



PUBLIC PRIVATE PARTNERSHIP

STROYPROEKT ENGINEERING GROUP

STROYPROEKT ENGINEERING GROUP IS THE LARGEST RUSSIAN ENGINEERING COMPANY IN THE FIELD OF TRANSPORT INFRASTRUCTURE PROJECTS TO BE BUILT AND OPERATED ON A TOLL BASIS

TOLL ROAD DESIGN FOR PPP PROJECTS

- Development of design and detailed design documentation for Concessionaires, private investors, Main Contractors, etc.
- Tolling system design
- Project life cycle design

CONSULTANY SERVICES FOR PPP PROJECTS

- Development of project implementation strategy
- Development of project technical part:
 - Traffic flow modelling with account for tolling
 - Tariff calculation
 - Land property inventory (if required)
 - Capital and operation expenditures schedules for the project construction and operation
- Development of legal framework and financial models
- Preparation of bidding documentation for investment tenders
- Advice to all stakeholders (state agencies, construction companies and investors)



STROYPROEKT'S EXPERIENCE IN DESIGNING TOLL ROADS FOR PPP PROJECTS

STROYPROEKT HAS LONG BEEN A LEADER IN DESIGNING TOLL TRANSPORT FACILITIES, HAVING STARTED WITH THE WESTERN HIGH SPEED DIAMETER PROJECT IN ST. PETERSBURG IN 2004.

- Construction and operation of a new express toll highway M-11 Moscow – St. Petersburg

- Construction and operation of the M-4 Don highway from Moscow to Novorossiysk
- Construction and rehabilitation of the M-1 Belarus highway Moscow – Smolensk – the Belarussian border

- Construction and toll operation of a new link between Moscow Ring Road and the M-7 Volga federal highway
- Construction of Central Ring Road in Moscow Region, Stage 5



STROYPROEKT – CONSULTANT FOR PPP ROAD CONSTRUCTION AND OPERATION PROJECTS

SINCE 2013 STROYPROEKT RENDERS A FULL RANGE OF SERVICES FOR PPP TRANSPORT PROJECTS, INCLUDING LEGAL, FINANCIAL AND ENGINEERING ADVICE.



These services include development of feasibility studies for projects with international or private funding, preparation of concession tenders under PPP mechanisms, engineering evaluation of designs developed by other design companies, project engineering audits, preparation of tender documents (including specifications), assistance during the tendering process, tender bid evaluation and negotiation supporting, and construction project management.

Stroyproekt was involved in the development of bidding documents for investment tenders for the following projects:

- Khabarovsk Bypass Road
- The Ob River Bridge Crossing at Ippodromskaya Street in Novosibirsk

Stroyproekt has a unique experience in implementing PPP projects in cooperation with renowned consultancy companies and has successful experience in negotiating with state authorities such as the State Company Russian Highways (GK Avtodor), Novosibirsk Region Administration, St. Petersburg City Administration, Khabarovsk Territory Administration and others. Stroyproekt is always available for providing full assistance and information support to the clients and partners.



WESTERN HIGH SPEED DIAMETER IN ST. PETERSBURG

THE WESTERN HIGH SPEED DIAMETER (WHSD) IS A MODERN MULTILANE HIGHWAY THAT LINKS THE SOUTH-WEST OF THE CITY, INCLUDING THE SEA PORT AREA, WITH THE RING ROAD, VASILIEVSKY ISLAND, KURORTNY DISTRICT AND THE SCANDINAVIA HIGHWAY.

MAIN PARAMETERS:

- Total length: 47 km
- Number of lanes: 4 to 8 (in both directions)
- Total length of engineering structures (bridges, flyovers, overpasses): 21 km
- Number of traffic interchanges: 14 (including 6 planned ones)



The WHSD Project is implemented based on a PPP scheme. The PPP model of the project is a minimum income guarantee concession.

The Concessioner is a consortium consisting of construction companies and financial investors.

In accordance with the agreement, the Concessioner shall attract financing for construction of the WHSD Central Section and is granted a 30-year concession for operation of the whole motorway.



OUR PARTICIPATION IN THE PROJECT:

- Design
- Detailed design for the Northern and Southern Sections
- Detailed design for the Central Section within the concession agreement
- Services of the concedent's Technical Expert



THE OB RIVER BRIDGE CROSSING AT IPODROMSKAYA STREET IN NOVOSIBIRSK

THE PROJECT ENVISAGES CONSTRUCTION AND OPERATION OF A NEW BRIDGE CROSSING OVER THE OB RIVER.

