



**MOSMETROSTROY**



# ABOUT THE COMPANY

Mosmetrostroy, a Joint Stock Company, hereinafter referred to as Mosmetrostroy, is a multi-profile construction and engineering company. The company constructs metro stations, tunnels, transport junctions and highways, as well as civil and industrial projects.

Mosmetrostroy was established in 1931. The first line of the Moscow Metro was built by the company specialists in the unprecedented time and was put into operation on May 15th in 1935. Mosmetrostroy has built 193 of 250 operating stations of Moscow metro. The company was awarded with four orders for outstanding service to the Fatherland. They are the following: order of Lenin, order of October Revolution, Order of the Red Banner of Labour and order of People's Friendship.

The main advantage of Mosmetrostroy is its complex approach to execution of the tasks. The company has the qualified staff, wide

range of manufacturing capacity, which includes the segment plant for production of the tunnel lining and its own design institution. Owing to all these features the company is capable to put the projects into service with a turnkey. Starting from design, construction and architectural finishing to assembly of the engineering.

systems, commissioning and putting into operation. The structure of the company is comprised of 20 main specialized divisions.

Mosmetrostroy is one of a few internationally recognized construction companies in Russia. The specialists of the company successfully built projects in Israel, Turkey and Serbia. At present Mosmetrostroy is taking part in construction of the transport facilities in Montenegro and India.

As of the beginning of 2021 the total cost of the portfolio with the long term orders is 75 billion rubles.



**For  
90 years**

Mosmetrostroy has been building and reconstructing the metro tunnels, railway tunnels, traffic and civil projects.



**250** operating stations of Moscow metro

**193** were built by Mosmetrostroy



**600 km** of tunnels



**> 400 thous. m²** of the residential property and industrial facilities.



**30 km** of the road junctions and arterial roads



# AWARDS AND ACHIEVEMENTS

MOSMETROSTROY  
WAS AWARDED WITH:



**1939**

Order of Lenin  
For successful construction of the 2<sup>nd</sup>  
stage of Moscow metro

**1944**

Order  
of the Red Banner of Labour  
For construction of the 3<sup>rd</sup>  
stage of Moscow metro  
during the WWII

**1975**

Order  
of October Revolution  
For putting into operation  
of the Zhdanovsk-  
Krasnopresnensk circle

**1981**

Order  
of People's Friendship  
For success in construction  
of Moscow metro

Grand Prix

INTERNATIONAL  
AWARDS



**1937**

Paris  
Sokolniki station  
*Sokolnicheskaya line*

**1937**

Paris

**1958**

Brussels  
Kropotkinskaya station  
*Sokolnicheskaya line*

**1938**

New York  
Mayakovskaya station  
*Zamoskvoretskaya line*

**1938**

Paris  
Krasnye vorota station  
*Sokolnicheskaya line*

**1958**

Komsomolskaya station  
*Koltsevaya line*





NATIONAL AWARD



**1937**  
Krasnye vorota station  
*Sokolnicheskaya line*



**1941**  
Kievskaya station  
*Filyovskaya line*



**1946**  
Avtozavodskaya station  
*Zamoskvoretskaya line*



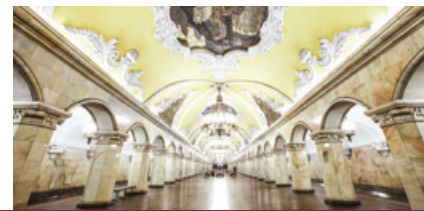
**1950**  
Kurskaya station  
*Koltsevaya line*



**1950**  
Oktyabrskaya station  
*Koltsevaya line*



**1952**  
Belorusskaya station  
*Koltsevaya line*



**1952**  
Komsomolskaya station  
*Koltsevaya line*



**1952**  
Elektrozavodskaya station  
*Arbatsk-Pokrovskaya line*

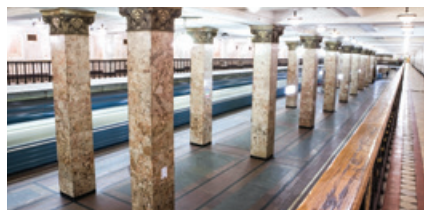


NATIONAL  
STALIN'S AWARD  
OF THE 1<sup>ST</sup> GRADE

AWARD  
OF THE 2<sup>ND</sup> GRADE



**1941**  
Kropotkinskaya station  
*Sokolnicheskaya line*



**1941**  
Komsomolskaya station  
*Sokolnicheskaya line*



**1946**  
Novokuznetskaya station  
*Zamoskvoretskaya line*



AWARD  
OF THE COUNCIL  
OF MINISTERS



**1977**  
Kuznetskiy most station  
*Tagansk-Krasnopresnensk line*



**1977**  
Pushkinskaya station  
*Tagansk-Krasnopresnensk line*



**1983**  
Chertanovskaya station  
*Serpukhovsk-Timiryazevskaya line*



# LICENSES, CERTIFICATES AND DIPLOMAS

**Mosmetrostroy has the following priority activities:**  
**Create safe working conditions, save lives and health of the employees,**  
**ensure reliable functioning of the projects.**



Mosmetrostroy is a member of the self-regulatory organizations:

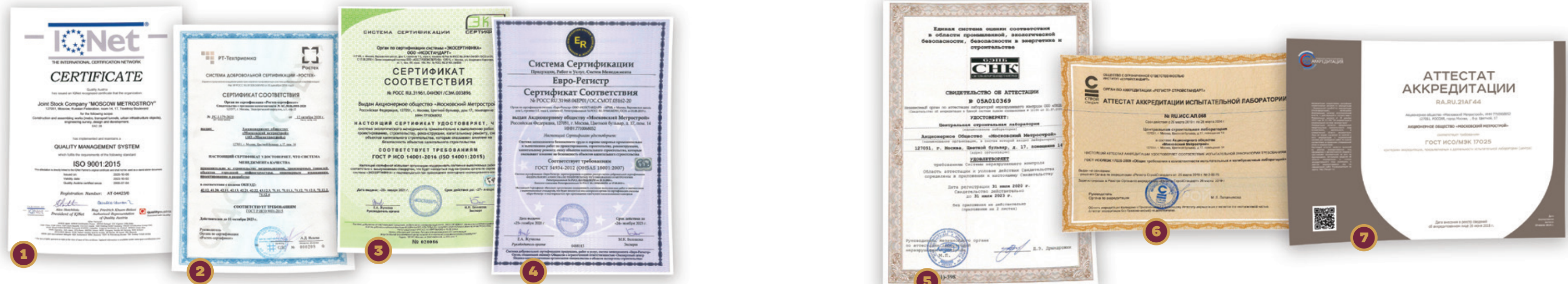
- “Union of the general contractors in construction” association;
- “Union of the city design and planning” association;
- “GeoIndustry, union of the surveyors” association.



The Mining Industrial, Sanitary and Central Construction Laboratory of Mosmetrostroy monitors the labour conditions, estimates impact of the running projects on environment and controls quality of structures, products, materials and soils.



The company follows and is improving the Quality Management System, certified in the international IQNET network under the license agreement with Quality Austria, as well as GOST R certification system for compliance with the requirements of GOST R ISO 9001-2015 (ISO 9001: 2015), 14001-2016 (ISO 14001: 2015) and OHSAS 18001.



## 1. Certificate # AT-04423/0

From the International network IQNET under the license agreement with Quality Austria for compliance with the standard ISO 9001-2015

## 2. Compliance Certificate # PC.1.179-2020

From the body for certification of the management systems «Rostec» for compliance with GOST R ISO 9001-2015 (ISO 9001:2015)

## 3. Compliance Certificate # POCC RU.31961.04ИЭ01/СЭМ.03896

From the body for certification of the management systems «Ecocertification» for compliance with GOST R ISO 14001-2016 (ISO 14001:2015)

## 4. Compliance Certificate # POCC RU.31968.04EP/01.OC.CMOT.03160-20

From the body for certification of the management systems «Euro-Registr» For compliance with GOST 12.0.230-2007 (OHSAS 18001)

## 5. Certificate of Attestation by the central construction laboratory # 05A010149

From the independent body for attestation of the non-destructive testing laboratories “Lider NK” Ltd., For compliance with NDT system

## 6. Accreditation Certificate for the testing laboratory # RU.MCC.AJL.068

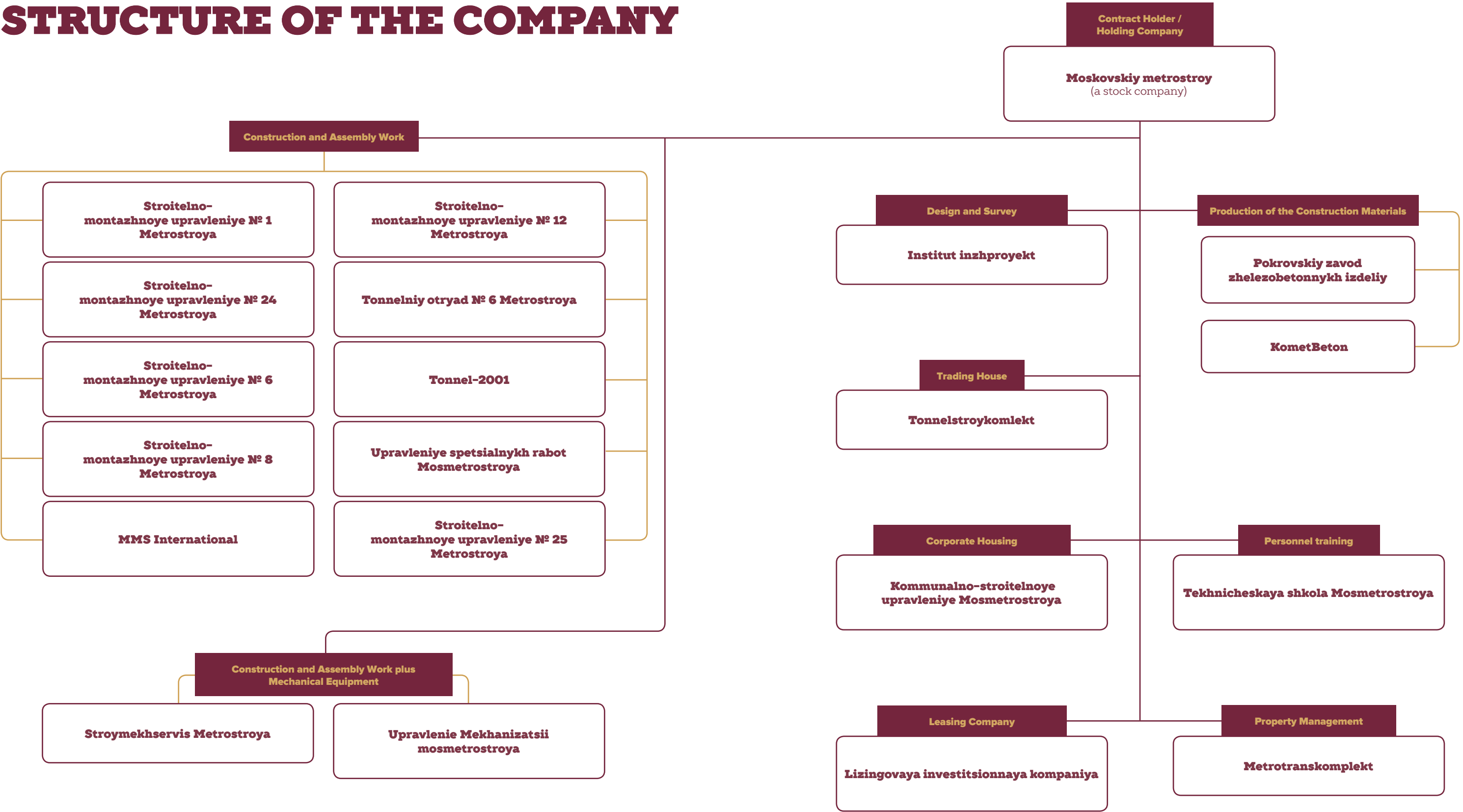
“Register SroyStandart” for compliance with the proficiency requirements of GOST ISO/MAK 17025-2009

## 7. Accreditation Certificate # RA.RU.21AF44

From the Federal Service of accreditation for compliance with GOST ISO/MAK 17025-2009



# STRUCTURE OF THE COMPANY





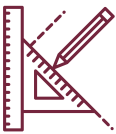
# AREA OF ACTIVITY



## INTERGRATED DESIGN

Institut Inzhproyekt is a part of Mosmetrostroy and its function is to carry out the complete range of design work for metro facilities, transport infrastructure and the civil projects.

- Sketch and Conceptual Design
- Function as a General Designer
- General Plan (land plot layout diagram)
- Special Divisions of the Project
- Technological Design
- Architectural Design
- Design Solution
- Internal and External Utility Networks
- Organization of Construction
- Engineering Research in Construction



At present Inzhproyekt is carrying out the project design work for reconstruction of the stations in Kakhovskaya line, Kakhovskaya and Varshavskaya stations. The company portfolio with the completed orders contains the projects for overhaul of seven surface stations in Filyovskaya line, Studencheskaya, Koutouzovskaya, Fili, Bagrationovskaya, Filyovskiy Park, Pionerskaya and Kuntsevskaya, plus reconstruction of a ski jump in Vorob'jovi Gori and the cable way from the viewing point to Louzhniki stadium. The modern requirements towards the metro and other infrastructure were taken into account in all projects.



Inzhproyekt completed the all-inclusive design including development of the stages «Project» and «Engineering Documentation» for Troparyovo-Salar'yev section of Sokolnicheskaya line. While working on the design of the stations the engineers used the modern technical and design solutions.





## CONSTRUCTION OF METRO

Mosmetrostroy is the pioneer in construction of metro in Russia. Since 1931 and as of today the main activity of the company is construction of Moscow metro.

The engineers of Mosmetrostroy contributed to construction and future development of metro in St. Petersburg, Nizhniy Novgorod, Kazan, Novosibirsk, Yekaterinburg, Kyev, Tbilisi, Baku, Tashkent, Yerevan, Alma-Aty. The Moscow en-

gineers also contributed to construction of metro in Prague, Sofia, Warsaw, Budapest and Calcutta.

At present Mosmetrostroy specialists are busy with construction of three new stations in the north-eastern part of Bolshaya Koltsevaya line, Sokolniki, Rizhskaya and Mar'ina Roshcha stations, plus three stations in Lyublinsko-Dmitrovskaya line, Yakhromskaya, Lianozovo and Fiztek stations.

