery

1
pavements



Civic budget

A civic budget allows citizens to have a real impact on their surroundings. It enables implementation of investments that improve safety and aesthetics of public space. Over the course of eight years, Warsaw citizens have submitted several thousand ideas to be implemented under the city budget. A large part of them concerned road infrastructure.

So far, the Public Roads Authority has implemented 249 civic budget projects. As we try to fit the ideas submitted by the citizens into our plans, many of them were part of larger investments. Sometimes, the submitted projects become an inspiration for us to take further actions or expand our activities.

In 2021, this was the case e.g. in Śródmieście. On the occasion of pavement renovation and construction of bicycle path at Marszałkowska St. along Defilad Sq., we planted 34 trees with numerous perennials and shrubs. Decorating the street with additional plants was a postulate submitted by the citizens of Warsaw. On the other hand, in Praga-Południe, the residents opted for creating bicycle lanes on Meissnera St. and Umińskiego St. We extended this idea by arranging parking and making it impossible to park near pedestrian crossings.

We have implemented more similar investments under the civic budget. Those have often been small-scale projects of great importance for local citizens. Examples of pavement renovation on the eastern side of Modlińska St. in the area of the bus stops "Kanał Żerański 02" and "Konwaliowa 02" or improvement of safety at the pedestrian crossing on Rosoła St. at Belgradzka St. by installing warning beacons. "Lighting" investments have

been a significant part of the projects. In 2021, as part of the civic budget, we illuminated pedestrian crossings on Walcownicza St., Czekanowska St., Paderewskiego St. and Wrocławska St.

There were also bicycle investments. They were related not only to the construction of new infrastructure (bicycle paths on Jana Olbrachta St. and Idzikowskiego St. or along Saska St. and Egipska St.) or its renovation (e.g. pedestrian and bike route on Popularna St.). They also concerned an installation of stands and separators separating the path from the roadway.

In 2021, the Public Roads Authority completed 29 projects chosen by citizens under the civic budget. Some of them are overdue projects that could not be completed in previous years. We have 95 projects to be implemented, chosen by Warsaw citizens. This includes pavement construction or renovation, additional lighting for pedestrian crossings, as well as new bike routes.



PLN 11 million
cost of the projects
implemented
in 2021

Efficient handling of notifications from citizens

This is the eighth year the 19115 Warsaw City Contact Center makes it easier for citizens to report failures or ideas. In 2021, the number of notifications sent to the Public Roads Authority increased to 32,248. On average, we handled them within 7.6 days, and they mainly concerned damaged street lamps, traffic lights, pavement and road.

The 19115 Warsaw City Contact Center is a platform through which residents can submit failures, applications or inquiries in any area of the city life. Many of them go to our unit. In 2021, on average 88 notifications were submitted to the Public Roads Authority every day. It was more than a year earlier, and a 7% increase was mainly due to the easing of restrictions and returning to the way Varsovians lived before the pandemic outbreak.

As the previous years, notifications were mainly related to breakdowns and repairs of the road infrastructure. Most of the signals concerned lighting – we received 10,117 reports of damaged street lamps. Next, residents most often indicated problems with operation of traffic lights and a poor condition of pavements, bicycle paths and roadways. Varsovians also submitted applications for changing traffic organization, marking out new pavements, erecting parking-restricting posts or removing advertisements of questionable legality.

The notifiers often paid attention to improving safety. They called for installation of warning plates at pedestrian crossings or adjustment and lowering of excessively high curbs. There were also signals about flooded roads or abandoned car wrecks taking up parking place or, due to their technical condition, posing a threat.

Various inquiries and free notifications were also received. Residents asked e.g. about operation of the Public Roads Authority or our renovation plans. Precisely for this reason, but also partly due to an overall increase in submissions, an average time of handling them increased to 7.6 days. Answering such questions involved collecting information from various departments or even other municipal units, and not only delegating employees to the site of failure and its removal.

In total, 32,248 notifications were submitted in 2021. We received most of them in November (3,022), and the least – in April (2,444). The record day in terms of the number of signals turned out to be December 2 – 181 applications. Only 25 applications were received on May 1.

For us, citizens' notifications are one of the sources of information about failures and defects in the road infrastructure, as a result of which the Breakdown Services can react faster, thus reducing road safety hazards. Every day, around the clock, our employees send maintenance technicians to the places of intervention to repair defects.

The 19115 Warsaw City Contact Center can be notified not only via the app and by phone, but also via the portal warszawa19115.pl, e-mail address kontakt@um.warszawa.pl or chat warszawa19115.pl/czat. The city service is available 24 hours a day, seven days a week.

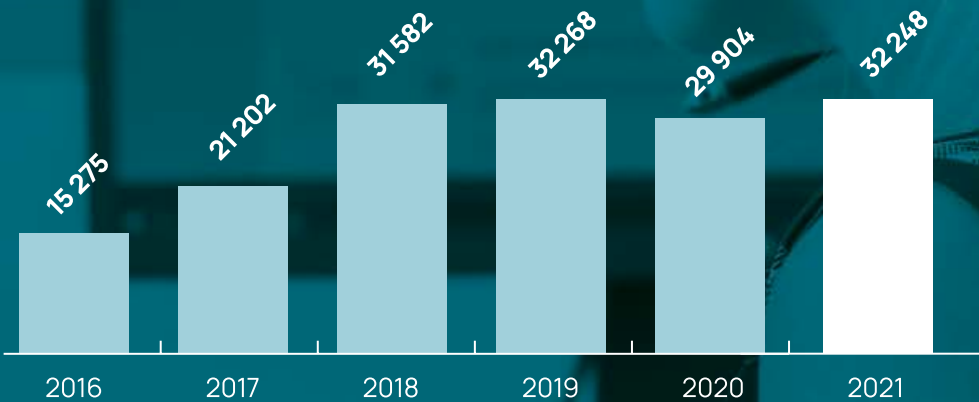


Warsaw 19 115

Average time of handling notifications (in days)



Number of notifications



Districts with **the highest** number of notifications in 2021

1.	4066	4.	2605
	Mokotów		Praga-Południe
2.	3694	5.	2028
	Śródmieście		Ursynów
3.	2686		
	Wola		



Districts with **the lowest** number of notifications in 2021

1.	505	4.	727
	Rembertów		Wilanów
2.	564	5.	1016
	Wesoła		Żoliborz
3.	717		
	Ursus		

Public Roads Authority behind the scenes

#NotOnlyAsphalt – this is how we define implemented investments that are related not only to the replacement of the surface. However, the meaning of this slogan should be understood more broadly, because first of all **#ZDMisPeople**. Especially for you we have prepared a photo coverage that shows what our work looks like behind the scenes.



589 employees in six divisions and 31 departments face new challenges every day.



Some of them design, write, calculate, measure and analyze in the office, others check, patrol and repair in the field. Although there are many challenges, we do not forget about kindness and smile.





PUBLIC
ROADS
AUTHORITY

Annual report 2021

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