The bridge crossing comprises the Ob River bridge with approaches, traffic interchanges, the Trans-Siberian Railway underpass and the tolling system infrastructure.

MAIN PARAMETERS:

- **Total length :** 5.1 km
- **Number of lanes:** 3 + 3
- **Navigation span clearance:** 2 (120 x 13.5) m
- **Bridge width:** about 30 m

To attract private investments to the project and to ensure its financial efficiency, the bridge is planned to be operated on a toll basis.



STROYPROEKT HAS DEVELOPED THE BRIDGE DESIGN CONSIDERING THE PPP SCHEME, INCLUDING:

- Space-planning and structural solutions
- Traffic flow modelling with account for toll operation
- Toll tariff calculation
- Tolling system and toll plazas
- Capital and operation expenditures schedule

STROYPROEKT IS ALSO RENDERING CONSULTACY SERVICES FOR THE PPP PROJECT IMPLEMENTATION:

- Development of the project implementation strategy and a legal framework
- Development of a financial model
- Preparation of tender documents and draft concession agreement
- Advice and information support for all stakeholders

Using the financial and economic model, the optimal funding and contractual schemes have been identified; besides investment efficiency indicators have been defined and included into the draft concession agreement and tender documents. Optimal criteria for selecting tenderers have been established; these criteria significantly influence the investment attractiveness of the project.



EXPRESS TOLL HIGHWAY MOSCOW – ST. PETERSBURG

A NEW EXPRESS MOTOR ROAD MOSCOW–ST. PETERSBURG WILL CONNECT THE CAPITAL OF RUSSIA WITH ST. PETERSBURG – THE SECOND LARGEST RUSSIAN CITY AND THE MAJOR TRANSPORT CENTRE OF THE NORTH-WEST REGION.

OUR PARTICIPATION IN THE PROJECT:

Stroyproekt has designed all large and non-standard bridges, overpasses and flyovers on the highway, about 130 structures in total.

SECTION 58 KM – 97 KM

Stroyproekt is in charge of preparatory works and also develops the detailed design, including relocation of the existing utilities.

Main parameters:

- Length: 38 km
- Road category: 1A
- Number of lanes: 4 to 8
- 3 interchanges
- 26 engineering structures

SECTION KM 258 – 334 KM (VYSHNY VOLOCHYOK BYPASS).

The total length of this 4-lane road section is 72 km. Stroyproekt develops the detailed design for three large bridges.



SECTION 15 KM – 58 KM, MOSCOW REGION

For this road section, Stroyproekt has developed the detailed design and rendered the Designer's Supervision services.

MAIN PARAMETERS:

- Length: 43 km
- Road category: 1A
- Number of lanes: 8 to 10
- 5 traffic interchanges
- 30 bridges and overpasses
- 2 pedestrian overpasses

SECTION 334 KM – 543 KM

Stroyproekt is the main designer of this road section and is also responsible for the Designer's Supervision.

MAIN PARAMETERS:

- Length: 217 km
- Road category: 1A
- Number of lanes: 4
- 6 traffic interchanges
- 105 engineering structures



SECTION 545 KM – 684 KM

MAIN PARAMETERS:

- Length: 138 km
- Road category: 1A
- Number of lanes: 4 to 6
- 3 traffic interchanges
- 65 engineering structures

Stroyproekt is responsible for the design optimisation and the detailed design of various engineering structures.



KHABAROVSK BYPASS ROAD, SECTION 13 – 42 KM

THIS HIGHWAY IS DESIGNED TO CONNECT THE USSURY MOTORWAY FROM Khabarovsk TO Vladivostok AND THE VOSTOK MOTORWAY FROM Khabarovsk TO NAKHODKA.

The 4-lane highway with 6 traffic interchanges and 33 bridges and overpasses will be a toll road.

The project is implemented based on a PPP scheme that will allow attracting funds for its construction both from the federal budget and extra-budgetary sources. At the same time, the project will represent an additional source of the budget income via toll collecting.

