



**PUBLIC ENTERPRISE
ROADS OF SERBIA**

APRIL 2019

Newsletter 22 | 23

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New section of Corridor X ready for traffic

Full profile highway section from Srpska Kuća to Levošoje on Corridor X was opened for traffic on September 19.

The section also includes the “Bujanovac 1” interchange, enabling direct entry to and exit from the town of Bujanovac, close to Bujanovačka Banja, as well as access to the overall road network in the area.

The completion of works on Srpska Kuća - Levošoje section brings us one step closer to the realisation of the overall project of the construction of E-75 Highway, Belgrade - Niš - border with the Republic of North Macedonia.



Press safari through Grdelica Gorge

All participants of the Press safari through Grdelica Gorge, organised by the Ministry of Construction, Traffic and Infrastructure on December 7, 2018 had an opportunity to see that the works there are carried out day and night and that they are being speeded up.

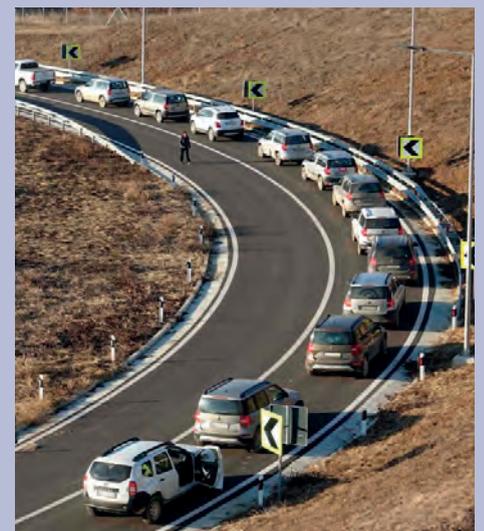
The Deputy Prime Minister and Minister of Construction, Traffic and Infrastructure Professor Zorana Mihajlović said that the biggest part of the highway through Grdelica Gorge was finished and that the most important thing is that all is safe for the upcoming opening of the road for traffic.

Together with media representatives in the press safari through Grdelica Gorge, Mihajlović toured the whole trace of the 26.3 km long highway section and along with the reporters had an opportunity to see the whole section from Grdelica to Vladičin Han: from works on Slope 2, Predejane and Manajle tunnels, bridges Vrla and Džemin Do, to Momin Kamen and Predejane and Vladičin Han interchanges.

“You are the first drivers who had the opportunity to drive along the highway through Grdelica Gorge, whose building is being completed.



I wanted you to come and see for yourself what was done, to see what our workers did here and how they fought with nature to build this highway. “I wish that you would share your impressions about the road with the citizens of Serbia and tell them how you see all this, because you will take a ride along this highway tomorrow”;



Mihajlović told reporters after touring the location.

The PR Department actively participated in the organisation of the Press Safari and invited all correspondents of TV stations with national coverage, local media, specialised web portals and a number of automobile magazines to join the safari.

The PR Department also had its representative in the press safari who took part in driving through Grdelica Gorge.





Successful infrastructure project

The third Summit of Transport Ministers of the People's Republic of China and 16 countries of Central and Eastern Europe held in Belgrade in mid-October represented an opportunity for the Minister of Transport of the Republic of China Li Xiaopeng to tour the construction site of the bridge over Sava and Kolubara river on the Corridor XI, section from Surčin to Obrenovac, accompanied by the participants of the Summit, the State Secretary of the Ministry of Construction, Traffic and Infrastructure Imre Kern, act-



ing director of the PE "Roads of Serbia" Zoran Drobnyak and acting director of the "Corridors of Serbia" Zoran Babić.

"Over 70 percent of works have been completed, while all works are planned to be completed for contracted price and deadline in early 2020", said Imre Kern, State Secretary of the Ministry of Construction, Traffic and Infrastructure.

The Chinese Minister of Transport Li Xiaopeng praised the cooperation of the Chinese Company "CCCC" - the contractor of works and

the Government of Serbia and the PE Roads of Serbia as the project investor. "The works are conducted in a quality manner and according to schedule and I am glad that the bridge will be a symbol of the friendly relations of our countries", said the Chinese Minister of Transport Li Xiaopeng.

The impressive and modern bridge over the Sava and the Kolubara rivers that will beautify the E-763 motorway will remain an example of a successful and constructive project of Serbian and Chinese companies.

Safe Road Facilities

The Sector for Maintenance of State Roads of I and II Category is regularly committed to the maintenance and protection of the existent network of state roads of categories I and II and the associated road facilities on the territory of the Republic of Serbia. Through regular maintenance of the road facilities on the network of state roads within the competence of the PE Roads of Serbia, examinations, monitoring and recording of the changes in the state of facilities are conducted, based on which works on the removal of the detected irregularities are carried out and the conclusion on further activities aimed at removing the recorded damages is reached.

Within regular maintenance works at facilities, cleaning of bridges, maintenance of traffic profile, small repairs of concrete surfaces and protective concrete layers, concrete parapets etc. are conducted, as well as the maintenance of steel structures and metal elements, traffic signalization and other facilities, which is conducted throughout the bridge usage. If, during the observation of road facilities, certain damages are detected which exceed the framework of regular maintenance, those facilities are delegated in the plan of works on periodical (investment) maintenance of facilities that is the rehabilitation, reconstruction or construction.

The works on the following road facilities were conducted within periodical maintenance in 2018. Bridge over Crne Bare, Jagodina-Čuprija section, extended overpass on Novi Sad-Kač section, overpass over Belgrade-Velika Plana railway section, on the Mladenovac bypass road, on the section Mladenova-Topola, in Arilje, on Lekovića Bridge.

Works are currently in progress on the periodical maintenance of the following facilities: on the bridge over the highway near Paraćin, rehabilitation of the overpass over the railway in Kraljevo - overpass "Zelena gora", rehabilitation of the bridge on the section Zagrađe - Gornji Milanovac, bridge over the Suva Jaruga Stream - Đorđevića Bridge, rehabilitation of the bridge near Požega, rehabilitation of the bridge



across the Banjska Reka on the interchange in Novi Pazar, Raška - Novi Pazar section and the rehabilitation of the bridge near Klisa on Novi Sad-Subotica section. Works contracted for the rehabilitation of the overpass on the section Konjevići - Beljina, the Čačak bypass road, on Čačak Viaduct, were completed while the works on the rehabilitation of damaged pillars are ongoing.

A significant number of bridges were treated within emergency maintenance in 2018. and the facilities on which the works were conducted and completed were: bridge over the stream on Petrovaradin-Maradik section, bridge over the Osaonička Reka on the Sušica-Kremna section, reinforced concrete viaduct bridge over the Cer Peripheral Canal on the section Prn-

javor-Čokešina, pass over Dubočaj stream on the Bećarevo Brdo - Brestovik section in Grocka, bridge over the river Kamenica on the local road Mršelje - Bogdanica near the village of Duškovci.