### MAIN TYPES OF WORK IN METRO CONSTRUCTION



Construct the tunnels and the stations with open cut and trenchless method, including the tunnel boring machines



Construct the station halls and the pedestrian subway



Construct the escalator tunnels



Drill piles and ground work



Lay and re-arrange the engineering networks



Construct using the special methods:  
Ground freezing,  
Water depression, slurry wall,  
Piled wall, jet grouting



Permanent track



Comprehensive work package for installation of the engineering networks:  
Power supply, heating, ventilation, sewer, water supply, lighting, low current systems



Architectural and finishing work of any complexity, including marble and granite lining, mosaic pictures, modern finishing materials



Commissioning





# RECONSTRUCTION OF THE METRO PROJECTS

In recent years Mosmetrostroy reconstructs the current metro facilities, the tunnels, platforms, concourses, stations and the underground passages.

Mosmetrostroy reconstructs the stations of Kakhovskaya line:

- Kakhovskaya
- Varshavskaya
- Kashirskaya

## Main types of work for modernization of Moscow metro

De-install structures and the engineering systems of a running project

Install new bearing structures while metro is running

Repair the bearing structures using the modern technologies and materials

Water proofing work of any complexity

Architectural and design finishing

Assemble the engineering systems and install the equipment. Commissioning





## CONSTRUCTION AND MODERNIZATION OF THE TRANSPORT INFRASTRUCTURE PROJECTS

Mosmetrostroy proved to be a reliable contractor for construction and repair of the traffic and railway tunnels, transport junctions, transfer hubs.

MOSMETROSTROY

1

### **“Ploshchad Gagarina” transfer hub**

This is the only underground station of Moscow central circle built by Mosmetrostroy for the reason to provide the pedestrian link between the station of the central circle and “Leninskiy prospekt” station at Kaluzhsko-Rizhskaya line.

2

### **Roofed pedestrian bridge as a part of “Solnechnaya” transfer hub**

The Mosmetrostroy specialists built a new safe and roofed pedestrian bridge instead of the old bridge over the railway.

3

### **Construction of a part of Krasnopresnenskiy prospect from Moscow Ring Road to Marshal Zhukov’s Prospect 7 km long**

The highway consists of the unique facilities:

“Severo-Zapadnyi” tunnel and “Zhivopisniy” cable bridge with an arch. On top of the bridge there is a hanging 2 level spheroid with the panoramic windows. It has a viewing spot inside. It was built for the first time in Russia when a 3-lane road and the metro line (from “Krylatskoye” to “Strogino” station) were combined in the cross section of the bridge. The tunnels were built by means of the tunnel boring machines. The main tunnel was built with a 14.2 m diameter and the service tunnel was built with a slurry TBM 6.28 m in diameter.

4

### **Reconstruction of the junction at Zvenigorodskoye highway with Moscow Ring Road and Novorizhskoye highway**

The new junction allowed the motor transport to quickly overcome the transit directions of the highways. This transport hub is a four-level structure. The first level is a direct route connecting Zvenigorod highway with Novorizhskoye highway. The second is the Moscow Ring Road. The third is a 1.5 km overhead road for the exit from the western direction to Novorizhskoye highway. The fourth one is a 1.5 km overhead road for the exit from Novorizhskoye highway to the Moscow Ring Road towards Leningradskoye and Dmitrovskoye highway. The second overhead road is located under the first one and goes into the tunnel underneath the Moscow Ring Road. It is 180 m long.

5

### **Tunnel type transport junctions in Kutuzovskiy prospect, Gagarinskaya square and Lefortovo district in the 3<sup>rd</sup> transport ring**

The tunnels under Kutuzovskiy highway were built with the “Milan method”, meaning the traffic was not closed down during construction. Totally they built six tunnels. The length of the central ones is 610 meters. Mosmetrostroy built a part of Gagarinskaya road and a railway tunnel. They used the most up-to-date technologies when laying the superstructure to provide protection from vibration. While building Lefortovo road tunnel the specialists of Mosmetrostroy arranged a 30-meter tongue around the pit. Such approach was used for the first time in Russia.





## CIVIL CONSTRUCTION

Throughout its history Mosmetrostroy has expanded the scope of activity doing construction and reconstruction of the administrative buildings, industrial, residential and architectural historical facilities, underground garages, shopping malls and many other structures.

The company started from construction of housing for tens of thousands of people who came to Moscow from different regions of the country to build metro. In total, Mosmetrostroy built over 400.000 m<sup>2</sup> of housing.

In addition, the specialists of Mosmetrostroy were called for construction and repair of various

projects, such as the former Verhniye Torgoviye Ryady (trading rows) on Red Square, the current building of GUM, the Kremlin, the Government House, the premises of the Manezh, which was converted into the Central Exhibition Hall, the country's largest store for children - Detskiy Mir, the hotels Russia, Moscow, President Hotel, the Prague restaurant, the Olympic facilities, Luzhniki stadium. All large-scale work was performed with high quality and in a short time.

For recent years they built schools in Moscow and its region, a new 9-storey office of the Retirement Fund of the Russian Federation and repaired a choral synagogue.

**> 400 thous. m<sup>2</sup>**  
of the housing property has been  
commissioned since the company  
was established



## PRODUCTION OF CONSTRUCTION MATERIALS AND STRUCTURES

Mosmetrostroy has the capacity to produce construction materials and structures, such as:

- high precision tunnel lining;

- metal structures;
- tunnel support machines and various labour saving tools;
- commodity concrete.



# SPECIAL MACHINERY AND EQUIPMENT



**Herrenknecht**  
**S-755, S-770,**  
**S-771, S-772**

## Technical Parameters

<b>Type</b>	<b>Weight</b>	External diameter: 6 000 mm
For mixed ground,	480 t	Internal diameter: 5 400 mm
Earth pressure balance	<b>Installed power</b>	Thickness: 300 mm
<b>Cut diameter</b>	1 900 kW	Length: 1 400 mm
6 250 mm	<b>Primary voltage</b>	Arrangement: 6 segments + 1 key
<b>Total length</b>	10 000 V	
79 m	<b>Lining</b>	
	Prefabricated reinforced concrete segments	



**Herrenknecht**  
**S-290**

## Technical Parameters

<b>Type</b>	<b>Weight</b>	External diameter: 6 000 mm
For mixed ground,	480 t	Internal diameter: 5 400 mm
Slurry machine	<b>Installed power</b>	Thickness: 300 mm
<b>Cut diameter</b>	1 600 kW	Length: 1 200 mm
6 320 mm	<b>Primary voltage</b>	Arrangement: 6 segments + 1 key
<b>Total length</b>	10 000 V	
64 m	<b>Lining</b>	
	Prefabricated reinforced concrete segments	





**Lovat**  
**RME-242 SE**

## Technical Parameters

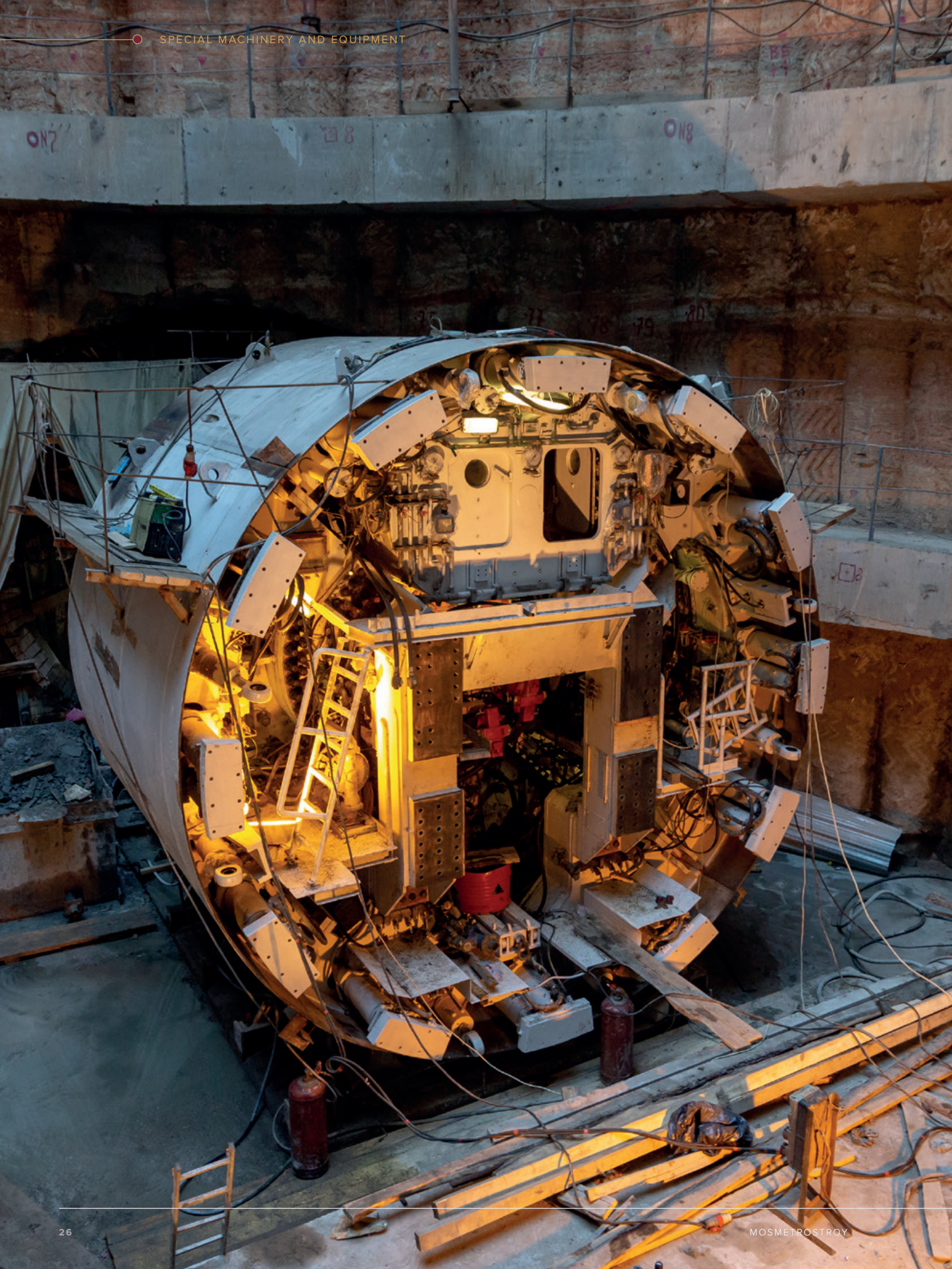
<b>Type</b>	<b>Weight</b>	External diameter: 6 136 mm
For mixed ground, Earth pressure balance	549 t	Internal diameter: 5 400 mm
<b>Cut diameter</b>	<b>Installed power</b>	Thickness: 300 mm
6 174 mm	1 274 kW	Length: 1 000 mm
<b>Total length</b>	<b>Primary voltage</b>	Arrangement: 6 segments + 1 key
83 m	<b>Lining</b>	
	Prefabricated reinforced concrete segments	



## Technical Parameters

<b>Type</b>	<b>Weight of the VSM items</b>	External diameter:
For mixed ground, Down movement of the shaft lining by means of the immersed hydraulic jacks	1. Steel foundation – 88 t	min – 6 740 mm, max – 8 700 mm
<b>Thrust</b>	2. Boring machine (arm + dome) – 72 t	Internal diameter:
Max – 1 000 mm	3. Power plant – 17 t	min – 5 700 mm, max – 7 800 mm
<b>Rotation angle</b>	4. Centrifuge – 35 t	Thickness: 350 mm
<b>Left / right</b>	5. Separator – 25 t	Length: 1 000 mm
Max – 190°	6. Container with a bigger water tank – 14 t	Arrangement: 3 segments
<b>VSM height</b>	7. Container with a smaller water tank – 8 t	
11 m	8. High pressure pumps – 11 t	
<b>Installed power</b>	9. Operator's room – 4.5 t	
1 200 kW	<b>Lining</b>	
<b>Primary voltage</b>	Prefabricated reinforced concrete segments	
400 W		





Various Equipment owned by the Company  
as of January, 1<sup>st</sup> 2021

Description	Quantity
1. Face equipment <b>Km-14E</b> (ТУ-1Гп, ТН-16, ПП-8А)	<b>1</b>
2. Tunnel lining placer <b>ТУ-1Гп</b>	<b>9</b>
3. Station type tunnel lining placer Typea <b>ТУ-2Гп</b>	<b>5</b>
4. Station type tunnel lining placer Typea <b>ТУ-4Гп</b>	<b>7</b>
5. Tunnel lining placer (ТНУ-3), inclined type, c/w the loader (МПН)	<b>4</b>
6. Tunnel lining placer (ТНУ-4), inclined type, c/w the loader (МПН)	<b>3</b>
7. Station type tunnel lining placer <b>УС-01</b>	<b>1</b>
8. Tunnel lining placer for short passages <b>УКВ</b>	<b>1</b>
9. Shaft hoist <b>2Ц-2х1, 1УХЛ4</b>	<b>10</b>
10. Shaft hoist <b>Ц-2х1, 5АР УХЛ4</b>	<b>3</b>
11. Shaft hoist <b>2В2810</b>	<b>4</b>
12. Locomotive for suspended floor-rails <b>ПЛР50F-II-M</b> (rail gauge 600 mm)	<b>19</b>
13. Loader <b>1ППН-5</b>	<b>29</b>
14. Loader <b>ППН-1С</b>	<b>11</b>
15. Tunnel loader <b>ITC 120 F2</b>	<b>3</b>
16. Tunnel loader <b>ITC 312</b>	<b>2</b>
17. Roadheader <b>1ГПК-С</b>	<b>3</b>
18. Freeze <b>WTE-100</b>	<b>8</b>
19. Hydraulic drilling rig <b>LIEBHERR LB36</b>	<b>1</b>
20. Hydraulic drilling rig <b>Comacchio MC-1200</b>	<b>3</b>
21. Hydraulic drilling rig <b>Comacchio MC-800</b>	<b>2</b>
22. Hydraulic drilling rig <b>Comacchio MC-600</b>	<b>1</b>
23. Drilling rig <b>LIEBHERR HS 855 HD, HS 845</b>	<b>2</b>
24. Drilling rig <b>CASAGRANDE B250</b>	<b>2</b>
25. Drilling rig <b>CASAGRANDE B125</b>	<b>1</b>