CONSULTANCY SERVICES FOR THE PPP PROJECT IMPLEMENTATION SUPPORT:

- Development of financial and economic documentation for a concession project

STROYPROEKT HAS DEVELOPED THE DESIGN BASED ON THE PPP SCHEME INCLUDING:

- Traffic flow modelling for a toll road
- Tariffs calculation
- Tolling system and toll plazas
- Development of capital and operation expenditure schedules for construction and operation period



THE M-4 DON HIGHWAY CONSTRUCTION AND REHABILITATION

THE M-4 DON FEDERAL HIGHWAY MOSCOW – VORONEZH – ROSTOV-ON-DON – KRASNODAR – NOVOROSIYSK IS A KEY MERIDIONAL ROAD OF RUSSIA. THE ROAD CONNECTS THE NORTHERN AND CENTRAL REGIONS IN THE EUROPEAN PART OF THE COUNTRY TO THE NORTHERN CAUCASUS, THE BLACK SEA AND THE CITY OF NOVOROSIYSK ENSURING BOTH REGIONAL TRANSPORT AND ECONOMIC LINKS AND LONG-DISTANCE TRANSIT TRANSPORTATION.



STROYPROEKT HAS DEVELOPED THE DESIGN OF TWO ROAD SECTIONS FOR THE CONCEDENT:

SECTION 933 KM – 1024 KM

- Length: 91 km
- Road category: 1A
- Number of lanes: 4 to 6
- 7 traffic interchanges
- 21 bridges and flyovers

SECTION 1024 KM – 1091 KM

- Length: 62 km
- Road category: 1A
- Number of lanes: 4 to 6
- 4 traffic interchanges
- 32 bridges and flyovers



THE M-4 SECTION 633 KM – 715 KM IS LOCATED IN VORONEZH REGION. THE EXISTING 2-LANE ROAD IS OF CATEGORY 3. THE PROJECT PROVIDES FOR CONSTRUCTION OF A NEW SECTION BYPASSING LOSEVO AND PAVLOVSK TO MEET THE REQUIREMENTS ESTABLISHED FOR THE HIGHWAYS BEING PART OF INTERNATIONAL TRANSPORT CORRIDORS.

MAIN PARAMETERS:

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- Project type: new construction and modernisation of the existing road sections
- Length: 85 km
- Road category: 1B
- Number of lanes: 4
- Design speed: 150 kmh
- 2 traffic interchanges
- 37 bridges and flyovers



The design is developed under an investment agreement concluded by State Company Russian Highways (GK Avtodor). In accordance with the agreement, the designer shall develop the design at its own expense and the concessionaire will pay for it after the concession tender has been carried out.

OUR PARTICIPATION IN THE PROJECT:

- Basic design
- Input data acquisition
- Structural analyses
- Design documentation
- Cost estimates



CENTRAL RING ROAD OF MOSCOW REGION, Section 5

THE PROJECT FOR CONSTRUCTION OF THE CENTRAL RING ROAD OF MOSCOW REGION (A-113) TO BE OPERATED AS A TOLL ROAD IS A MAJOR INVESTMENT PROJECT IMPLEMENTED UNDER A PPP SCHEME BY THE STATE COMPANY RUSSIAN HIGHWAYS (GK AVTODOR).

The section 5 is planned to be toll-free.

MAIN PARAMETERS:

- Length: 76 km, including about 28 km of a new road to be built and 48 km to be modernized
- Road of category 2 (outside populated areas) and an urban arterial street controlled by traffic lights in settlements
- Design speed: 80/70 kmh
- Number of lanes: 4
- 20 bridges and overpasses
- 6 grade-separated interchanges

A long-term investment agreement has been signed for the road construction, maintenance, repairs and rehabilitation. According to the agreement, GK Avtodor will reimburse maintenance costs to the contractor and will also reimburse in phases private investments used for construction.

OUR PARTICIPATION IN THE PROJECT:

Stroyproekt is in charge of contract management and construction supervision.
The contract management is aimed to ensure a targeted use of available funds by the investor or other stakeholders and to monitor the project implementation during construction.

THE CONSTRUCTION SUPERVISION SERVICES INCLUDE:

- Checking the compliance of detailed design drawings with the main design and the recommendations of the engineering audit
- Monitoring the compliance of executed works with the design and detailed drawings
- Preparing expert conclusions on completed works and developed documentation



THE M-1 BELARUS HIGHWAY CONSTRUCTION AND REHABILITATION

THE M-1 BELARUS FEDERAL HIGHWAY FROM MOSCOW TO THE BELORUSSIAN BORDER IS PART OF THE E-30 EUROPEAN ROUTE AND THE AH-6 ASIAN ROUTE.