Since tender documents for public procurements for works on the rehabilitation of bridges on the state road network were prepared during 2018, public procurements were conducted and the most favourable bidders were selected, whereby contracts have been concluded between the selected contractors and the PE Roads of Serbia as investor, while those for certain facilities are in the preparation stage.

During 2019 contracts for works on the following bridges will be concluded: the bridge over the Smederevska Palanka - Krnjevo road, over Ralja - Požarevac - Velika Plana highway section, for the construction of a bridge over the Mijajlovačka Reka in Medveda, the Velika Drenova - Grabovac section, the bridge over Garibovac Stream - Lukića Bridge, Zagrađe -

Gornji Milanovac section, the bridge over Jelašnica River, the Surdulica - Gramađa section, the bridge over Topčider - Mala Krsna railway section within the loop - highway connection of the Belgrade - Niš section with Smederevo.

The experts at the Maintenance Sector are monitoring the realisation of all the stated works, while the Supervisory Service takes care of the quality, quantity and technology of works being carried out and the laboratory controls are conducted by accredited laboratories for control of concrete, asphalt and other used materials, taking care that all works conducted on facilities enable their long-lasting exploitation.



Goals of Winter Maintenance achieved - all roads clear

Fast and efficient maintenance of roads is the main goal of the PE Roads of Serbia during winter period. The 2018/2019 plan of the winter service, in accordance with the legal obligations, envisaged the works and activities required for providing the passability and safe traffic on the roads of categories I and II.

“The winter maintenance of roads shall start 15 days earlier, to last until April 1, in accordance with the New Law on Roads. The control of the company for roads has been conducted, the road maintenance workers and mechanisation are ready and a sufficient materials for sprinkling the roads have been provided,” said the Acting Director Zoran Drobnjak.



A new way of road maintenance has been introduced this winter according to the principle of performance based contracts.

“The contract between the investor, i.e. the contracting authority and the contractor defines the time frames for cleaning of roads per categories divided in three levels. The payment to contractors on certain section is made after the intervention is conducted”, said Zoran Stojisavljević, Executive Director of the Sector for Maintenance of I and II Category state roads and Manager of Winter service Department.

The total network of the state roads covered by winter maintenance of nearly 15 thousand kilometres is divided in priorities I, II and III, that is categories A, B and C. The first priority roads should be cleared within four hours,

while the second and third priority roads should be cleared within six, i.e. 8 hours after precipitation ends. The maintenance is carried out from 169 road bases and points and, depending on the degree of alert, between 25 and 100% of staff and mechanisation are engaged. The mechanisation is constantly present on highways, while its presence on other roads is within the range from minimum 8 hours to 16 hours. Over 70,000 tons of salt have been provided with reserves as well as over 1,500 tons of cold asphalt mass for the repair of road holes.

The cooperation with the Hydro-meteorological Service of Serbia is crucial for the quality work of the Winter Department, whose condition has been improved thanks to a new network of meteorological stations.

“By developing the monitoring network and thanks to the investments of the PE Roads of Serbia into meteorological stations we improved the mutual data exchange. The forecasts that we enclose to you define the precipitation type, intensity and duration,” said Goran Mihajlović, Assistant Director of the Sector for Meteorological Monitoring System of the Republic Hydro-meteorological Service.

The start of the winter season was marked with a press conference organised by the PR Department with the goal to present the Winter Maintenance Plan for State Roads of Categories I and II, the organisation of staff, available resources and mechanisation, as well as the system of the notification of media and public on the state on roads.

Head of the PE Roads of Serbia Information Centre Stanislava Ostojić explained the information flow on the state of the state road network: “The Information Centre of the PE Roads of Serbia gets reports from field from the Winter Department and it posts them in real time on the internet presentation of the Company, which is the most reliable and the fastest source of information on the state on roads. The reports are distributed directly to Company directors, forwarded to the Ministry in charge, as well as the Ministry of Interior and media.

Stevan Spasić of the Traffic Police Directorate said that the Traffic Police is always ready to help the traffic participants, especially under unfavourable weather conditions during winter, and thus enable the road workers to adequately implement the Winter Department Plan.

“Excellent organisation, as well as accuracy in the implementation of the Winter Department Plan, along with fast, reliable and modern system for informing traffic participants on the state on roads and appeals for safety in traffic during winter period, position our Company as the main carrier of activities in the winter maintenance of roads in the Republic of Serbia, but also as regards the informing of the public and the ministries and institutions in charge, concluded Ljerka Ibrović, Head of the PR Department.



Good neighbours creating common future

The realisation of Serbia and Hungary joint infrastructural projects “Development of a Road Border Crossing at Kübekháza-Rabe area” will improve the quality of life of the inhabitants of the border settlements in the three-border regions of Hungary, Serbia and Romania.

The cross-border, provincial and state importance of the Project is reflected in the faster movement of people and transport of goods, as well as better trade, which will improve the economic situation in the area.

The project is funded from the EU Interreg IPA funds, and is realised through the cooperation of the Ministry of Construction, Transport and Infrastructure with the PE Roads of Serbia and the PE Urban and Spatial Planning Institute of Vojvodina, as well as the Hungarian National



Agency for Infrastructure. Representatives of all institutions participating in the Project realisation met at the Conference on project progress, held in the premises of the PE Roads of Serbia in October 2018,

“The contribution of all project partners was significant and the proved to be excellent associates. Together they applied for resources from 2016 IPA funds in the amount of EUR 5.5 and the Donation Agreement was signed in October 2017. It is very important that the Project be implemented within the deadline,” said Imre Kern, State Secretary at the Ministry of Construction, Transport and Infrastructure, stressing that the successful completion of the Project would provide spatial and technical conditions for the opening of the new border crossing point “Rabe”.

The agreement signed between the Government of the Republic of Serbia and the Government of Hungary on the new border crossing point represents the continuation of the successful cooperation between the two countries. The aim is to improve the infrastructure connections that will support the economic activities of the population and raise the level of regional and international connectivity, while fostering the

common identity and heritage of the border region.

Director of the Public Enterprise Urban and Spatial Planning Institute of Vojvodina Petar Knežević said that the projects for the development of border crossing roads in the border region with Hungary are not a novelty: “So far, we have had several successfully completed projects such as Tiszasziget-Đala and Bácsalmás-Bajmok. The idea of connecting the settlements of Rabe and Kübekháza is supported through the “Special Purposes Spatial Plan for the Infrastructure Corridor M-24”, the so-called Banat Highway and other spatial planning documents and is a part of the Memorandum of Cooperation between the two countries.”