Description	Quantity
26. Drilling rig <b>SOILMEC HC-81</b>	<b>1</b>
27. Drilling rig <b>SOILMEC SR 80; SR 60; SR 40</b>	<b>3</b>
28. Demolition robot <b>HUSQVARNA; BROKK 260; 400</b>	<b>11</b>
29. Various tunnel lining placers, including (ТУ-1Гп; ТУ-2Гп; ТУ-4Гп; ТНУ-3; ТНУ-4; УС-01; УКВ; GTA-7500 TAM)	<b>32</b>
30. Tunnel locos, diesel locos, electric locos	<b>69</b>
31. Rock loading machine	<b>40</b>
32. Road header	<b>9</b>
33. Demolition robot	<b>12</b>
34. Tower crane	<b>32</b>
35. Bridge crane	<b>45</b>
36. Gantry crane	<b>13</b>
37. Truck mounted crane and loader crane	<b>80</b>
38. Caterpillar crane	<b>4</b>
39. Bulldozer	<b>9</b>
40. Clamp bucket	<b>7</b>
41. Drilling rig	<b>32</b>
42. Excavator	<b>36</b>
43. Loader	<b>40</b>
44. Tractor	<b>6</b>
45. Truck	<b>166</b>
46. Tow truck	<b>21</b>
47. Truck mounted mixer	<b>16</b>
48. Tunnel conveyor system <b>H+E Logistic</b> with the vertical cassette	<b>2</b>
49. Tunnel conveyor system <b>Continental</b> with the horizontal cassette	<b>1</b>
50. Diesel-hydraulic tunnel locomotive <b>Schöma-CFL-350</b>	<b>16</b>
51. Diesel-hydraulic tunnel locomotive <b>Schöma-CFL-180-DCL</b>	<b>4</b>



# PERFORMANCE FIGURES FOR 2021

Special subsidiaries of Mosmetrostroy build tunnels and the metro stations with open cut and by means of the tunnel boring machines in any type of the geological conditions

**543 215 m<sup>3</sup>**

Excavation of pits for stations and concourses

**107 m**

Excavation of stations, escalator tunnels (closed way)

**34 088 m<sup>3</sup>**

Arrangement of excavation pits (bored secant piles and diaphragm walls)

**6 953 m**

Tunneling by means of the tunnel boring machines (Herrenknecht, Lovat)

**643 km**

Laying cables and wires

**16 842 m**

of track superstructure

**183 124 m<sup>2</sup>**

of architectural and finishing works done (granite, suspended ceiling, etc.)

**177 421 m<sup>3</sup>**

of cast-in-place reinforced concrete

**~ 12 000 people**

Total number of the employees

Earnings:

**34.62 million rubles**



# PROJECTS



## PROJECTS COMPLETED FOR THE LAST 5 YEARS

1. Tchortanovtsy tunnels in the Republic of Serbia
2. 46 engineering structures in the Republic of Serbia
3. Refurbishment of Amur tunnel in the Far East of Russia
4. Elektrozavodskaya station
5. Lefortovo station
6. Aviamotornaya station
7. Reconstruction of seven stations in Filyovskaya line
8. Upgrade of Vladivostok tunnel in the Far East of Russia



## PROJECTS IN PROGRESS

1. Sokolniki station
2. Rizhskaya station
3. Mar'ina Roshcha station
4. Yakhromskaya station
5. Lianozovo station
6. Fiztekh station
7. Reconstruction of Kakhovskaya station
8. Reconstruction of Varshavskaya station
9. Reconstruction of Kashirskaya station
10. Reconstruction of four tunnels in Vrnitsa-Bar section in the Republic of Montenegro
9. Savyolovskaya station
10. Seligerskaya station
11. Verkhniye Likhobory station
12. Okruzhnaya station
13. Reconstruction of two concourses of Leninskiy Prospekt station
14. Second exit of Mezhdunarodnaya station
15. Reconstruction of the concourse of Petrovsko-Razumovskaya station
16. Covered pedestrian bridge as a part of the transport interchange hub Solnechnaya
17. Petrovsko-Razumovskaya station
18. Fonvizinskaya station
19. Butyrskaya station
20. Ploshchad Gagarina transport interchange hub
21. Salar'yevo station
22. Roumyantsevo station
23. Troparyovo station



# NORTH-EASTERN PART OF THE BOLSHAYA KOLTSEVAYA LINE OF MOSCOW METRO

SAVYOLOVSKAYA STATION –  
ELEKTROZAVODSKAYA  
STATION (SECOND STAGE)

The large scope of work is being carried out in the second stage of the north-eastern direction of Bolshaya Koltsevaya line, from Elektroza-  
vodskaya to Savyolovskaya station. It will be linked to the north-western part of the ring, from Delovoy Tsentr to Savyolovskaya station.

As of today, Mar'ina Roshcha and Rizhskaya stations are two of the several last stations being built at the depth more than 65 meters.

## Government Client

Department of construction for Moscow

## General contractor/client

Mosinzhproyekt

## Designer

Metrogiprotans

## Contractor

Mosmetrostroy

## Length of the line

7.9 km

## Number of stations

3

## Start of work

2017



## SOKOLNIKI STATION

**Address:** Moscow, Sokolniki district, Sokolnicheskaya square.

### TYPE OF THE STATION

shallow, column-type station, with island-type platform.



**23 694.21 m<sup>2</sup>**  
Total area



**431.79 m<sup>2</sup>**  
Total surface area



**23 262.42 m<sup>2</sup>**  
Total underground area



# RIZHSKAYA STATION

**Address:** Moscow, Meshchanskiy district, Krestovskiy flyover and Rizhskaya square.

## TYPE OF THE STATION

Deep, pylon type three-vault station with a platform of an island type.



**16 242.2 m<sup>2</sup>**  
Total area



**7 005.6 m<sup>2</sup>**  
Total surface area



**9 236.6 m<sup>2</sup>**  
Total underground area



## MAR'INA ROSHCHA STATION

**Address:** Moscow, Mar'ina Roshcha district, crossing of Sheremetjevskaya street and the 3<sup>rd</sup> passing of Mar'ina Roshcha.

### TYPE OF THE STATION

Deep, three-vault pylon station with the platform of an island type.



**14 372.5 m<sup>2</sup>**  
Total area



**7 057.6 m<sup>2</sup>**  
Total surface area



**7 314.9 m<sup>2</sup>**  
Total underground area





# LYUBLINSKO-DMITROVSKAYA METRO LINE

## THE THIRD STAGE



**9 064 m**

have been bored by the tunnel boring machines for the entire construction period



**1 271 m**

were built by open cut



**133 692 m³**

total volume of concrete



**~ 596 808 m³**

total volume of the excavated ground

Three stations will be put into operation as a part of the Seligerskaya- Fiztekhn section. They are Yakhromskaya, Lianozovo and Fiztekhn. Extension of Lyublinsko-Dmitrovskaya line to Fiztekhn station will improve transportation for about 400 thous. people who live and work in Beskudnikovskiy, Vostochnoye Degunino, Dmitrovskiy, Lianozovo and Severniy districts by reducing the travel time for 15-20 minutes. The passengers will be able to select the optimal routes by using metro, urban trains (MTsD, which stands for Moscow Central Diameters), or surface public transport.

### Government Client

Department of construction for Moscow

### General contractor/client

Mosinzhproyekt

### Designer

Metrogiprotrans

### Contractor

Mosmetrostroy

### Length of the line

5.8 km

### Number of stations

3

### Start of work

2019



## YAKHROMSKAYA (ULITSA VOSEMSOTLETIYA MOSKVI) STATION

**Address:** Moscow, edge of Dmitrovskiy and Vostochnoye Degunino districts, crossing of Dmitrovsk highway and Ulitsa Vosemsotletiya Moskvi street.

### TYPE OF THE STATION

shallow, three-span, column-type station.



**19 789.2 m<sup>2</sup>**

Total area



**620.6 m<sup>2</sup>**

Total surface area



**19 168.6 m<sup>2</sup>**

Total underground area





## LIANOZOVO STATION

**Address:** Moscow, at the crossing of Lianozovo, Vostochnoye Degunino and Beskoudnikovskiy districts, along Dmitrovskoye highway, and 350 meters away from the railway platform with the same name.

### TYPE OF THE STATION

shallow, three-span, column-type station.



**19 736.3 m<sup>2</sup>**  
Total area



**455 m<sup>2</sup>**  
Total surface area



**19 281.3 m<sup>2</sup>**  
Total underground area



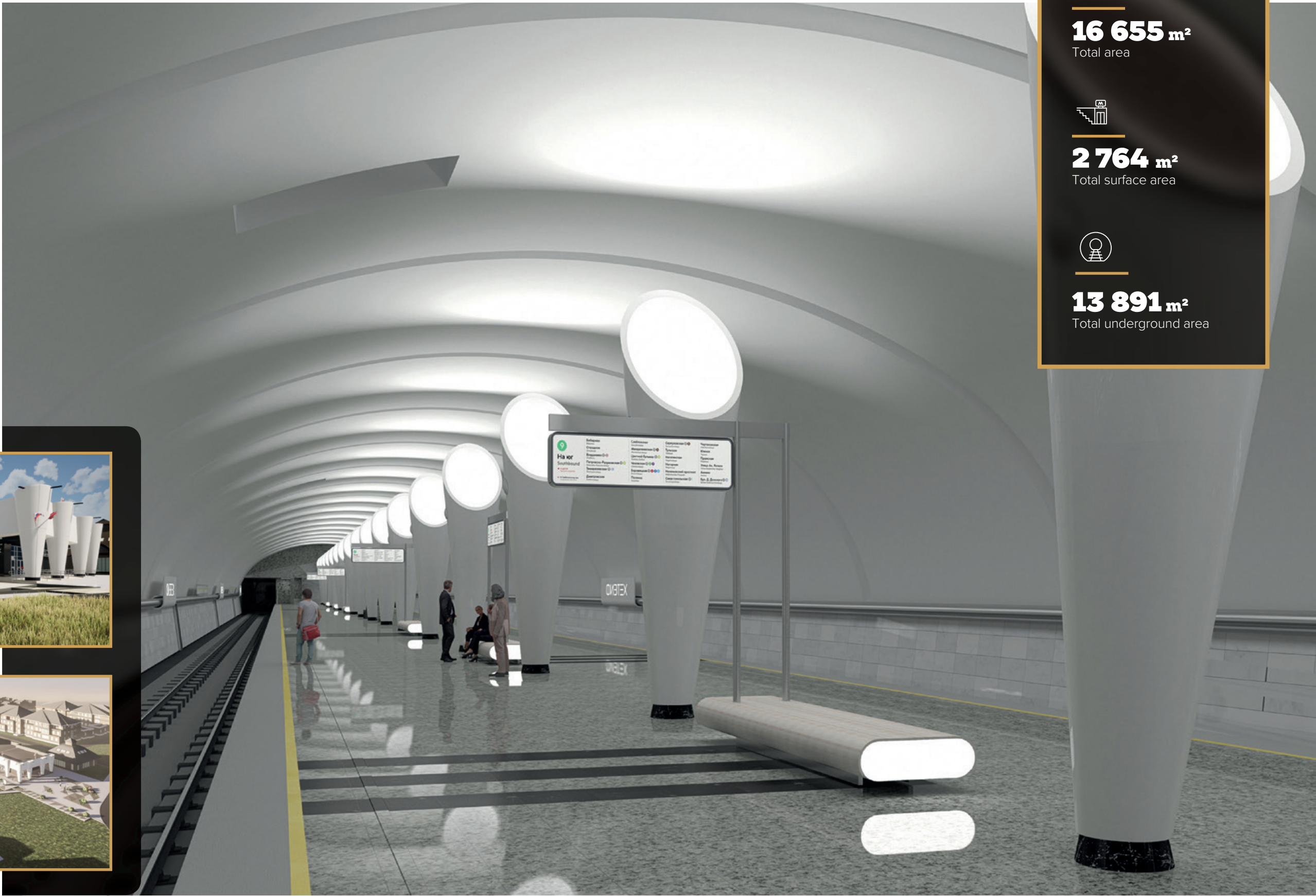


**FIZTEKH**  
STATION

**Address:** Moscow, Severniy district, right side of Dmitrovskoye highway, to the north from the boulevard named after the Academician Landau.

**TYPE OF THE STATION**

shallow, single-vault station.



**16 655 m<sup>2</sup>**  
Total area



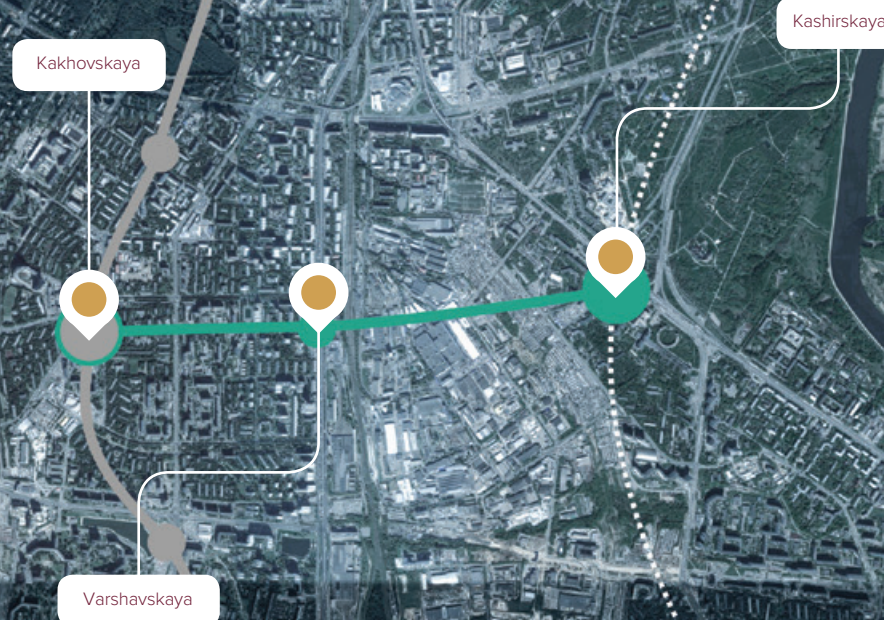
**2 764 m<sup>2</sup>**  
Total surface area



**13 891 m<sup>2</sup>**  
Total underground area



# RECONSTRUCTION OF KAKHOVSKAYA LINE



## FINISHING

of 3 stations

**28 156 m<sup>2</sup>**

Flooring, stairs, walls, plinth walls, columns with natural stone

**1 274 m<sup>2</sup>**

Metal panels on walls

**2 855 m<sup>2</sup>**

Walls, plinth walls, columns with porcelain stoneware

**5 478 m<sup>2</sup>**

Suspended ceiling

**125 m<sup>2</sup>**

Installation of track wall panels

**6 691 m<sup>2</sup>**

High-quality finishing of the ceiling

Overhaul of the shortest Moscow metro line started in the spring of 2019. It was required in order to integrate the stations Kakhovskaya, Varshavskaya and Kashirskaya into Bolshaya Koltsevaya line.

