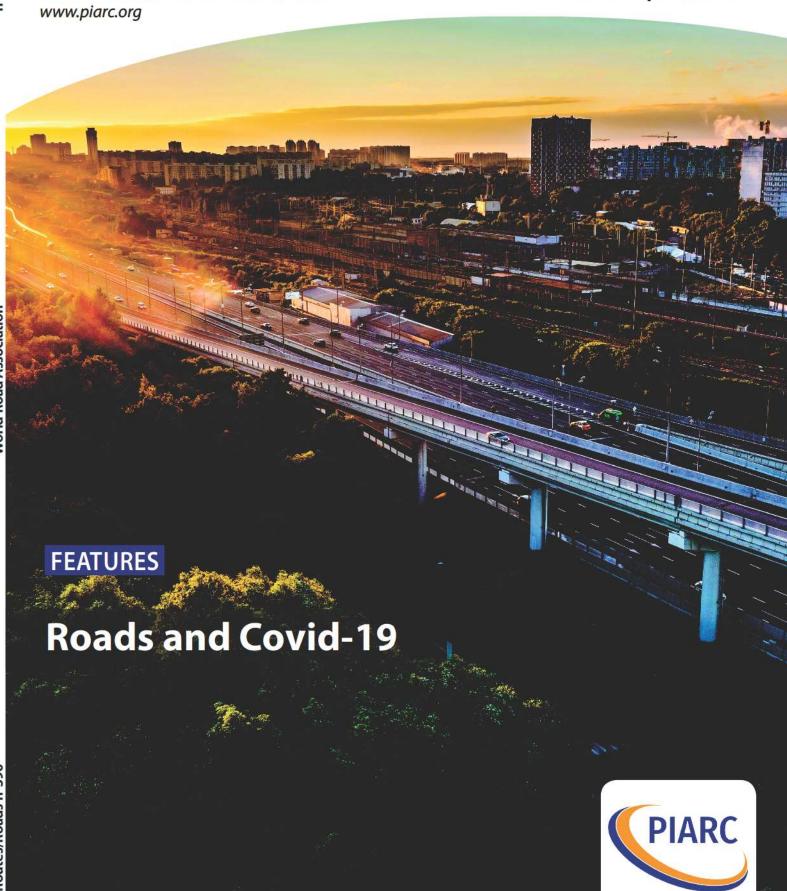
ROUTES/ROADS

PIARC - World Road Association

English Version

n°390 - 3rd quarter 2021





North-East Expressway construction



The Moscow transport system has made the most significant breakthrough in its history. More than 1,000 km of new roads were built over the last 11 years – more than an 18% increase of the capital's road network. A large part of these new facilities are complex manmade multilevel structures.

Dedicated efforts of the Moscow Government and high-quality engineering solutions has helped the metropolis avoid gridlock.

Only several years ago Moscow was considered to be a metropolis with the worst traffic problem in the world. Public transport, especially in the areas with no metro infrastructure, was so inconvenient that residents opted for private cars even knowing they were going to spend hours in traffic jams. The car fleet of the Moscow metropolitan area today exceeds 9 million vehicles.

The Moscow Government has understandably channeled its resources to expand off-street city transport



Sergey Sobyanin, the Mayor of Moscow opens one more iconic road object

network and to encourage residents not to use their private cars when it's not necessary. For that end 91 thousand paid parking spots were introduced on the streets of Moscow, including outside of the city center.

Nevertheless, it was also decided to significantly increase the pace of road building – at that time Moscow was far behind other metropolitan cities in terms of road network density. It was decided to adapt the radial-ring road system inherent to many Russian cities, prioritizing public transport, and to upgrade the network by introducing a new element – high-speed expressways.

"Everything indicated that we were going to end up in a permanent gridlock, but we tried to work proactively. And we continue extensive road building regardless of COVID and other problems. Not only for today, but for decades to come, a new transport framework, new expressways, and a new road network are being formed. And all this is combined into one system. These are the most important projects", - said Sergey Sobyanin, the Mayor of Moscow.

Because of a great number of commuters 12 radial highways that connect the city center to its residential areas were the first to undergo large-scale modernization. The aim was to avoid using traffic lights and to add dedicated lanes for public transport while increasing road capacity. Later on the project opened the way for introducing the "Magistral" bus network – more than 500 million passengers have used it over the last 5 years.

In the areas where outbound routes cross the city border the Moscow Government implemented an equally ambitious project – modernization of 16 cloverleaf interchanges. Their traffic pattern was improved by building outright exits – in such a way Russia got its first five-level interchange Businovskaya.

After a while rapid-paced reconstruction of high-priority radial highways made it possible to launch the construction of three new routes. One of them - General Dorokhov Street – is already operational. The project of the concessional North backup highway of Kutuzovsky prospekt was created by a team of engineers of the Group of Companies Mosproekt-3 using BIM. The digital model of the facility stretching for 10 km covers the area of 320 hectares.