The project includes the construction of a new 2.3 km long road in Hungary, and the rehabilitation of 1365 meters of road in Serbia.

“The Urban and Spatial Planning Institute of Vojvodina has successfully completed the design of the project technical documentation for almost 50 km of roads, in accordance with the positive regulations of the Republic of Serbia, thus providing the conditions for the PE Roads of Serbia to begin the procedures required for the

rehabilitation of the road from Kübekháza to Rabe, on the section of the state road of II B Category, number 302, Banatsko Aranđelovo-Rabe,” said the Institute Director Petar Knežević.

Speaking about the Project progress, Biljana Vuksanović, Executive Director of the PE Roads of Serbia Sector for Strategy, Designing and Development, said that the Company, supported by the Ministry in charge, would start the realisation of its task in order to create conditions for a new border crossing point, which would be very significant for citizens, as well as for the turnover of goods and relieving existing border crossings.

According to the Deputy Director of the Hungarian National Infrastructure Agency Kornel Kondrik, the construction of a road network towards the border crossing point in the Hungarian territory should begin in the spring of the current year: “The Contract has been concluded and if the weather conditions are favourable, the works will start in the spring and finish according to the plan in the last quarter of 2019.” Until then, we will carry out preparatory works which will include soil structure research and making watercourse canals.”

“The Development of the border crossing road in the Kübekháza - Rabe”, apart from the rehabilitation of the road between Hungary and Serbia, includes two more road infrastructure projects, namely, the improvement of the Baja-Sombor cross-border road and the Draft Project for the Subotica-Baja railroad project.

Other cross-border projects funded from pre-accession funds and from the budget of the participating countries have been successfully continued in the previous year.

The goal of the Interreg - IPA program involving Serbia and Romania “Improving the Connectivity of Banat” is to improve the transport mobility and quality. The project envisages that the PE Roads of Serbia, as the Project Leader, develop project-technical documentation for the rehabilitation and construction of a bicycle route on the state road of I B category number 15, on the section from Kikinda to Nakovo. The project will also include the border crossing point “Nakovo” and the rehabilitation of the streets along the state road in Jimbolia.

Energy saving control management

The Energy Management Department uses the ISEM - Information System for Energy Management in the monitoring and management of energy consumption, as well as the promotion and introduction of alternative supply sources, developed by the United Nations Development Program (UNDP), which donated it to the Republic of Serbia, while the Ministry of Mining and Energy supported and prescribed its use.

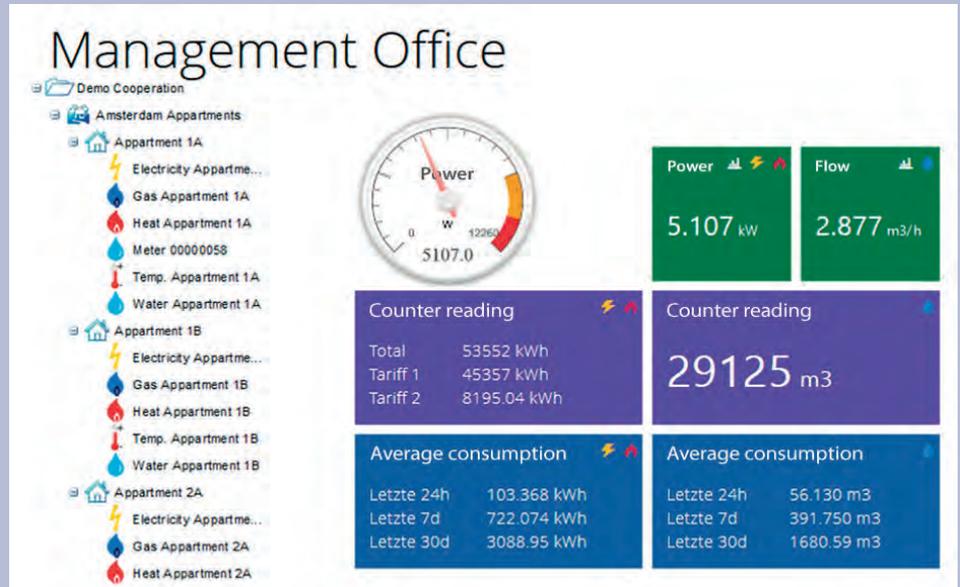
The ISEM is primarily used for the monitoring and analysis of the data on energy and water consumption and expenses in public facilities, for collecting data on public lighting systems, that is for the forming of database on facilities, types of facilities and consumption.

The system identified several types of facilities, more specifically defined with the following data: building (as a whole or one part), tunnel, toll station, control centre, public lighting, meteorological station, bridge, traffic signalisation etc.

The system defines several types of consumption read from the electricity bill, which imposes different tariffs for different consumers. A great advantage of leading such a system is the classification of consumers in suitable groups, which often results in the reduction of expenses only through the definition of suitable category.

Based on the data collected in ISEM system and based on an insight in the field, made in 2017 the Register of Energy Consumers of the PE Roads of Serbia was made, which created a foundation for the introduction of the telemanagement system this year.