The project was broken down into 2 stages. At first stage they finished reconstruction of the Kakhovskaya station, which was opened as a part of the southern section of the Bolshaya Koltsevaya line from the Prospekt Vernadskogo station to Kakhovskaya station. Plus they will build the joining line to Zamoskvoretskoye depot,

which is now servicing the metro line with the same name. Afterwards it will be servicing the Bolshaya Koltsevaya line.

In the second stage the upgraded stations Varshavskaya and Kashirskaya will be put into operation together with the eastern part of Bolshaya Koltsevaya line, from Kashirskaya to Nizhegorodskaya station.

In the course of reconstruction the historical appearance of the stations will be preserved as much as possible. Mosmetrostroy workers will upgrade

the infrastructure, will replace the engineering communications, the track superstructure, the rails, finishing of the walls, columns and the platforms.

In the western end of the Kakhovskaya station they will build an additional concourse with the passage to Serpukhovsko-Timiryazevskaya line. Kakhovskaya station will become more comfortable for the disabled people. In one of the concourses there will be a lift which will unite the platform with the ticket hall and exit to the city.

**1<sup>th</sup>**  
**quarter of 2019**  
Start of overhaul

**3**  
stations

**2022**  
End of work





# KAKHOVSKAYA LINE

PAST – PRESENT – FUTURE

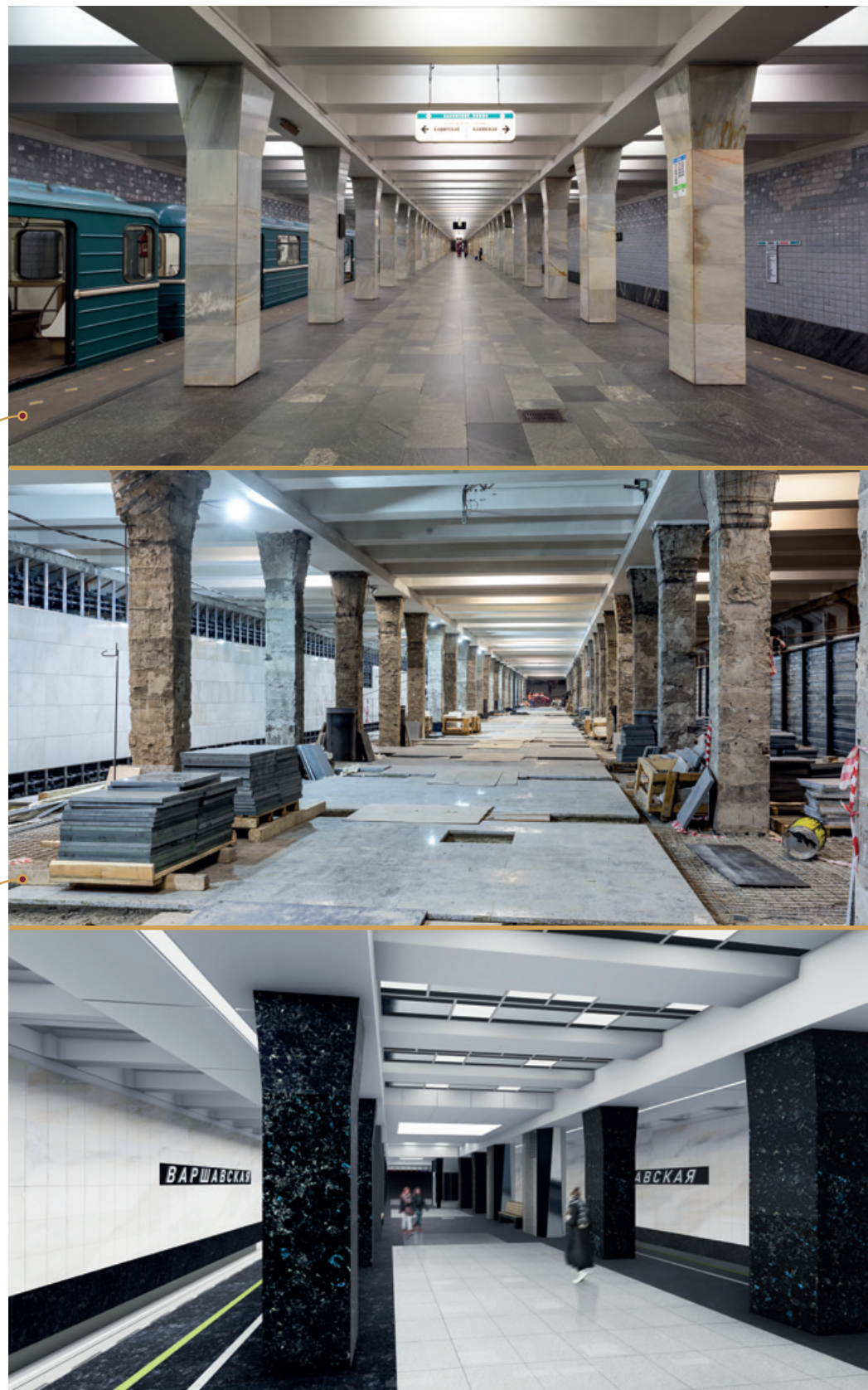


## KAKHOVSKAYA STATION

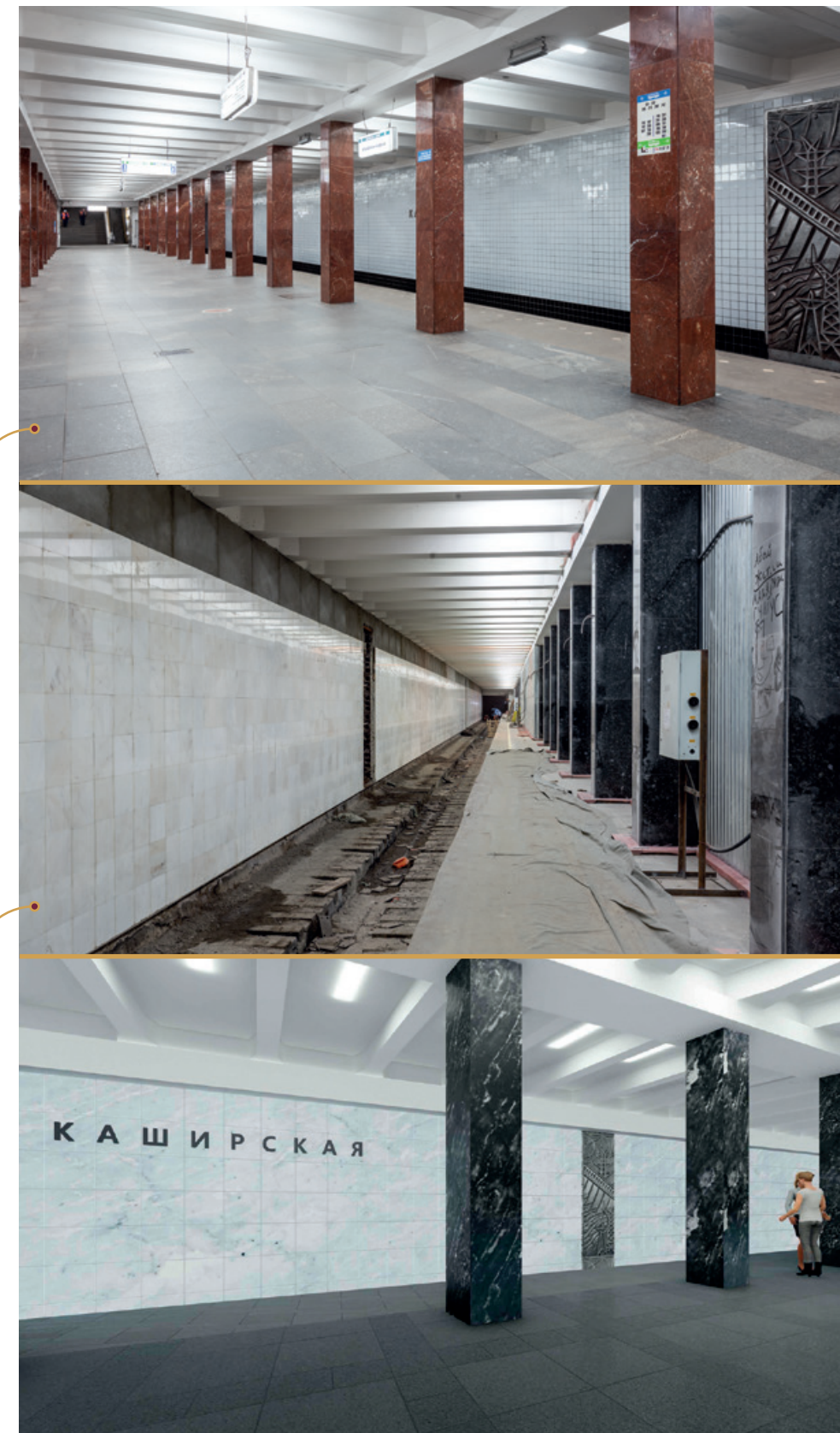




## KASHIRSKAYA STATION



## VARSHAVSKAYA STATION





# RECONSTRUCTION OF THE RAILWAYS



## VRBNITSA – BAR RAILWAY IN THE REPUBLIC OF MONTENEGRO

# REFURBISHMENT OF FOUR TUNNELS (GROUP 2)

**Address:** Republic of Montenegro, Kalashin-Podgoritsa railway section.

In September of 2020 MMC International, a subsidiary of Mosmetrostroy, won an international tender for refurbishment of four tunnels in the Republic of Montenegro.

The works can only be carried out during the gaps, which last no longer than 4 hrs 30 mins and have to be carried out from the rail platforms which are fully fit with the equipment, tools and materials.

The following works have to be carried out under the contract for refurbishment of the tunnel lining of four tunnels:

- Drill and inject the bore holes
- Inject behind the lining
- Demolish the broken concrete
- Repair the compensation joints and cracks
- Apply spray waterproofing
- Assemble the reinforced shotcrete

The total length of for tunnels together is 986 meters.



**165 m**  
Tunnel 1

**203 m**  
Tunnel 2

**352 m**  
Tunnel 3

**266 m**  
Tunnel 4

**5.4 m**  
Average width of the tunnel

**6 m**  
Height of each tunnel from the top of the rails

**Client**  
Željeznička Infrastruktura Crne Gore (Railway Infrastructure of Montenegro)

**Designer**  
"SBCC" DOO CETINJE

**Contractor**  
Mosmetrostroy

**Start of work**  
January 2021

**End of work**  
August 2022



## CONSTRUCTION OF CHORTANOVTSY TUNNELS IN SERBIA

**Address:** Republic of Serbia, chainage 56+400 – 57+550 of Stara Pazova – Novi Sad section.



On April, 24<sup>th</sup> of 2017 a subsidiary of Mosmetrostroy, MMC International signed a subcontractor agreement for construction of Chortanovtsy tunnels in Republic of Serbia. It is a part of the package for construction and upgrade of twin track railway Belgrad – Stara Pazova – Novi Sad – Subotitsa – the frontier.

According to the project requirements Mosmetrostroy should build two single track railway tunnels, horseshoe type. The tunnels should be built by alpine method of construction. In the first half of 2020 they did a breakthrough of both tunnels. Total length of two tunnels is more than 2 kilometers. The permanent lining was finished in autumn the same year, and in February of 2021 they finished installation of the track superstructure and started assembly of the engineering systems. The works should finish soon.

**186 625 m<sup>3</sup>**

Construction volume

**1 150 m**

Length of the left tunnel

**1 090 m**

Length of the right tunnel

**8 m**

Average width of the tunnel

**7.45 m**

Height of the tunnel from the top of the rails

### Client

RZD International

### Designer

CIP (Serbian Design institution)

### Contractor

Mosmetrostroy

### Start of work

2017

### End of work

2021

## CONSTRUCTION OF 46 ENGINEERING STRUCTURES IN SERBIA

**Address:** Republic of Serbia, chainage 56+400 – 57+550 of Stara Pazova – Novi Sad section.



Mosmetrostroy people built 46 engineering structures in the section of the railway Stara Pazova – Novi Sad under the reconstruction program of the two track railway Belgrad – Stara Pazova – Novi Sad – Subotitsa – the frontier with Hungary in the Republic of Serbia. They are the flyovers, the pedestrian underpasses, the underpasses for cars, the railway bridges, the overhead roads. All man-made facilities are within the populated places with the existing communication routes and on the crossings of the roads.

The following structures were built under the contract:

- 33 flyovers
- 5 pedestrian underpasses
- 4 underpasses for cars
- 2 railway bridges
- 2 overhead roads

**268 737.89 m<sup>3</sup>**

of ground works

**3 008 250.78 kg**

of re-bars installed

**44 595.68 m<sup>3</sup>**

of concrete works

### Client

RZD International

### Designer

CIP (Serbian Design institution)

### Contractor

Mosmetrostroy

### Start of work

2019

### End of work

2021



## MODERNIZATION OF VLADIVOSTOK TUNNEL, FAR EAST RAILWAY OF RUSSIA

**Address:** city of Vladivostok, Leninskiy district, from crossing of Lougovaya and Karskaya stations to Zhigurova street (Tret'ya Rabochaya station).



**1 382 m**

Length of the single track railway tunnel

**1 140 m**

Length of the adit with the drainage system

**56 978 m³**

Construction volume of the tunnel

**7 684 m³**

Construction volume of the adit

**5.5 m**

Width of the tunnel

**6.6 m**

Height of the tunnel

The tunnel named after Stalin was built in 1935. It has a strategic status and is a historical and architectural landmark of the region. Over the years of operation, it reached a dire state. When a decision to overhaul the tunnel was taken, Mosmetrostroy offered to carry out the required work using the up-to-date technology not closing down the tunnel.