STROYPROEKT DEVELOPS THE DESIGN FOR THE M-1 SECTION 33 KM – 84 KM (FOR THE CONCEDENT – GK AVTODOR).

MAIN PARAMETERS:

- Length: 51 km
- Road category: 1B
- Number of lanes: 6 at the main toll road and 2 at local alternative roads
- 3 traffic interchanges
- 18 bridges and overpasses
- 13 pedestrian overpasses

The assignment includes the detailed landscaping and architectural design for the area around the monument to road workers – soldiers of the Second World War.



SERVICES OF THE TECHNICAL EXPERT FOR THE PROJECT “ODINTSOVO BYPASS: A NEW TOLL ROAD IN MOSCOW REGION CONNECTING MOSCOW RING ROAD AND THE M-1 BELARUS HIGHWAY”

The road is located in Moscow Region. It runs from the Moscow Ring Road to the M-1 Belarus highway km 33. The road was commissioned on 26 November 2013. The project was implemented on a concession basis. The concedent is the State Company Russian Highways (GK Avtodor).

MAIN PARAMETERS:

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- Length: 18.5 km
- Number of lanes: 4 to 8
- 14 bridges and overpasses
- 6 traffic interchanges

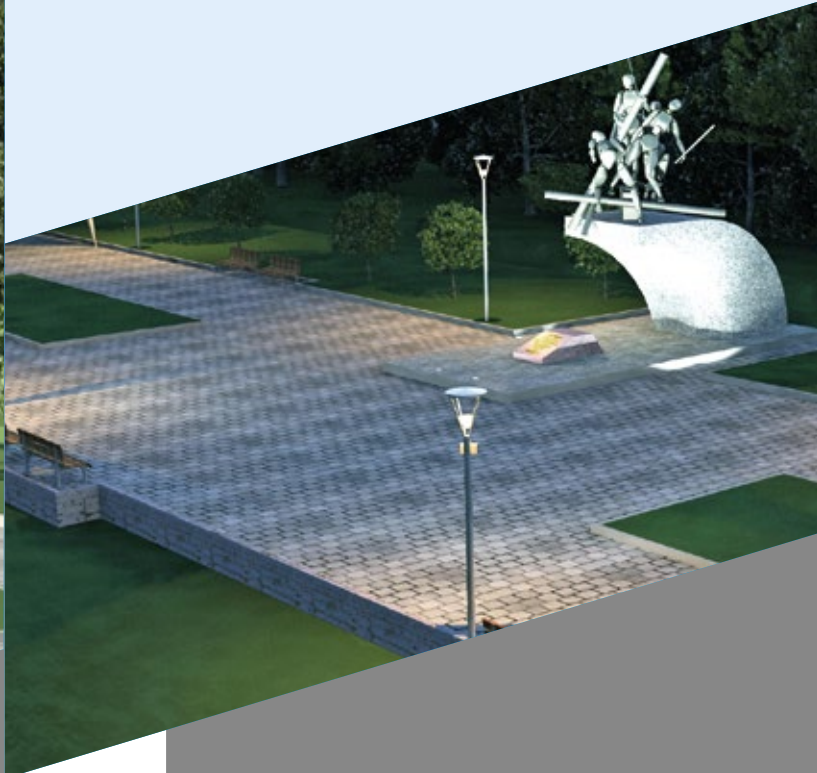


SERVICES OF THE TECHNICAL EXPERT DURING THE CONSTRUCTION PERIOD:

- Participating in inspections and tests, preparation of non-conformance notifications, approval of remedy actions and other services in line with the concession agreement
- Construction supervision

SERVICES OF THE TECHNICAL EXPERT DURING THE ROAD OPERATION STAGE:

- Inspecting the road condition and checking the quality of the concessionaire’s road maintenance works for compliance with the concession agreement and the operation and maintenance contract
- Participating in road defects inspections and preparing instructions on remedy actions for the main contractor on behalf of the concessionaire
- Construction supervision and acceptance of executed remedy works



CONSTRUCTION OF A TOLL ROAD BETWEEN MOSCOW RING ROAD AND THE M-7 VOLGA FEDERAL HIGHWAY (BYPASSING BALASHIKHA AND NOGINSK)

THE OBJECTIVE OF THE PROJECT IS TO BUILD AN EXPRESS TOLL ROAD BYPASSING THE TOWNS OF NOGINSK AND BALASHIKHA IN MOSCOW REGION. THE ROAD IS PART OF THE NEW INTERNATIONAL TRANSPORT CORRIDOR «EUROPE – WESTERN CHINA»