In the context of the Company's operations telemanagement means a system of re-

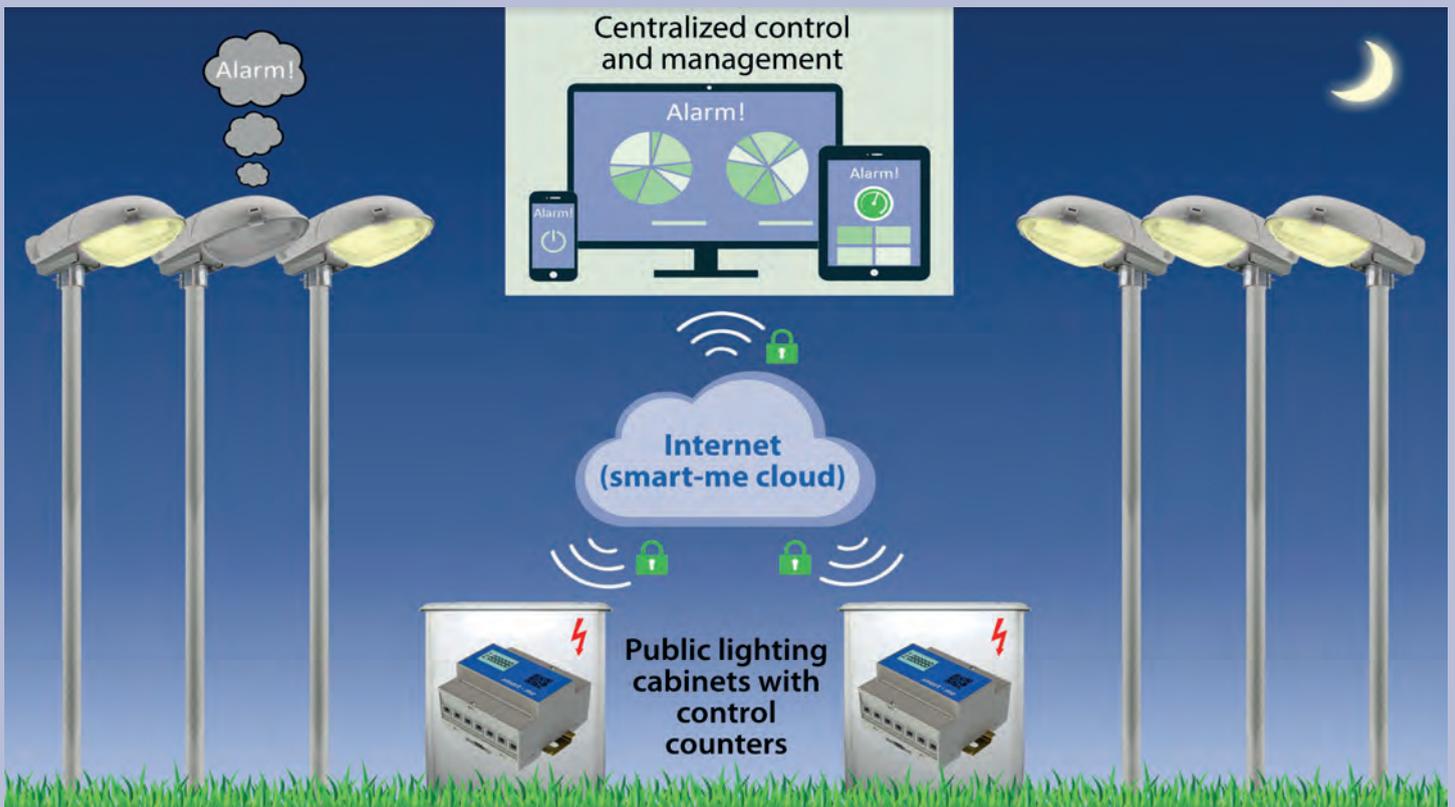


remote measurement of the consumption of electric power and management of public lighting that the PE Roads of Serbia is in charge of. The telemanagement program meant the installation of Wi-Fi devices conducting the measurements and the automatic calculation of the consumption of electric power and on-line remote sending of data to relevant sectors. The alarms set shall send the warnings about non-characteristic consumption of electric power or failure of a part of the system.

The remote Wi-Fi control of the consumption of energy substances, with remote Wi-Fi control and alarming shall considerably reduce Company's exploitation expenses.

The PE Roads of Serbia also intends to install the system of remote management of its public lighting system together with the control system.

Similar systems of remote monitoring and management have already been tested in a smaller extent through pilot measurements at certain facilities of the Company: Belgrade toll station, Gazela corporate facility, then the facility in Ljube Čupe Street, toll stations Šid, Šimanovci, Stara Pazova and Subotica. The measurements shown in real time, in time intervals of one, seven or thirty days are used for the monitoring and correction of consumption for the proper dimensioning of system.



New Records in Toll Collection revenues

Record high toll collection revenues achieved last year – RSD 23.60 billion, came as a result of the constant modernisation of the toll collection system and an increase in the total number of vehicles on the roads of the Republic of Serbia.

Over last ten years, the number of vehicles increased by 63.93%, accompanied by 72.16% growth in revenues. There was also a considerable increase in the overall toll collection revenues, reaching over 14%, compared to 2017.

53,723,465 vehicles passed the toll roads in the Republic of Serbia in 2018. According to a comparative analysis, most vehicles passed the Belgrade-Niš section - 21,679,465 and Belgrade-Subotica section - 13,610,946. Category I vehicles made the most of the total number of vehicles on toll roads - 42,235,831.

Electronic Toll Collection

Vehicles pass through especially marked traffic lanes, without stopping, more simple, comfortable and less costly toll collection, with vari-



vehicles were recorded in 2018, most of which in August - 1,001 vehicles.

The Toll Collection Sector files charges against traffic participants involved in abuses, in cooperation with the Sector for Legal, Staff and Common Affairs initiating special toll collection procedures for vehicles for which toll was not collected.

Compared to 2017, the amount charged to “runaway” users increased by 24% in 2018, what amounts to 208% in comparison with the 2016, amounting to RSD 6,746,292.67.

The percentage of the subsequently charged tolls upon complaints for the road tolls unpaid by TAG device users is 97%. In the last three years, out of the total amount of RSD 2,547,414 the amount of RSD 2,478,737 was collected subsequently.

ous discounts being granted both in prepaid and postpaid system, which leads to a significant increase in the number of users on annual level. With almost 70,000 new users last year, the total number of vehicles using electronic toll collection increased to around 300 thousand. The number of vehicles that passed through the ETC lanes in 2018 was 16,458,521, more than one quarter of 2017 ETC transactions, i.e. the number of vehicles increased by 3,382,418.

Share of the Category IV vehicles using ETC reached 70.94% of the total number of toll collection transactions involving vehicles of that category.

Toll collection rates among Europe’s highest

The PE Roads of Serbia recorded outstanding toll collection rates in the last five years. It amounted to 99.92% last year.

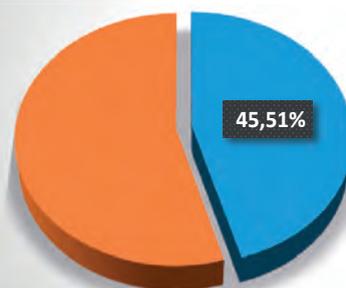
Thanks to the measures taken by the Toll Collection Sector, the number of the “runaway” vehicles has decreased. Exactly 6,154 “runaway”

Every third transaction on toll stations is paid through ETC

The revenues from electronic toll collection transactions in the period between January and December 2018, increased by as much as 28.03% to almost RSD 11 million.

The electronic toll collection share in the overall toll collection revenues increased by 6% on average last year, making almost one half of the total amount.

ETC share in overall toll collection revenues



■ ETC revenue share
 10.741.299.570,00

At the International Motor Show in Belgrade for the 3rd time

The International Motor Show, an event in which our Company took part in the last three years, was held in Belgrade in the last ten days of March, under the slogan “In Retrovision”.

Guided by the interests of users, the PE Roads of Serbia - Toll Collection Sector enabled the visitors, to be given the answers to all of their questions related to the projects of modernisation of toll roads in the Republic of Serbia.

“We are at the stage of realisation of the pilot project of establishing a video surveillance system, which includes the installation of 56 cameras and 14 portals on Belgrade-Niš highway section, and one of functions of the cameras will be the average speed measurement for each section, said Darko Savić, Assistant Executive Director of the Toll Collection Sector.