During the overhaul they injected behind the lining, suppressed the water inflow, arranged the waterproofing, reinforced the existing lining with an additional layer of shotcrete and repaired the track superstructure. Plus they repaired the service tunnel with the drainage system.

**Client**  
RZD

**Designer**  
Roszheldorproyekt

**Contractor**  
Mosmetrostroy

**Start of works**  
2016

**End of works**  
June, 21<sup>st</sup> 2019

## REFURBISHMENT OF AMUR TUNNEL, FAR-EASTERN RAILWAY, SECOND STAGE

**Address:** city of Khabarovsk, three track section between Khabarovsk-1 and Post-Pokrovskiy stations.



**7 104 m**

is the length of the single track rail tunnel

**400 m³**

the new reinforced concrete jacketing of the ventilation shaft

**2 000 m²**

waterproofing of the ventilation shaft

**> 14 000 m**

refurbishment of the power supply for the ventilation shaft  
refurbishment of the power supply for the ventilation shaft №3 and the security equipment

**20 400 m³**

of landfilling for security facilities and the approach roads

In February of 2020 MMC International, a subsidiary of Mosmetrostroy started refurbishment of the ventilation shaft №3, the buildings and the security facilities on Mostovoy island.

The single track rail tunnel was built in 1937-1941 as a duplicate strategic crossing over Amur river. It is the only rail track under water in Russia. The tunnel provides complete and stable service as a part of Trans-Siberian railway in the city of Khabarovsk.

The accomplished works are as follows: repair the ventilation shaft plus reinforced concrete jacketing, build the switchboard room, a building for the security, the kennels for the security dogs, warehouse, etc., power supply, lighting, communication, water supply, sewer, heating, etc., plus improvement of the territory.

**Client**  
RZD

**Designer**  
Roszheldorproyekt

**Contractor**  
Mosmetrostroy

**Start of works**  
2020

**End of works**  
2021



## NORTH-EASTERN SECTION OF BOLSHAYA KOLTSEVAYA LINE OF MOSCOW METRO

AVIAMOTORNAYA STATION –  
RUBTSOVSKAYA STATION  
(FIRST STAGE)



### SCOPE OF FINISHING

Granite slabs (flooring and stairs) — 15 682 m<sup>2</sup>  
Granite and marble (walls, columns, base) — 14 646 m<sup>2</sup>  
Aluminum panels (walls) — 4 629 m<sup>2</sup>  
Suspended ceiling — 11 716 m<sup>2</sup>  
High-quality finishing of the ceiling — 13 283 m<sup>2</sup>

This is the biggest project in the entire history of Moscow metro. It will resolve the current problems with transportation of the passengers. The future second circular line will pass about 10 km away from the existing Koltsevaya line and will unite the existing and projectable radial directions. It will become the longest metro line in this country. Its total length will be 70 km.

Construction of Bolshaya Koltsevaya line is broken down in several stages.

The first stage was near the Yauza river, from Elektrozavodskaya to Aviamotornaya station. At present this section is working on a temporary basis as an extension of Nekrasovskaya line. Later on the stations will become a part of Bolshaya Koltsevaya line.

#### Government Client

Department of construction for Moscow

#### General contractor/client

Mosinzhproyekt

#### Designer

Metrogiprotans

#### Contractor

Mosmetrostroy

#### Length of the line

6.7 km

#### Number of stations

3

#### Start of work

2015

#### Date of opening

March, 27<sup>th</sup>, 2020 (Aviamotornaya and Lefortovo stations)  
December, 31<sup>st</sup> 2020 (Elektrozavodskaya station)

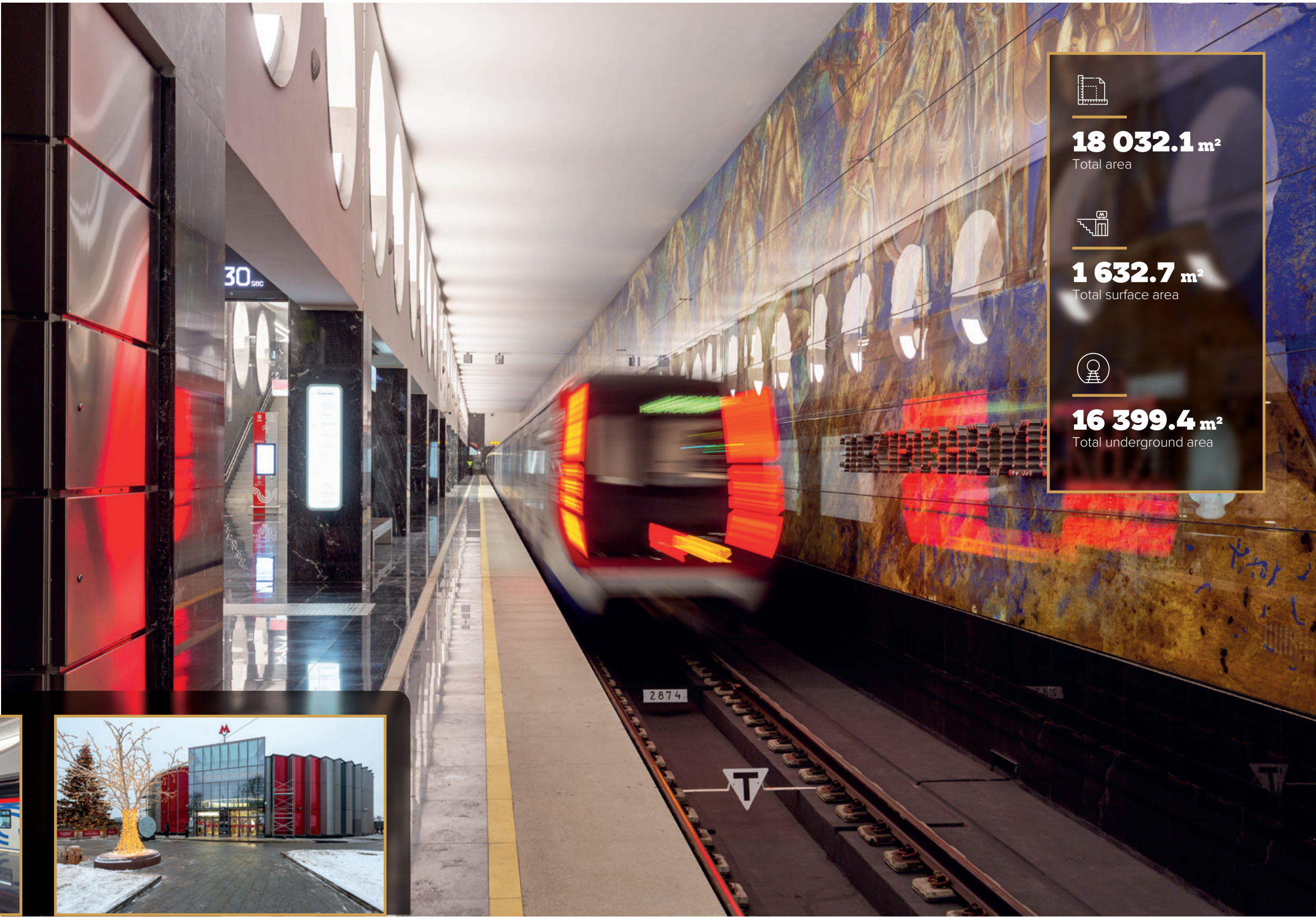


# ELEKTROZAVODSKAYA STATION

**Address:** Moscow, Basmanny district, Semyonovskaya embankment.

## TYPE OF THE STATION

Shallow, column type with a platform of an island type.



**18 032.1 m<sup>2</sup>**  
Total area



**1 632.7 m<sup>2</sup>**  
Total surface area



**16 399.4 m<sup>2</sup>**  
Total underground area





# LEFORTOVO STATION

**Address:** Moscow, Lefortovo district, cross point of the Soldatskaya and the Nalichnaya streets.

## TYPE OF THE STATION

Shallow, column type, two-span station with a platform of an island type.



**17 633.1 m²**  
Total area



**648.8 m²**  
Total surface area



**16 984.3 m²**  
Total underground area





## AVIAMOTORNAYA STATION

**Address:** Moscow, the meeting point of the historical districts Lefortovo, Sokolinaya gora and Danguerovskaya sloboda; Entuziastov passage at the cross point with Entuziastov highway and Kazanskoe direction of Moscow Railway.

### TYPE OF THE STATION

Shallow, column type, three-span station with two rows of the columns and a platform of an island type. In the middle of the central concourse there is a passage to Kalininskaya station of the Kalininskaya line.



**21 946.7 m²**  
Total area



**804.5 m²**  
Total surface area



**21 142.2 m²**  
Total underground area





## SAVYOLOVSKAYA STATION

AS A PART OF PETROVSKIY PARK – SAVYOLOVSKAYA STATION, BOLSHAYA KOLTSEVAYA LINE



**2 090.32 m**

of deep conventional excavation, which includes the niches, adits and inclined tunnels



**71 445.01 m**

of waterproofing



**12 094.3 m³**

of concourse construction



**10 865.69 m³**

major structures of the station



The Savyolovskaya station was built by alpine method and it is 65 meters deep. This allowed carrying out works in the dense urban environment.

The station will become a part of the new transport interchange hub, Savyolovskiy, which will unite the passenger traffic of Savyolovskiy railway station, two metro lines, Serpukhovsk-Timiryazevskaya and Bolshaya Koltsevaya, and the surface public transport.

### Government Client

Department of construction for Moscow

### General contractor/client

Mosinzhproyekt

### Designer

Metrogiprotrans

### Contractor

Mosmetrostroy

### Length of the line

1.9 km

### Number of stations

1

### Start of work

2011

### Date of opening

December, 30<sup>th</sup>, 2018

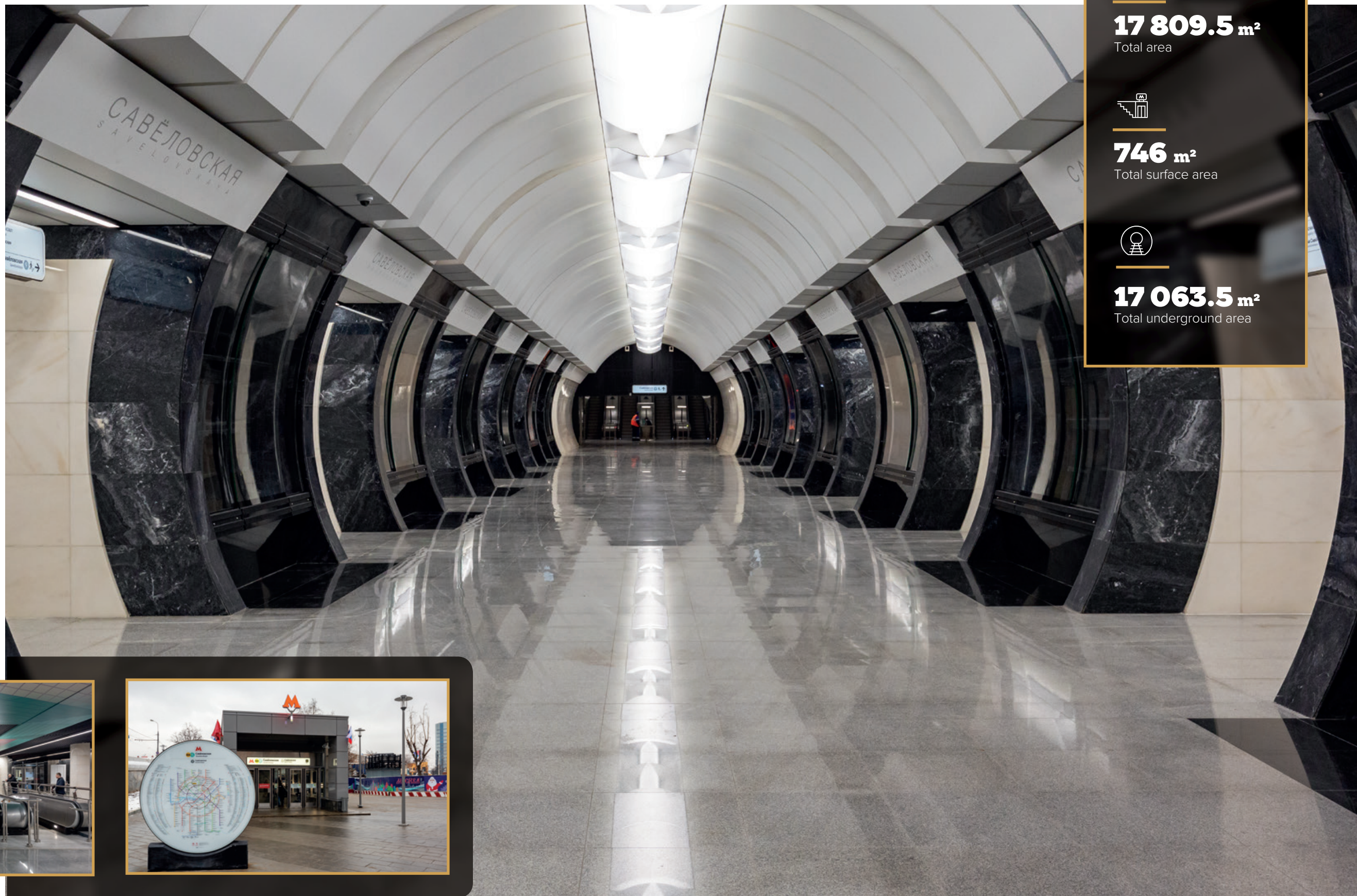


## SAVYOLOVSKAYA STATION

**Address:** Moscow, Savelovskiy district, square of Savelovskiy railway station.

### TYPE OF THE STATION

Deep, pylon type, 3-span station.



**17 809.5 m<sup>2</sup>**  
Total area



**746 m<sup>2</sup>**  
Total surface area



**17 063.5 m<sup>2</sup>**  
Total underground area





# RECONSTRUCTION OF THE SURFACE

## SECTION OF FILYOVSKAYA LINE

Square of the  
concourse, m²

- Before reconstruction
- After reconstruction
- W West concourse
- E East concourse



### FINISHING

of 7 stations

~ **14 800.7 m²**  
Flooring, stairs, walls, plinth walls, columns with natural stone

~ **5 358.38 m²**  
Flooring, stairs, walls, plinth walls, columns with porcelain granite tiles

~ **5 120 m²**  
Stained-glass windows of the concourse facades and the walls

~ **30 794.4 m²**  
Flooring, walls and columns

~ **1 308 m²**  
Galvanized painted panels on walls and cornishes

~ **2 975.4 m²**  
Counter ceiling

~ **1 600 m**  
Handrails made of stainless steel

Reconstruction of the surface stations in Filyovskaya line and its related infrastructure is a large-scale project where the existing facilities had to be run down, the carrying structures were reinforced, the engineering networks were upgraded, asphalt

was replaced with granite, the new covers with infrared heating were installed and plus architectural finishing was done. In order to keep the traffic going they had to carry out the work in stages. First they repaired one concourse and the platforms on the way

from the city downtown, and then on the way to the downtown. Owing to the added lift zones, the total square of the stations increased as well, namely Fili station by 84.4 m², Studencheskaya station by 23.8 m², Pionerskaya station by 246 m².