"While the length of the MKAD itself is about 100 km, to modernize interchanges we've built more than 150 km of roads – exits, backup routes and accelerating lanes. We've actually built another MKAD and a half. The capacity of modernized interchanges has increased by 30%. The average speed on outbound routes has increased by 20%, and the number of traffic jams has decreased by 15%", – said Pyotr Aksenov, First Deputy Head of the City Department of Construction.

Moscow car users have high hopes of the system of expressways that will be introduced in the city in 2023. The road network becomes operational on a step-by-step basis: The North-West Expressway is fully opened for traffic, the South lateral line and the North-East Expressway are in the final stage of development, and construction works are in progress at all the sections of South-East Expressway.

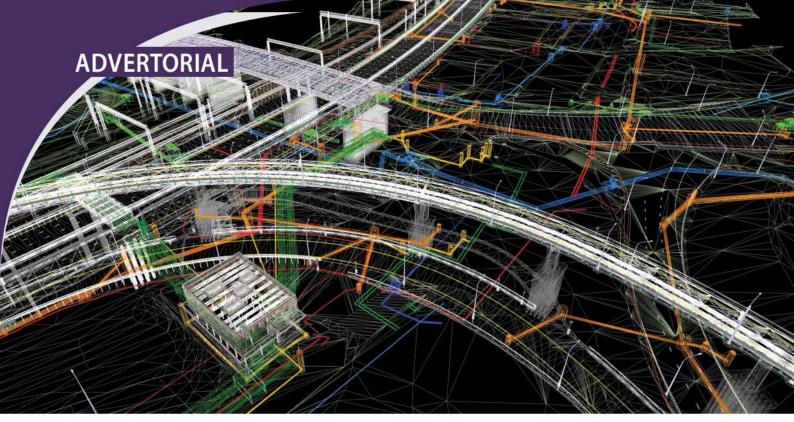


Anna Merkulova, CEO of the Group of Companies Mosproekt-3

The expressways network will run through the midpart of the city and will serve as an alternative to the jammed lateral connection roads - the Garden Ring, the Third Transport Ring and MKAD. The North East Expressway is of great importance not only for incity traffic but also for connecting the transcontinental route "Western Europe – Western China".

Expressways have several advantages. On one hand they serve as outbound routes, saving the vehicles heading outside the city the trouble of going through city center, on the other hand expressways redirect traffic flows between outbound routes they cross. Experts consider transport system based on expressways to be 20% more effective than the closed circuit one.

"Expressways help avoid jams and speed-up traffic. Besides they accelerate economic flow and help residents of the Moscow Region choose less time-consuming routes to work", - explained Aleksandr Shumsky, automobile expert, the head of the project "Probok.Net".



The North backup highway of Kutuzovsky prospect construction. BIM

Dense urban environment, extensive utility and transport infrastructure, mitigation of the impact on existing traffic during construction – all this combined has become the main challenge on the path of implementing ambitious road projects. Over the last 11 years more than 300 manmade structures were build, including bridges, flyovers and tunnels. Most of them were designed by specialists of the Group of Companies Mosproekt-3.

"Given the lack of free space in the metropolis new road facilities are to be thoroughly entwined in the urban fabric. For example, we make the best of land resources along railroads, which function in Moscow was fundamentally reevaluated. Today the railroads integrated into the public transport system are used to carry passengers on a scheduled basis. In order to minimize the impact on train and car traffic our team uses a variety of methods of launching structures and cantilever erection", - said Anna Merkulova, CEO of the Group of Companies Mosproekt-3.

Within the next two years more than 200 km of roads, more than 80 tunnels, bridges and flyovers are planned to be built. The Moscow Government is not announcing any additional large-scale projects within the historical boundaries of the city, the focus is made on



The North backup highway of Kutuzovsky prospect construction

development of the transport framework of New Moscow (similar to the Greater Paris project). The area is already connected to the metro infrastructure, all the highways connecting new territories with the historical center were overhauled, the construction of lateral connection roads is under way.

The government of the metropolis is satisfied with the results of these rewarding last 11 years: though the car fleet is ever-increasing, Moscow is no longer considered to be world's worst city in terms of traffic jams and public transport becomes more popular with residents.

"The development of the framework of road construction for years 2024-2030 is now under way. The program includes construction of 555 km of roads, 112 transport facilities and 128 convenient and safe off-street pedestrian crossings. Besides we plan to increase the pace of building bridges and overpasses crossing rivers and railroads. It'll help get rid of permanent traffic jams in troubled parts of the city", - said Andrey Bochkarev, Deputy Moscow Mayor for Urban Development and Construction.#