In addition to the concern for safe drive on the highway, within prescribed speed limits, the visitors of our booth were interested, also, in the convenience regarding toll payment and advantages of electronic toll collection. The visitors were given an opportunity to buy or refill TAG devices under favourable conditions and a prize contest with surprises for participants was organised too.

Speaking at a press conference and meeting with journalists at the Show, organised by the PR Department, Darko Savić pointed out that the share of electronic toll collection in overall reve-



nues recorded constant growth, reaching 45.51% last year.

“We record a significant increase in the number of users of electronic toll collection. There are currently nearly 300,000 users in the system of electronic toll collection, with one in three vehicles using TAG devices, and the share of freight vehicles using this type of payment is 70.94% of the total number of that category of vehicles,” said Savić.

Talking to the representatives of the Toll Collection Sector, along with the corporate materials of the PR Department, the visitors were also presented other services, such as free internet on highways, chargers for electric vehicles, as well as the mobile application of the PE Roads of Serbia and VMS portals, as the fastest easiest way for the users to get informed about the situation on roads and toll stations.

The Deputy PM and Minister of Construction, Traffic and Infrastructure, Professor Zorana Mihajlović visited the Belgrade Motor Show on the first day of event to present the “Car of the Year” award, on which occasion she also visited the booth of the PE Roads of Serbia, at which she was welcomed by the Acting Director Zoran Drobnjak and the Executive Director of the Toll Collection Sector Milenko Caković with employees of the Company.

The participation of our Company at the 54th Belgrade Motor Show justified the expectations. The booth of the PE Roads of Serbia attracted many visitors and journalists at this important event of car and motorcycle industry, involving several hundred exhibitors and visited by over 100 thousand people.

Training and certification of auditors and controllers of traffic safety

Within the Road Rehabilitation and Traffic Safety Improvement Program, under the auspices of the Investment Sector of the PE Roads of Serbia, training and certification of auditors and controllers of traffic safety in the Republic of Serbia were conducted. The procurement contract was signed with the Swedish National Road Consulting AB – SweRoad”.

Defined within Chapter XI of the Law on Roads - Special requirements to be met regarding traffic safety, (Articles from 88 to 95), are the areas of partial responsibility of the PE Roads of Serbia as the company managing the state roads. The assessment of the traffic safety risk of the road, the revision and control, mapping of risks, identification and ranking of dangerous spots, independent assessment of the road impact on fatal traffic accidents, creating expert teams for assessment, revision and control, conditions for obtaining licences for auditors and controllers, licensing and implementation of the Program of Vocational Training.

Supported by the World Bank and the Ministry of Construction, Traffic and Infrastructure, our Company arranged with the consultant the making of the rulebooks and guidelines aimed at regulating the traffic safety audits and controls, so that the Rulebook on the manner of licensing of auditors and controllers of



traffic safety, the Rulebook on conducting audit and controlling traffic safety, the Guidelines on the manner of traffic safety and the Guidelines on the manner control of traffic safety shall be made.

A working group has been formed to actively monitor and participate in the making of the stated documents, comprising the participants of the Company, the Ministry and the Road Traffic Safety Agency. The Consultant is supposed to prepare the proposals for two rulebooks and two types of guidelines to be presented to the working group, consider all comments and suggestions of the working group members and prepare the final draft version of the stated documents. The Consultant held the first presentation of the draft versions of documents for the working team and joint efforts are made to improve the versions based on the comments at the working meeting held.

By adopting the stated by-laws, all requirements will be met for the systematic introduction and implementation of the procedures for the training of auditors and controllers, as well as for the implementation of the traffic audit and control procedures in accordance with the EC Directive 96/2008 in the Republic of Serbia. By regulating this area, the Republic of Serbia largely harmonises its laws with those of the European Union and thus contributes to the harmonisation with standards defined in the European Union.



Marking the World Day of Remembrance for Road Traffic Victims

The PE Roads of Serbia, in the past year, joined again the marking of the World Day of Remembrance for Road Traffic Victims under the slogan “Roads have stories”.

In accordance with the recommendations of the United Nations, the World Day of Re-

membrance for Road Traffic Victims has been marked in a great number of countries in the third week of November, that is to say, on November 18, since 2005. In accordance with its competence, the PE “Roads of Serbia” continues to improve the quality of the network of state

roads in order to provide, as good qualities for safe drive as possible, with the goal to reduce the number of traffic accidents on Serbian roads, appealing to traffic participants to observe the traffic signalisation, take care of speed limits and adapt the speed to the road conditions.

Campaign for Raising awareness about road safety of children in schools near rehabilitated roads

The PE Roads of Serbia and the consortium involving MHM "Projekt" Ltd., "Adomne" Ltd. and "Andzor Inženjering" Ltd. signed a contract on the realisation of the project titled "**Campaign for raising awareness about the road safety of children**" in schools near rehabilitated roads.

The stated campaign, as an educational measure for improving children's safety in traffic is implemented within the realisation of the **Road Rehabilitation and Safety Project (RR-SP)**, which is part of the **National State Road Network Rehabilitation Program**, initiated by the Government of the Republic of Serbia, funded through a loan granted by the World Bank, the European Investment Bank and the European Bank for Reconstruction and Development.

The implementation of the **Campaign for raising awareness about the road safety of children in schools near rehabilitated roads** was also supported by the **Ministry of Education, Science and Technological Development of the Republic of Serbia**, which engaged its representatives involved in the monitoring of the dynamics and results of the implemented activities, and through the participation of elementary schools' directors and teachers.

The PE Roads of Serbia, as a socially responsible company, recognised the risks posed by the increase in the level of traffic on rehabilitated sections of roads which, besides a number of benefits, unfortunately, also bring certain negative effects, such as an increase in the speed of vehicles on rehabilitated parts, which can particularly affect youngest traffic participants - children who are not accustomed to higher speeds of moving vehicles in zones of their intensive movement, that is, from home to school and vice versa.

In order to prevent potential traffic accidents involving children, the PE Roads of Serbia has



launched and implemented a specific campaign aimed at improving the knowledge, attitudes and behaviour of children in traffic, especially in schools located in the zones of rehabilitated roads.

Basic Goals of the Campaign are aimed at improving the behaviour of children in traffic, which is achieved in cooperation with teachers of elementary school pupils, grades from 1 to 4, through training and workshops (ToT) aiming to increase their knowledge and skills regarding children safety in traffic.

Teachers trained in that manner will transfer the pupils the knowledge that will enable them to safely participate in traffic. On the other hand, an equally important goal is to motivate the parents to take on a more active role regarding the behaviour of their children in traffic in order to provide them with all the necessary informa-

tion and support through informal learning and studying at home.