#### FINISHING MATERIALS

Before reconstruction After reconstruction

#### CONCOURSE

FLOORING	Ceramic tiles	Granite tiles, waste pit, heating system in the entrance
WALLS	Ceramic tiles, plaster	Porcelain granite, plaster, stained-glass windows for interior walls
CEILING	Plaster, paint	Plaster, paint, metallic ceiling systems
STAINED-GLASS WINDOWS	Twin stained-glass windows (shop type)	Single windows with energy-saving glass
LIGHTING	Fluorescent lamps	LED lamps
FACADE	Stained-glass windows, plaster, paint	Stained-glass windows, façade system, new lighting system, new ventilation system, new water supply and water diversion systems, new communication wiring and power supply lines
FACADE PLINTH	Ceramic tiles	Granite tiles
NEW DETAILS OF THE FACADE		Metalic facade panels

#### PLATFORM

FLOORING	Asphalt	Granite tiles
WALLS	Concrete wall	Frameless glass on granite base, wall made of metal sheets
PLATFORM COVER	Profiled sheets on concrete slabs	Roof sandwich panel with coating and in-built lighting
HANDRAILS, FENCING	Black painted metal	Polished stainless steel

**4<sup>th</sup>**  
quarter of 2016  
Start of reconstruction

**7**  
stations

**2018**  
Completion date



# FILYOVSKAYA LINE

BEFORE – AFTER

## KUNTSEVSKAYA STATION





## PIONERSKAYA STATION



## FILYOVSKIY PARK STATION





## BAGRATIONOVSKAYA STATION

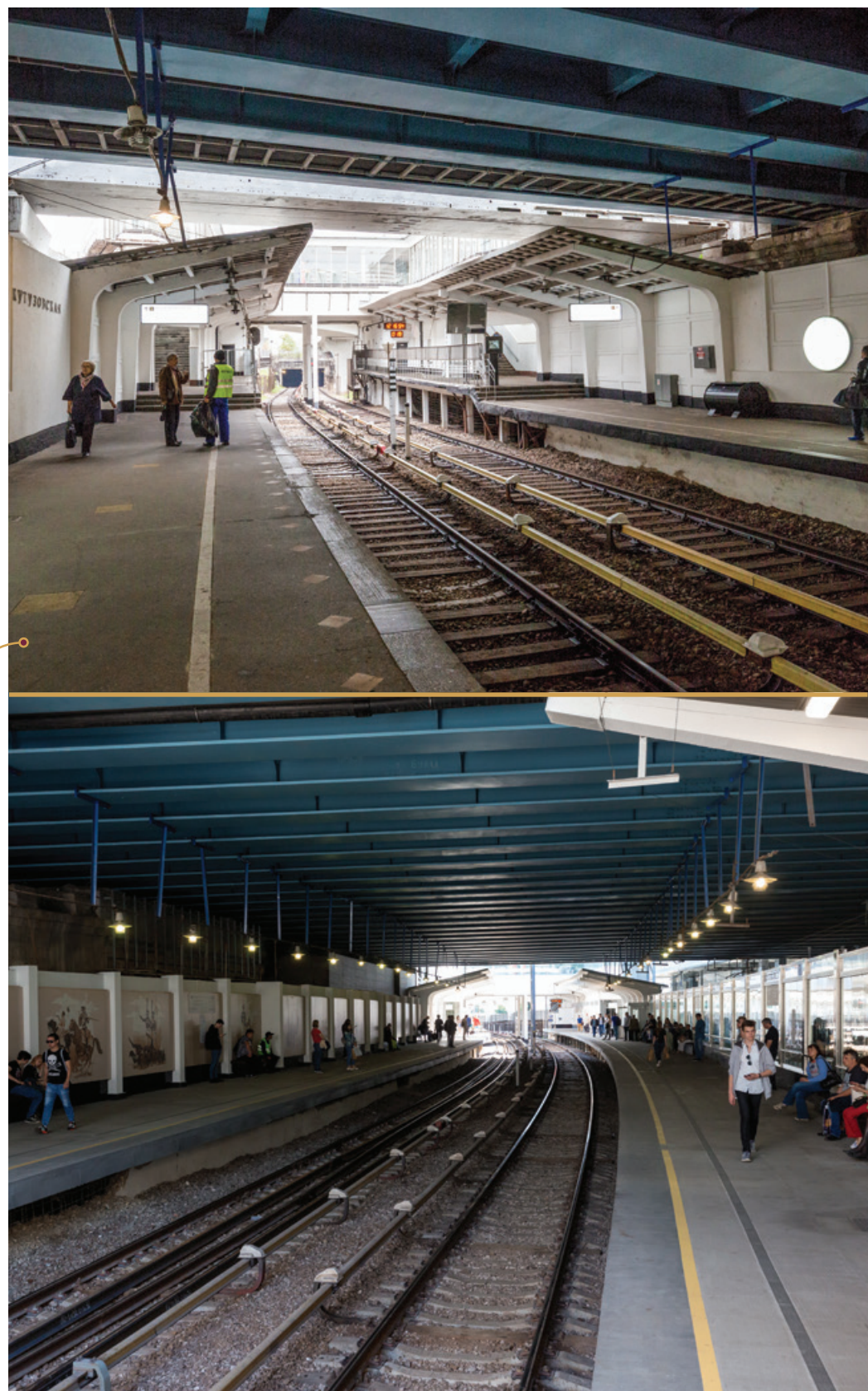


## FILI STATION





## KUTUZOVSKAYA STATION



## STUDENCHESKAYA STATION





# LYUBLINSKO-DMITROVSKAYA METRO LINE

## THE SECOND STAGE



**12 000 m**

have been excavated for the entire construction period



**9 389 m**

from the entire length was built by means of the tunnel boring machines



**2 410 m**

of deep tunnels were built by conventional method, including the tunnel adjacent structures and the inclined tunnels



**470 m**

were built by open cut



Total volume of concrete is

**65 thous. m<sup>3</sup>**



Total volume of the excavated ground is

**~ 320 thous. m<sup>3</sup>**

## FINISHING



Granite flooring (floor and stairs) – 11 909.7 m<sup>2</sup>

Granite and marble (walls, columns and ground floors) – 8 394.3 m<sup>2</sup>

Ceramic granite (walls) – 1 483.6 m<sup>2</sup>

Aluminum panels (walls) – 3 113 m<sup>2</sup>

Waterproof aluminum umbrellas – 9 414.9 m<sup>2</sup>

Fiberglass umbrellas (in inclined tunnels) – 2 678.4 m<sup>2</sup>

Counter ceiling – 3 055.8 m<sup>2</sup>

Ceiling high finish – 3 340.8 m<sup>2</sup>

This part became one of the most laborious in construction history of Moscow metro. The experts faced with a large water inflow. At “Verkhniye Likhobory” station water inflow would reach 350 m<sup>3</sup> per hour. To cope with such water inflow they used both classical dewatering and two-component chemical.

### The main client

Moscow Construction Department

### Client, General Contractor

Mosinzhproyekt

### Designer

Metrogiprotans

### Contractor

Mosmetrostroy

### Line length

6.2 km (including a line to Likhobory depot)

### Number of stations

3

### Start of work

2011

### Opening date

March, 22<sup>nd</sup> 2018




**SELIGERSKAYA**  
STATION


**Address:** Moscow, Beskudnikovskiy district, crossing of Dmitrovsk and Korovinsk highways

**TYPE OF THE STATION**


Shallow, column type, three-span station. There are two tunnels behind the station for the purpose to extend the line. For the train reverse there is a scissors-crossing.




**9 140 m<sup>2</sup>**  
Construction area




**13 509 m<sup>2</sup>**  
Total area



**755 m<sup>2</sup>**  
Total surface area



**12 754 m<sup>2</sup>**  
Total underground area



**6.1 m**  
Height



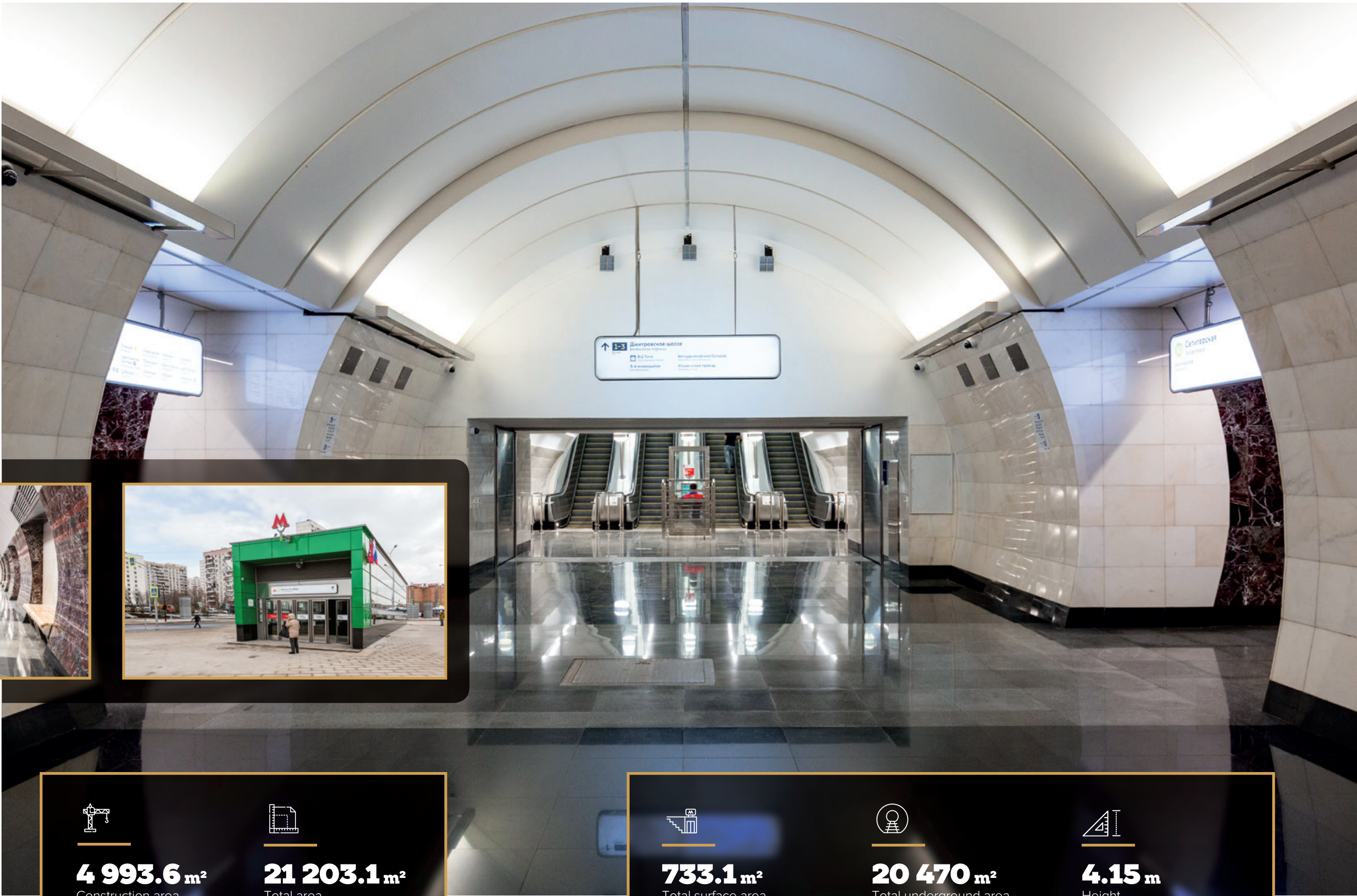


VERKHNIYE  
LIKHOBY  
STATION

**Address:** Moscow, crossing of  
Beskudnikovsk and Zapadnoye  
Degunino districts, along  
Dmitrovsloye highway.

TYPE OF THE STATION

Deep, three-span station, with  
lining made of the cast iron  
segments. External diameter of  
the side tunnels is 8.5 m and the  
central tunnel is 9.5 m.



**4 993.6 m<sup>2</sup>**

Construction area



**21 203.1 m<sup>2</sup>**

Total area



**733.1 m<sup>2</sup>**

Total surface area



**20 470 m<sup>2</sup>**

Total underground area



**4.15 m**

Height



OKRUZHAYA  
STATION

**Address:** Moscow, Timiryazevskiy district, along Locomotive passage at the cross point with the 3<sup>rd</sup> Nizhnelikhoborsky passage, next to the Moscow Central Circle platform and the railway platform to Savyolovskaya direction.

TYPE OF THE STATION

Deep, three vault station, pylon type with lining made of the cast iron segments. External diameter of the side tunnels is 8.5 m and the central tunnel is 9.5 m.



**1 915.63 m<sup>2</sup>**  
Construction area



**14 255.91 m<sup>2</sup>**  
Total area



**295.22 m<sup>2</sup>**  
Total surface area



**13 960.69 m<sup>2</sup>**  
Total underground area



**4.15 m**  
Height



## RECONSTRUCTION OF THE NORTHERN CONCOURSE OF LENINSKY PROSPECT METRO STATION IN KALUZHSKO-RIZHSKAYA METRO LINE



**567.85 m<sup>2</sup>**

Construction area



**4 358.15 m<sup>3</sup>**

Construction volume of the station concourse



**761.07 m<sup>2</sup>**

Total area of concourse



**215.8 m**

Construction area of the inclined tunnel

### FINISHING



Granite flooring – 385,3 m<sup>2</sup>

Granite and marble (walls) – 249 m<sup>2</sup>

High finish of ceilings and walls – 236 m<sup>2</sup>

Counter ceiling (armstrong) – 82.4 m<sup>2</sup>

Counter ceiling (aluminum lath) – 159 m<sup>2</sup>

Counter ceiling (wavy metal panels) – 235.5 m<sup>2</sup>

Granite (facade walls on subsystem) – 460 m<sup>2</sup>

**Address:** Moscow, Gagarinsky district, between Vavilova street and Leninsky Prospect.

Within reconstruction of the northern concourse of Leninsky Prospect station all escalators had to be replaced and the communications renewed. The modern domestic made escalators which conformed to all transport safety and technical service requirements were installed.