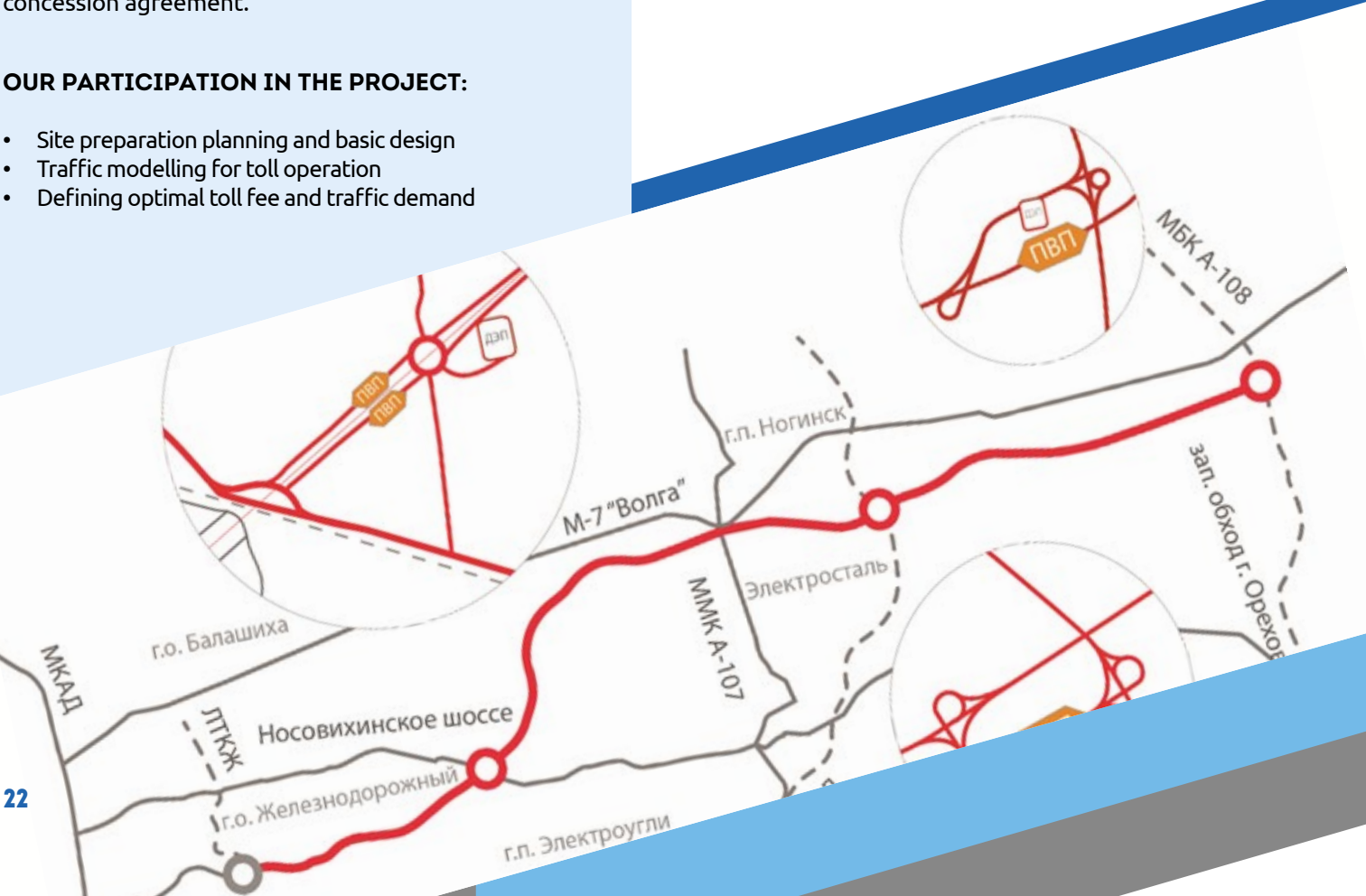
The project is realised by GK Avtodor under a direct toll concession agreement.

OUR PARTICIPATION IN THE PROJECT:

- Site preparation planning and basic design
- Traffic modelling for toll operation
- Defining optimal toll fee and traffic demand

MAIN PARAMETERS:

- Length: 69 km
- Number of lanes: 6 to 8
- 6 bridges and 30 overpasses



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