In order to achieve the set goals, the task of the campaign, in addition to training, is to provide quality publications on traffic education for pupils, for schools and teachers, as well as the publications for parents with the information on the stages of development children's abilities and limitations in their behaviour in traffic.

Exactly 20 schools near rehabilitated roads were selected for the implementation of the project, based on the criteria of school size, the proximity of the roads where rehabilitation works are carried out, average traffic speed near the school and the equality in the numbers of boys and girls. An overview of the existing elementary school curriculum has been made from the aspect of dealing with topics related to traffic safety, an analysis of already available literature on the safety of children in traffic, and consequently, a polling of teachers and parents was conducted.

On the basis of the collected information and results, educational materials for teacher training, scripts, materials for parents and children, presentations, audio and video recordings were prepared and the training of teachers from a total of regular 17 schools and 8 satellite units grouped in the areas of four regional centres - Novi Sad, Belgrade, Niš and Užice.

The teacher training program was divided into five segments. The first segment included introductory remarks with a focus on the problems of child victims of traffic accidents from the 1st to the 4th grade and the role of teachers in the traffic safety system. The following three segments were divided according to three teaching topics covered by the Teacher's Manual and training materials related to: children pedestrians, children cyclists and children passengers in traffic. Within each teaching subject, the teach-



ing units are processed by teachers who should work with children on classes.

The complete material and content is adapted to the children of the lower grades of elementary schools, and the teaching units are adapted to the age of children by grade (grades I, II, III and IV). The thematic unit on the cooperation with other subjects of traffic safety was realised as the last training segment.

The aforementioned teacher trainings were held in elementary schools, with 133 teachers participating, as follows: 27 in Crvenka, 46 in Smederevska Palanka, 11 in Požega, 26 in Vlasotince and 23 in Novi Pazar.

In addition to the above activities, the preparation of tests and forms for checking and assessing the knowledge and behaviour of children, before and after the teachers' work them and the work with parents (initial and final test), was carried out.

The identification, analysis and selection of spatial units for testing of children was carried out, observing all requirements stipulated by the behaviour test. The locations for testing of children were selected by regions, namely, initial testing was conducted in four elementa-



ry schools, in Crvenka, Smederevska Palanka, Požega and Vlasotince.

The initial testing procedure consisted of an initial test of children's knowledge and behaviour in experimental and control classes in each selected school in the region where, subsequently, during the three-month period, teachers conducted the training of children.

The test procedure involved the children of the second and fourth grade, whereby the second grade pupils represented pedestrians, and fourth grade pupils represented cyclists.

The principle of testing the children pedestrians consisted of the test of children's knowledge of behaviour in traffic, prepared specifically for this purpose, conducted in classrooms by selected classes, and a behaviour test conducted in real but controlled traffic conditions, where children testing could be performed safely, whereby, all behaviours were systematized in four scenarios and eleven activities, for this purpose.

The principle of testing children cyclists consisted of a traffic knowledge test for children, also specially prepared for this purpose, conducted in classrooms by selected classes, and a behaviour test carried out on a special polygon

designed in accordance with spatial capacities, with thirteen cyclist activities being monitored.

The examination of knowledge and behaviour in the selected elementary schools and control classes involved: in Crvenka, II grade – 69 and IV grade – 73, in Smederevska Palanka, II grade – 40 and IV grade – 37, in Požega, II grade – 43 and IV grade – 52, in Vlasotince, II grade – 60 and IV grade – 60 children.

The procedure of the testing of knowledge in the selected elementary schools included the children from experimental and control classes, as follows: in Crvenka, II grade – 69 and IV grade – 73, in Smederevska Palanka, II grade – 40 and IV grade – 37, in Požega, II grade – 43 and IV grade – 52, in Vlasotince, II grade – 60 and IV grade – 60 children.

The focus in the continuation of the project will be on the teachers' work with children.

Final testing of children will be carried out, as well as the grading of their knowledge, after which the final and desired result of the project shall be obtained - the increase in the level of pupils' knowledge on traffic safety and their safe behaviour in traffic.



“Traffic Solution Expo”

The PE Roads of Serbia participated also in the last year's second International Traffic Fair - “Traffic Solutions Expo” held in Novi Sad in mid-October.

The visitors had an opportunity to learn about the benefits of the projects of the PE “Roads of Serbia” considering modernisation of road sector.

The Toll Collection Sector, in an illustrative manner, informed the users of toll highways with promotional corporate material concerning the projects of improving the toll collection system, providing useful information on electronic toll collection that is used by an increasing number of drivers. Due to a considerable interest, visitors of the booth of the Company were able to refill or buy the ENP device, having numerous benefits.

The visitors were interested to learn more also about the ways of in which they could be informed about the state on highways and toll stations, traffic redirecting or weather conditions, thanks to a mobile phone application and new VMS portals - changeable signs for informing the users of toll highways, as well as chargers for electric vehicles.

Fairs and other events, again proved to be an excellent opportunity for the PE “Roads of Serbia” to directly present the novelties and advantages provided to the users of roads in Serbia, by new projects and possibility to quickly and directly answer to their questions and requests.



GIS and Information technology in environmental and overall protection of state roads

Modern infrastructure management requires the application of modern information systems, not only for the easier overall functioning of the Company, but also for the improvement of the functionality of all sectors in it. The engineers of our Company, in cooperation with software developing companies, made a huge step towards the integration of the GIS system into the Company's operating work, thanks to which a GIS tool was obtained as a result.

The **Geospatial Information System (GIS)** represents the visualization of geospatial data and facilitates the creation of spatial data, spatial analysis, interpretation and connection of information. All alphanumeric databases store data that can be presented geographically.