#### The main client

Moscow department for transport and development of the road and transport infrastructure

#### Client

Moskovsky Metropoliten

#### Designer

Institut Inzhproekt

#### Contractor

Mosmetrostroy

#### Start of overhaul

2016

#### Opening date

February, 25th 2018



## THE SECOND EXIT OF MEZHDUNARODNAYA METRO STATION, FIYOVSKAYA LINE



**3 289 m<sup>2</sup>**  
Total area



**744 m<sup>2</sup>**  
Total underground area



**2 545 m<sup>2</sup>**  
Total surface area



**20.12 m**  
Maximum height



### FINISHING

Porcelain tiles and granite (flooring) – 744 m<sup>2</sup>  
Plaster, spackling paste, walls painting – 1 666.81 m<sup>2</sup>  
Counter ceiling – 744 m<sup>2</sup>

**Address:** Moscow, Presnensky district, «Moskva siti», Moscow International Business Centre, IQ-quarter.

The second underground concourse of the Mezhdunarodnaya station is built into the two-level underground area of the IQ-quarter of MIBC. The concourse plan was dependant on its placing in the existing structure of the terminal (ceiling and flooring, base plate, walls).

Architectural and artistic appearance of the concourse conforms to the whole conception of the station. Real granite and marble of white, grey and black colours were used as finishing materials.



**The main client**  
Moscow Construction Department

**Client**  
Mosinzhproyekt

**Designer**  
Metrogiprotrans

**Contractor**  
Mosmetrostroy

**Start of work**  
2016

**Opening date**  
December, 30th 2017



# RECONSTRUCTION OF THE NORTHERN CONCOURSE OF **PETROVSKO- RAZUMOVSKAYA** METRO STATION IN SERPUKHOVSKO-TIMIRYAZEVS KAYA LINE



**1 812.5 m<sup>2</sup>**  
Total area



**19 999.96 m<sup>3</sup>**  
Construction volume



## FINISHING

Concrete base around the concourse – 354 m<sup>3</sup>  
Granite (flooring and entrance section) – 1 300 m<sup>2</sup>  
Granite (plinth of the columns) – 4 m<sup>2</sup>  
Granite slabs (walls and parapets) – 419 m<sup>2</sup>  
Ceramic panels (walls) – 226 m<sup>2</sup>  
Fins – 131 m<sup>2</sup>  
Roof – 1 575 m<sup>2</sup>  
Reflected ceiling – 840 m<sup>2</sup>

**Address:** Moscow, Timiryazevsky district, Dmitrovskoye highway, near the Lokomotiv passage, next to the Petrovsko-Razumovskaya platform of the Oktyabrskaya railway.

In the terms of the project the roof covers, cornice, reflected ceiling, the windows in the box offices and the central part of the concourse, and the ventilation bars were replaced. Finishing was done both inside and outside of the concourse.

Marble, granite, stainless steel were used as finishing materials. Fire-proof cables and break resistant glass were also used.



**The main client**  
Moscow Construction Department

**Client, General Contractor**  
Mosinzhproyekt

**Designer**  
Metrogiprotrans

**Contractor**  
Mosmetrostroy

**Start of overhaul**  
2017

**Opening date**  
December, 30th 2017





ROOFED PEDESTRIAN  
BRIDGE  
AS A PART OF SOLNECHNAYA  
TRANSFER HUB



1.22 hectares  
Land area



2 100 m²  
Total construction area



19 625 m³  
Construction volume

FINISHING



Granite (flooring and stairs) – 1 500 m²  
Reflected ceiling (aluminum lath) – 877 m²  
Reflected ceiling (Grigliato) – 1 132 m²  
Stained-glass windows – 355 m²  
Stainless steel fencing – 521 m  
Porcelain stoneware (flooring) – 800 m²  
Porcelain stoneware (walls) – 667 m²  
Aquapanel partitions – 260 m²  
Drywall partitions – 1 400 m²

**Address:** Moscow, Tretij  
Mikroraion Solnceva, Solnechnaya  
metro station, Kiyevskaya line of  
Moscow railway.

The structure is comprised of 3 parts:

- multistorey entrance area;
- central surface area – a concourse with shops, a transit corridor and the ticket barrier equipment;
- pedestrian bridge over the railway lines.

An old open pedestrian bridge over the railway lines was replaced with the new roofed. A comfortable warm concourse for passengers waiting for their trains was built inside the building. New lighting systems, CCTV and air conditioning were installed. Arrival time of a train is shown on the electronic scoreboard over the ticket barrier leading to the platform. Any level can now be reached by an elevator.

**The main client**  
RZD

**Client**  
Tsentrlnaya PPK

**Designer**  
MosgortransNIIproyekt  
(now GBU MosTransProyekt)

**Contractor**  
Mosmetrostroy

**Start of work**  
2015

**Opening date**  
June, 29th 2017



## LYUBLINSKO-DMITROVSKAYA METRO LINE

### THE FIRST STAGE

One of the main events in construction activity of Mosmetrostroy in 2016 was opening of three new stations in Lyublinsko-Dmitrovskaya line, they are Butyrskaya station, Fonvizinskaya station and Petrovsko-Razumovskaya station.



# 12 600 m

were excavated with a conventional method during the whole period



# 41 837 m³

Volume of concrete (concourses, stairs, crosswalks)



Volume of the excavated ground is about

# ~ 177 261.8 m³



## FINISHING

Granite, marble (flooring and walls) – 25 760 m²  
Reflected ceilings – 3 847 m²  
Waterproofing umbrellas – 23 163 m²  
Ceramics (ventilation booths) – 1 100 m²

Construction of the first stage of the Lyublinsko-Dmitrovskaya line of the Moscow metro was completed at the depth of 60-65 m. The work was complicated by the geology of the area. The workers struggled with water saturated layers and quicksands.

Opening of the three new stations improved the access to the transport for people who live in the North and North-Eastern districts of Moscow.

**The main client**  
Moscow Construction Department

**Client, General Contractor**  
Mosinzhproyekt

**Designer**  
Metrogiprotrans

**Contractor**  
Mosmetrostroy

**Line length**  
5.6 km

**Number of stations**  
3

**Start of work**  
2011

**Opening date**  
September, 16th 2016



## PETROVSKO-RAZUMOVSKAYA STATION

**Address:** Moscow, Timiryazevsky district, Dmitrovskoye highway, near the Lokomotiv passage, next to the Petrovsko-Razumovskaya platform of the Oktyabrskaya railway.

### TYPE OF THE STATION

Deep, three vault station, column type with lining made of cast iron segments. External diameter of side tunnels is 8.5 m and the central tunnel is 9.5 m.



**18 779.5 m<sup>2</sup>**

Total area



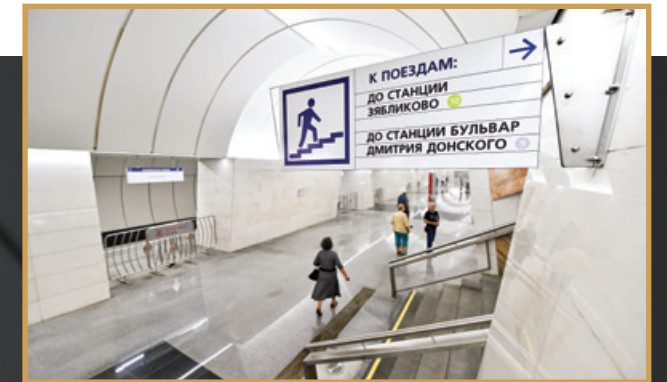
**726 m<sup>2</sup>**

Total surface area



**18 053.5 m<sup>2</sup>**

Total underground area



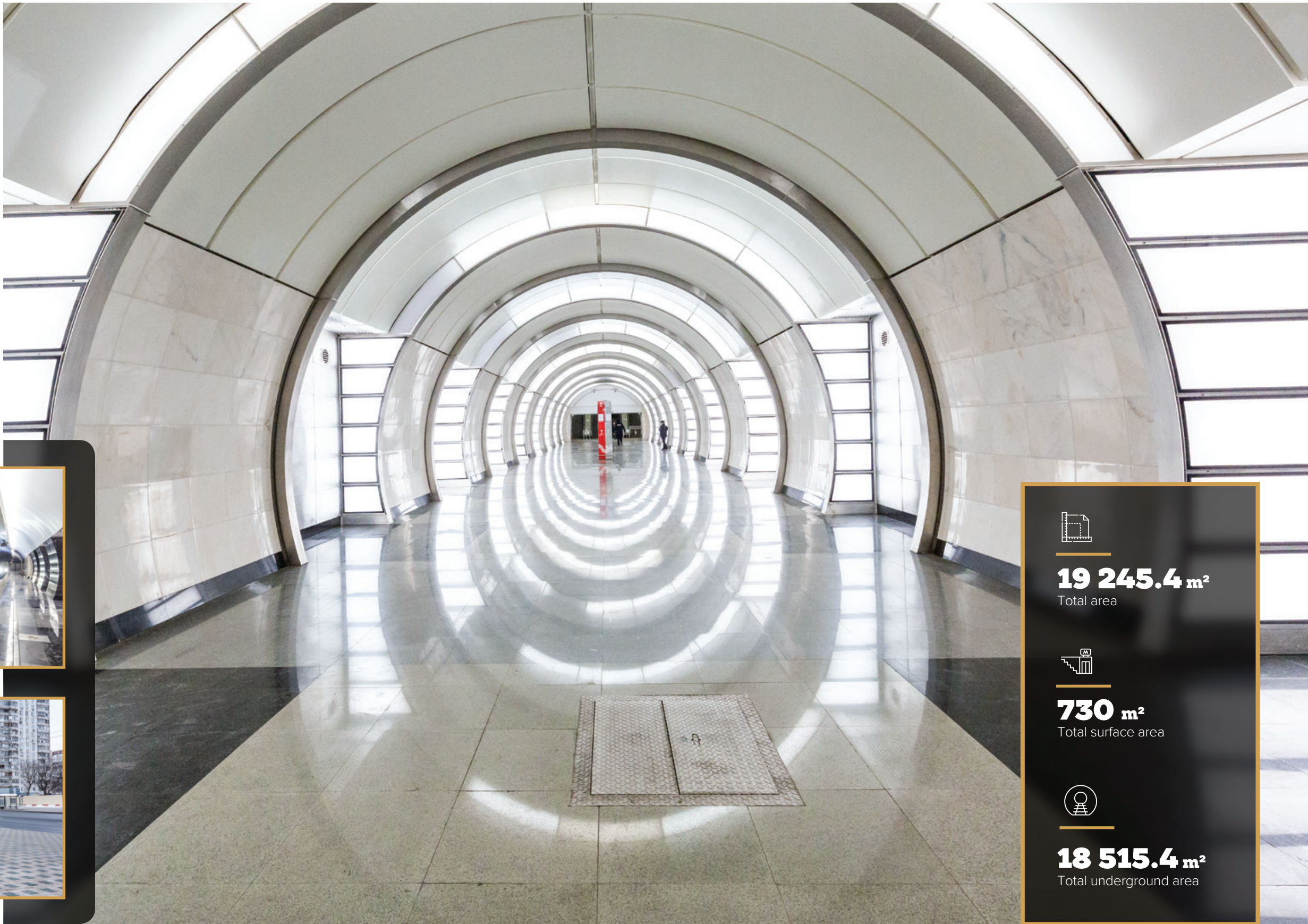


# FONVIZINSKAYA STATION

**Address:** Moscow, Butirsky district,  
Milashenkova street.

## TYPE OF THE STATION

Deep, three vault station, column  
type with lining made of cast iron  
segments. External diameter of  
the side tunnels is 8.5 m and the  
central tunnel is 9.5 m.



**19 245.4 m<sup>2</sup>**  
Total area



**730 m<sup>2</sup>**  
Total surface area



**18 515.4 m<sup>2</sup>**  
Total underground area

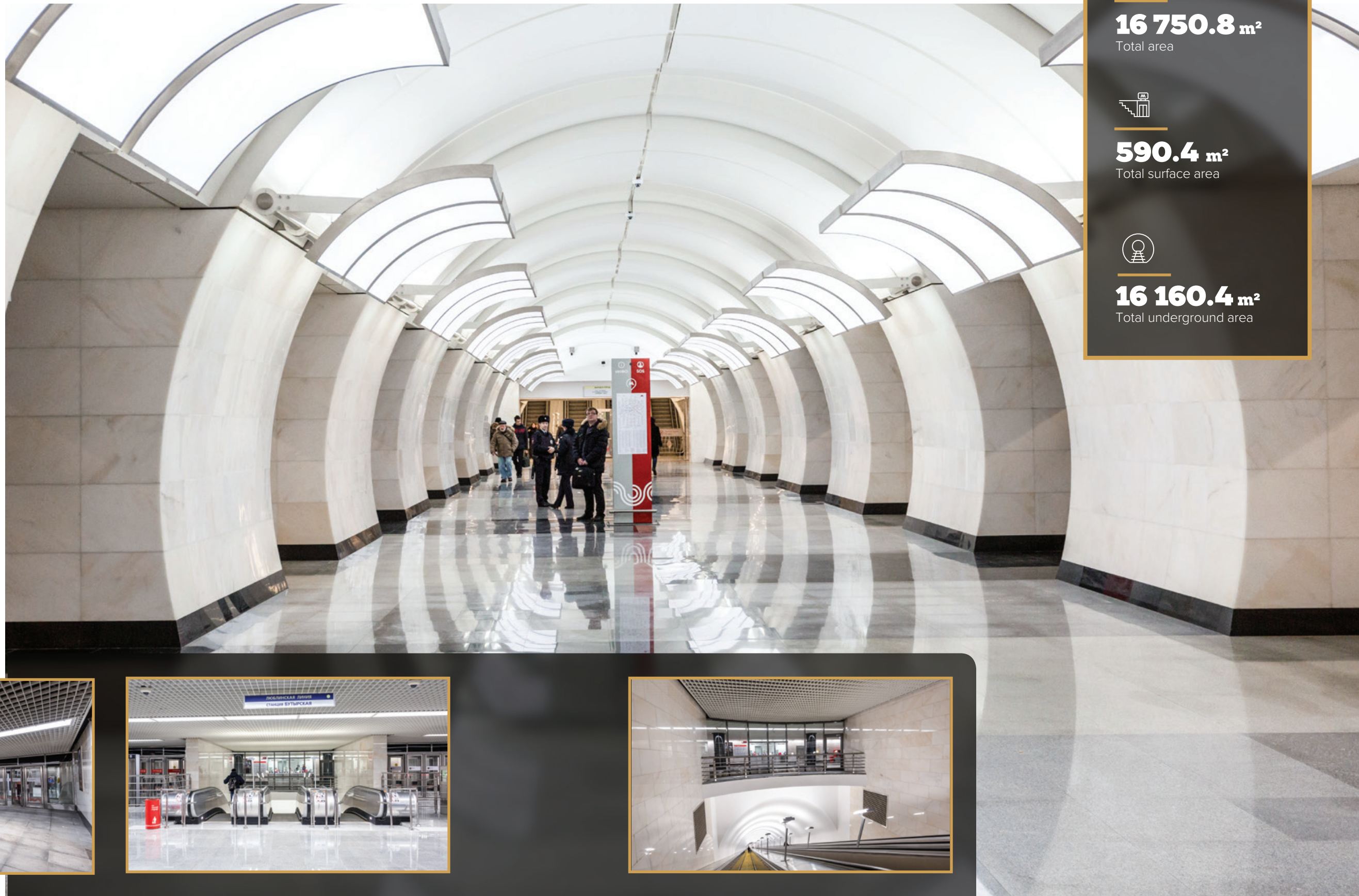


## BUTYRSKAYA STATION

**Address:** Moscow, Butyrsky district, along Ogorodny passage, between Rustaveli street and Dobrolyubova passage.

### TYPE OF THE STATION

Deep, three vault station of pylon type with lining made of cast iron segments. External diameter of the side tunnels is 8.5 m and the central tunnel is 9.5 m.