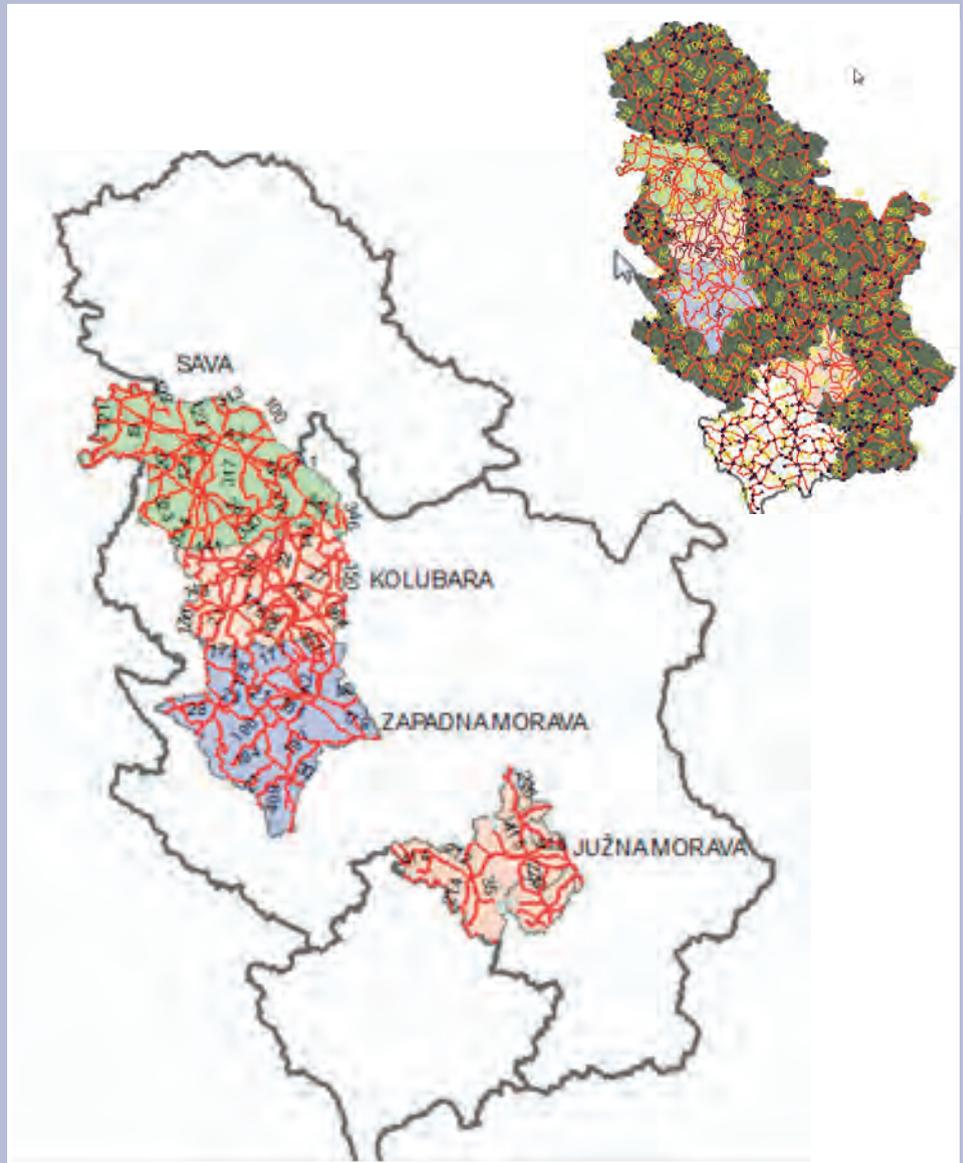
Thanks to the joint work of the Environmental Protection Department and the Database Department, the Strategy, Design and Development Sector and the Sector for Traffic Control Information Systems, during 2018, opportunities for further improvement of the work of our Company were recognised in the usage of the advantages of GIS and information technologies, with the creation of new formats, starting from the results of environmental protection studies conducted in the previous period.

The **Geographic Information System - GIS** enables the collection, storage, processing, review and analysis of spatial data. In addition to spatial data, suitable existing databases are connected, providing additional information and allowing their analysis and presentation. Information processed in that way provide better management decisions and improve the management of the efficiency of increasingly complex datasets, with balanced and controlled spatial development of the road network of the Republic of Serbia. **The environmental situation analysis** is the starting point for optimal spatial planning and defining basic spatial determinations and it indicates how to use space in relation to the potentials and limitations of natural resources.

A large number of data collected through the formation of bases was necessary for obtaining an adequate presentation, while the use of GIS enable the integration of various layers. Database creation allows the "storage" of the same type of data, their search and use.

Strategic noise maps for the network of state roads built in 2017 were the basis for displaying sections where a real risk of traffic noise threatening the surrounding environment (ecological potentials) is present. The risk indicator was annual traffic of more than 3 million vehicles or AADT > 8214 vehicles/day. The analysis showed that the length of the sections with excessive noise levels is 1757 km.

During 2018, the **Study of the relationship between protected natural and cultural assets and the state road network** was conducted, resulting in an assessment of the vulnerability of protected structures and areas against the nega-



tive impacts of road traffic, as well as the accessibility of these contents to the interested population, which is a prerequisite for strengthening tourist capacities.

Snow deposits on the State roads of categories I and II

During 2016 and 2017, in cooperation with the **Sector for Maintenance of State Roads, the Department of Environmental Protection** collected data on **snow deposit points on the road network of the Republic of Serbia**. This information, transferred to the GIS system, represents an initial database and its updating will facilitate the selection of priority locations for the planning of protection measures from snow deposits.

In order to prevent the damage caused by the negative effect of surface waters, **five Study of endangered State roads of categories I and II from torrential waters, made during 2018, in relation to floods and torrential flows for the**

The exposure of the roads of categories I and II to the risk of the occurrence of floods and torrents in the river basin / Belgrade - Obrenovac Road Project-Risk /

rivers Sava, Kolubara, Ibar, Zapadna Morava and a part of Južna Morava.

Data on all endangered sections on the road network and the state of facilities for control of water flows were entered in the geo-reference system, along with photographic documentation.

All the achieved results of the work of the PE Roads of Serbia were presented at the international conference GIS-IT ECO 2018, held in Zrenjanin in November 2018.

We expect that in the forthcoming period the quality system functioning in the PE Roads of Serbia will define data flows and that the standard procedures for all studies undertaken in the Company will be established, as well as for all the projects.

Constant concern for employees' safety, health and protection

In the period between July and late October 2018, assisted by especially trained colleagues from the **Department of Health and Safety, Fire Protection and Rescuing at Work**, the PE Roads of Serbia employees underwent basic trainings in fire protection after which they passed knowledge examinations, mandatory according to the Law on Fire Protection.

The training consisted of lectures with practical presentation of how to use fire extinguishers and the examination of knowledge of employees. During the training, relevant issues were discussed, from the obligations of the Company in the field of fire protection to basics of burning process, causes of fire and its extinguishing, demonstration of modern technical systems for the detection and fire extinguishing and specificities of the PE Roads of Serbia and its facilities.

The fire protection training is very important because it enables all employees to gain knowledge and practice skills which enable them to react in a proper and timely manner in undesired situations, in both corporate and private environments.

In addition to the training, medical examinations of employees were carried out, as well as the examinations of the conditions in working environments, training of employees in the field of health and safety at work and several trainings in provision of basic first aid.

The training for the provision of basic first aid, involving 300 selected representatives of every part of the Company, between October and December 2018, was conducted by the licensed healthcare workers from the Institute for Health Protection of Serbian Railways Employ-



ees, at locations in the Company and in the Institute.