**16 750.8 m<sup>2</sup>**

Total area



**590.4 m<sup>2</sup>**

Total surface area



**16 160.4 m<sup>2</sup>**

Total underground area







**Address:** Moscow, Gagarinsky district, Ploshchad Gagarina (Gagarin's square), between Leninsky prospekt and Vavilova street.

Ploshchad Gagarina transport hub is the only underground transport interchange in the new part of Moscow Central Ring. It includes the entrance rooms, ticket barrier halls, box offices and service area. The estimated passenger traffic is 50 thousand people per day.

This transport hub is to provide convenient underground pedestrian connection between Ploshchad Gagarina station in MCR and Leninsky Prospekt station in Kaluzhsko-Rizhskaya line of the subway as well as between the stops of the surface public transport.

## PLOSHCHAD GAGARINA TRANSPORT HUB AS A PART OF MOSCOW CENTRAL RING



**5 152 m<sup>2</sup>**  
Total area



**12 000 m<sup>2</sup>**  
Construction area



**42 000 m<sup>3</sup>**  
Construction volume

### FINISHING



Granite (flooring and stairs) – 6 400 m<sup>2</sup>  
Marble (on plaster) – 3 700 m<sup>2</sup>  
Marble (on aluminum framework) – 4 630 m<sup>2</sup>  
Porcelain stoneware (flooring) – 940 m<sup>2</sup>  
Porcelain stoneware (walls) – 1 130 m<sup>2</sup>  
Walls and ceilings paint – 12 000 m<sup>2</sup>  
Reflected ceiling (aluminum lath) – 3 500 m<sup>2</sup>  
Reflected ceiling (Grigliato) – 263 m<sup>2</sup>  
Reflected ceiling (Armstrong) – 373 m<sup>2</sup>  
Stained-glass structures – 660 m<sup>2</sup>

#### The main client

Moscow department for transport and development of the road and transport infrastructure

#### Client

RZD (DKRS)

#### Designer

Mosgioprotrans

#### Contractor

Mosmetrostroy

#### Start of work

2013

#### Opening date

September, 10th 2016



## RECONSTRUCTION OF THE SOUTHERN CONCOURSE OF LENINSKY PROSPECT METRO STATION IN KALUZHSKO-RIZHSKAYA LINE



**582.7 m<sup>2</sup>**

Construction area



**2 659.3 m<sup>3</sup>**

Construction volume of the concourse



**373.7 m<sup>2</sup>**

Total area of concourse



**1 001.12 m<sup>3</sup>**

Construction volume of the inclined tunnel



**184.62 m<sup>2</sup>**

Area of the passage to Moscow Central Ring (including stairs)



### FINISHING

Granite (flooring) – 536 m<sup>2</sup>

Granite and marble (walls) – 300 m<sup>2</sup>

Ceiling (lath) – 610 m<sup>2</sup>

Painting of the ceiling in the inclined tunnel – 600 m<sup>2</sup>

Stainless steel (doors and stain-glass windows) – 237 m<sup>2</sup>

**Address:** Moscow, Gagarinsky district, between Vavilova street and Leninsky Prospekt.

Specialists of Mosmetrostroy fully rebuilt the interior of the southern concourse of the Leninsky Prospekt station according to modern safety and comfort requirements for passengers. Engineering systems were replaced and the new navigation system was installed.

in terms of the project the station was integrated into the Ploshchad Gagarina transport hub.

#### The main client

Moscow department for transport and development of the road and transport infrastructure

#### Client

Moskovsky Metropoliten

#### Designer

Institut Inzhproekt

#### Contractor

Mosmetrostroy

#### Start of overhaul

2016

#### Opening date

September, 3rd 2016





# SOKOLNICHESKAYA LINE

## Connection between Yugo-Zapadnaya and Tropar'yovo stations

**1 330 m**

left tunnel

**1 296 m**

right tunnel

## Connection between Tropar'yovo and Rumyantsevo stations

**2 112.6 m**

left tunnel

**2 103.8 m**

right tunnel

## Connection between Salaryevo and Rumyantsevo stations

**1 416.8 m**

left tunnel

**1 416 m**

right tunnel

## Tropar'yovo station

**14 195 m<sup>3</sup>**

diaphragm wall

**154 512 m<sup>3</sup>**

excavation and ground disposal

## Rumyantsevo station

**8 260 m<sup>3</sup>**

diaphragm wall

**137 420 m<sup>3</sup>**

excavation and ground disposal

## Salaryevo station

**8 500 m<sup>3</sup>**

diaphragm wall

**141 650 m<sup>3</sup>**

excavation and ground disposal

The Sokolnicheskaya line extension gave an extra chance to develop Novaya Moskva (The new Moscow) territories and to build the residential neighborhoods, business centres and multifunctional public areas which correspond to social, cultural, domestic and other needs of the residents.

Rumyantsevo and Salaryevo became the first two-level stations of Moscow metro: there are box-office areas, technological and service spaces above the platforms.

The tunnels of the line were made with the tunnel boring machines, earth pressure balance and slurry type.

## The main client

Moscow Construction Department

## Client, General Contractor

Mosinzhproekt

## Designer

Institut Inzhproekt

## Contractor

Mosmetrostroy

## Line length

6.5 km

## Number of stations

3

## Start of work

2012

## Opening dates

Tropar'yovo station – December, 8th 2014

Rumyantsevo station – January, 18th 2016

Salaryevo station – February, 15th 2016



**SALARYEVO**  
STATION

**Address:** Moscow, Moskovskiy settlement, Kiyevskoye highway.

**TYPE OF THE STATION**

Shallow, column type, three-span station.



**13 494 m<sup>2</sup>**  
Total area



**502.5 m<sup>2</sup>**  
Total surface area



**12 991.5 m<sup>2</sup>**  
Total underground area





**RUMYANTSEVO**  
STATION

**Address:** Moscow, Moskovskiy settlement, Kiyevskoye highway.

**TYPE OF THE STATION**

Shallow, column type, three-span station.



**13 174.81 m<sup>2</sup>**  
Total area



**501.19 m<sup>2</sup>**  
Total surface area



**12 673.62 m<sup>2</sup>**  
Total underground area



**TROPARYOVO**  
STATION

**Address:** Moscow, Tropar'yovo-Nikulino district, Leninsky prospect.

**TYPE OF THE STATION**

Shallow, one-span station.



**8 481.89 m<sup>2</sup>**  
Total area



**4 584.99 m<sup>2</sup>**  
Total surface area



**3 896.9 m<sup>2</sup>**  
Total underground area



# STRATEGY AND PERSPECTIVE FOR DEVELOPMENT

## Domestic market



The company won the tenders for construction of the infrastructure in the north-eastern part of Bolshaya Koltsevaya line, which includes 6 stations. They are Mar'ina Roshcha, Rizhskaya, Sokolniki, Elektrozavodskaya, Lefortovo and Aviamotornaya plus extension of Lyublinsko-Dmitrovskaya line to Severniy vilage.



Mosmetrostroy refurbished and updated the railway tunnel named after Stalin in the city of Vladivostok. The tunnel was built in 1935. The tunnel has a strategic status and is a historical and architectural landmark of the region. The project took prize as «The best completed project of 2019», which is arranged annually by the world Tunnel Association.



Since 2016 the company is participating in reconstruction of the running parts of Moscow metro. As of today they are Kakhovskaya, Varshavskaya and Kashirskaya stations of the Kakhovskaya line. In the future they will become a part of Bolshaya Koltsevaya line.



Institut Inzhproyekt developed the reconstruction projects for the ski-jump in Vorobjovy Gori station and for construction of the cable way from the viewing platform to Louzhniki station. It is 700 meters long. It was put into operation on November, 26<sup>th</sup> 2019 and serves for three stations, Vorobjovy Gori, Novaya Liga and Louzhniki (bottom one).



The main strategic goal of Mosmetrostroy in the nearest future is to increase number of projects and extend scope of work for construction of the new stations and repair the existing lines of Moscow metro.

Additionally, in order to diversify its business activity we are consistently working on getting the large-scale infrastructure projects both in Russia and abroad.

One of the priority is to build the long-term partnership with RZD. As of today Mosmetrostroy has proved to be a reliable partner, which is proven by the concluded contracts in the far East of Russia and the Republic of Serbia.

Engineering study of some international projects in the countries the company is interested in is at different stages.



## International market

### Construction and putting into operation



**Water supply tunnel under the Bosphorus strait, 6 m in diameter and the length is 3.4 km, within Melen project. The purpose of the tunnel is to provide population of Istanbul with fresh water from the Melen river. The tunnel was built by means of the tunnel boring machines Herrenknecht.**



**The railway tunnels with 10 m in diameter and 3.5 km long in a mountain range within the project of a speed railway line Tel Aviv - Jerusalem (Israel).**



**A consortium with a Chinese company, Hindustan Construction Co Ltd., is in charge of construction of a section of the third metro line in Mumbai (India). It comprises of four stations and the tunnels between them with total length 4049 m. Two tunnel boring machines are doing the work. The performance time under the contract is 54 months.**



**Two railway tunnels called «Tchortanovtsy» in the mountains of Serbia are built under the modernization program of the twin track railway Belgrad-Stara Pazova-Novi Sad-Subotitsa-the frontier. The length of the tunnels is 1090 m and 1150 m. The performance time is 1557 days. The contract is within a loan of the Russian Federation to the Republic of Serbia for development and repair of the railway links. RZD International, a subsidiary of RZD, is the operator of the loan and the general contractor of the project.**



**Repair of four railway tunnels in Vrbnitsa-Bar line, the Republic of Montenegro. Under the contract they will have to refurbish 986 meters of the tunnel lining.**



# SOCIAL ACTIVITY

Mosmetrostroy is a socially oriented company which pays much attention to the personal potential of its employees.

With support of the company management there are such initiative groups as council of Metrostroy veterans, council of young specialists, Pamyat Metrostroya search party and Afgan Metrostroya.

From the time Mosmetrostroy was established the territorial committee of trade union was founded.



All the company events are covered in a corporate newspaper, Metrostroyevets. Its first issue came out on August, 6th in 1932. 13000 issues have been published for 89 years.



From the day the company was established and as of now the company owns 6 dormitories. It is called KSUM.



Annually, the company arrange the New Year celebrations for the employees children and the vets, drawing contest for children, family sport games a lot more things.



A special place in the social policy of the company is occupied by the popularization of sports and a healthy lifestyle. Today, there are mini-football and the volleyball teams in Mosmetrostroy. Also they carry out the chess tournaments between the employees, the summer sports competitions between the subsidiaries and the Champion Cup in mini football.



## THE RECREATIONAL CAMP FOR CHILDREN

Mosmetrostroy owns the recreational camp for children. It occupies the territory of 34.21 hectares and consists of nine accommodation buildings made of bricks, hospital, canteen and the gym. It is located in a picturesque Balabanovo town, near the Istja river, Kalouga region. Such location provides clean air and silence which the urban kids really need.

The idea came to the management of Mosmetrostroy back in 1944. This is when the history full of events of a legendary camp started. They decided to build it in the territory of Pobeda (Engl. victory) farm and the camp was opened in June 1945. It was named Beryozki (Engl. the birch trees). The first campers lived in the wooden barracks and the military tents.

Gradually they improved the territory, built the proper buildings and arranged the sport sites. They had their own bakehouse which was famous all over the area. Since 1960 in between the summer seasons for children they allowed the family campers.

In 1970 the camp celebrated its 25 years anniversary and got the new name, Yuniy Metrostroyevets, which stands for «a young builder of metro». The same year they started a major reconstruction of the camp.

Since then the camp became available for the kids during the winter holidays. By 2005 there were eight two-storey brick buildings, canteen, medical ward, a summer club, a library, a computer hall, a cinema and an art center.

In 2011 the camp was closed. Four years later the company decided to revive it and carry out repair of the buildings and to improve its territory. In 2016 they installed a monument dedicated to 53 Heroes of the Soviet Union and later on they installed a fountain in the central square. Also they rebuilt the entrance and arranged it as a tunnel with the cast iron lining.

By the start of 2019 they recovered the farm, its warehouses, an aviary, and the stable. In July of the same year they arranged the Summer Competitions, where several generations of the metro builders participated. Many of them visited the camp yet as children.



Up to  
**500**  
children

the camp can accommodate during one summer shift







**The recreational camp for the children whose parents work in the metro infrastructure resumed its work after the overhaul.**

**It is also available for those whose parents are not related to metro but willing to spend their holidays there.**





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