In accordance with the Rulebook on the Provision of First Aid, type of resources and equipment to be provided at workplace, the manner and time frames for the training of employees for the provision of first aid and training program, the training consisted of lectures, practical part and the final examination, with special emphasis on the practical part of training. The Rulebook prescribes that the first aid must be available to all employees during working hours, in all shifts and at all locations and that at least 2% of the total number of employees of the Company, i.e. 2% in every shift and every facility of the Company have to be trained in first aid, managers of all organisational units in the PE Roads of Serbia appointed persons for attending the training of employees in their units.

The training included all the segments of the Rulebook and the program of the provision of first aid, in particular, aid in injuries that can occur in the field, at toll stations and tunnel complexes. After completing the training, the employees who attended it received certificate on competence for the provision of first aid and were appointed to provide first aid in their business facilities. It is important to stress that a training for another 100 employees will be held in 2019, after the opening of new toll stations and control centres for tunnel complexes.

Concerning the fact that the PE Roads of Serbia promotes responsible approach to environment and corporate social responsibility, the results of these trainings shall furthermore contribute to the strengthening of values, such these are, in the overall mission of the Company.

Young Experts in PE "Roads of Serbia"

Our colleague Mladen Marković, Master of Forestry, employed at the Information Centre of the Sector for Traffic Control Information Systems of the PE Roads of Serbia presented in English language his scientific work "Analysis of the stability of slopes by roads in the conditions of bio-reinforced land" during the first day of the international conference "1st Young Researchers' Conference - Erosion and Torrent Control" (ETC 2018), held at the Faculty of Forestry in Belgrade between November 28 and 30, 2018.

The educational and professional institutions recognised this scientific work, for the making of which the data of the Sector for Maintenance of State Roads of Categories I and II were used, as relevant in the field to which it pertains. After the presentation, Marković responded to the questions of present colleagues, additionally presenting his work with very professional and clear answers, thus presenting the PE Roads of Serbia in the best light. Our colleague Marković received a certificate for the participation in this international conference.

The PE Roads of Serbia once again showed that it has excellent young experts who contribute to the strengthening and progress of the Company, improving their professional knowledge and putting their achievements in the services of the general well-being. The PE Roads of Serbia recognises and supports its employees in their professional improvement and proudly points to the work of its representative presented at the international ex-



pert conference, organised by the Faculty of Forestry of the University of Belgrade, under the auspices of the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia.

Innovated site of PE "Roads of Serbia"

The PR Department, in accordance with its competence, aims to make the web presentation of the Company modern, recognisable and attractive, both to experts and occasional visitors.

PE Roads of Serbia on YouTube Channel

During last year a significant step forward was made so that, in accordance with trends, uploading videos to YouTube channel was enabled, thus considerably reducing the usage of space, making the internet presentation uploading faster and improving the visibility and increasing the number of visits, at the same time.

During 2018, the Department launched activities aimed at the modernisation and redesign of the web presentation of the Company so that the new appearance of the web presentation has been in function since November last year.

During 2018, in addition to regular daily inputs of contents and maintenance activities, considerable improvements of web presentation

were made, namely: new web-site design, adaptation of the existing modules to the new appearance, adding components enabling creating animated contents in slider, new player for video contents on the homepage directly from the newly launched YouTube channel of the Company, creating categories for entering the news from the field and publication in mobile application, as well as the improvement of the system for faster updating and display of prices on the web site, after their change...

**1,300,000
viewed pages**

The web presentation plays a very important role in creating both the public opinion and informing.

During 2018, we recorded 584,732 visits, which resulted in nearly 1,300,000 Company web pages viewed.

Most visits came from Serbia - 78%, than Germany, Bosnia and Herzegovina, Macedonia, Croatia, Hungary, Bulgaria and other countries....

Constant monitoring of technologies, improvement and provision of information in a manner and in forms changing with new technologies, both on internet and in the systems of mobile devices that enable timely informing of users and visitors of the web presentation of the PE Roads of Serbia.



Facebook, Twitter, Instagram, YouTube

Observing the citizens' needs and following modern communication channels, the PE Roads of Serbia opened official accounts on social networks Facebook, Instagram, Twitter and YouTube.

All latest information, photos and videos of the activities of our company are now available to citizens through digital and mobile technology. They can also address us quickly and easily and since we care about their opinions, comments, praises or remarks, we are able to answer more quickly and efficiently to them.



Visit to the National Traffic Management Centre "ASFiNAG" in Vienna



The representatives of the ITS Department, IMS Sector of the PE Roads of Serbia, visited in February 2018, Austrian National Traffic Management Centre "ASFiNAG" in Vienna.

The representatives of "ASFiNAG" presented the systems and ways of performing tasks, as well as the exploitation, technical characteristics of the management centre, subsystems for traffic management in open sections and tunnels, as well as the operators' decision making procedures in incident situations.

The characteristics and performance of the installed video surveillance subsystem were presented, as well as those of the subsystem of traffic signalisation and lighting in tunnels, ventilation systems, light signalisation, fire protection systems etc.

Visiting this Centre, our employees gained great experience in the field of integration and implementation of intelligent transport systems, gained overall picture of the functioning of the arranged traffic management system of one well organised EU member state that should be aspired to in the development of intelligent transport systems in our company and country in the upcoming period.

Children's art competition "Enchanted Forest" and New Year's packages for the youngest

We happily dedicate the New Year's holidays to the youngest one, our little artists, who participated in the traditional painting contest with their drawings. Using various creative techniques, children of Company's employees made imaginative drawings for the contest titled - "Enchanted Forest".

The best in the group of children age group from four to six were Jakov Stanisljević and Iskra Jugović, while Mirka Milenković and Milica Ilić ranked third. In the second age group, Gligor Roland was the best, while Miloš Todorov won silver, and Aleksandra Gvozdenovic and Ivona Puzovic won bronze medals. Among the oldest children, Kristina Stamenković won two gold medals, one as the winner of the entire competition while Krsto Grković, Anđelija Nikčević and Danilo Milošević also won medals.

"Young talent" awards were awarded to Miljan Grković, Sofia Lazov and Tamara Čolić, while Valentina Pijanović, Kristijan Ljušić and Anđelija Pijanović won the "Young Hope" awards.

The little artists were greeted at the hall of the PE Roads of Serbia, where they received their medals and gifts. "Your creative drawings are making our New Year's holidays beautiful, as we await them with the wish to be a part of your



growing up, to encourage and motivate you", said Ljerka Ibrović, Head of the PR Department, greeting the kids cordially.

The best works decorated our Company's desktop calendar, that is, every year, prepared and designed by the PR Department.

New Year's holidays represented an opportunity to bring joy to all children of our employees and, as it always does, the Independent Trade Union of the PE Roads of Serbia prepared New Year's gifts for the youngest.

