

Central European Technical Tour

October 2008

Slovenská cestná spoločnosť
XIII. ročník Dni slovenských cestárov

Slovak Road Association
Road Maintenance – XIII

Hosted in Slovakia by doc. Ing. Ján Šedivý, CSc.,
Jeffrey Cathcart – Director, Rhode Island T2 Center
John D. Nickelson, PE – Director of Public Works, City of Providence

EXECUTIVE SUMMARY

The Federal Highway Administration (FHWA) established a cooperative program with three Central European countries, the Slovak Republic, Hungary, and the Czech Republic. The goal of FHWA's cooperation is to improve access to road transportation technology, including institutional and program building activities, which can facilitate conditions for sustainable development, technology transfer, and enhance the flow of goods and information among countries for international trade and technology.

The Slovak Road Association (SRA) holds its annual Highway Maintenance meeting each year in early October. Held in Košice October 9-10, 2008, Mr. Jeffrey Cathcart of the Rhode Island Local Technical Assistance Program (RIT2 Center) and Mr. John D. Nickelson, Director of Public Works, for the City of Providence, Rhode Island were invited guests of the SRA. In addition to attending the meeting in Košice, Mr. Cathcart and Mr. Nickelson met with Mr. Ernoe Grieger Head of North Hunagrian Regional Transport Organising Office of KTI Institute for Transport Sciences, at Miskolc, Hungary; they met with Milan Rezetka, an engineer with the Transport Research Institute (TRI) in Žilina to review short span bridges, with Monika Kowalska-Sudyka, of the Road and Bridge Research Institute of Warsaw, and with Josef Mikulik of the Czech Republic to discuss the Summer Transportation Institute (STI) and other programs of mutual interest.

Background

The Federal Highway Administration (FHWA) has facilitated cooperative “twinning” relationships between transportation agencies in the United States and transportation agencies in developing countries. The partnerships are fostered by the FHWA Office of International Programs and are intended to establish long-term relationships between the “twinning” agencies. The partnerships have shown to be a cost-effective way to transfer technology and to develop an international relationship and goodwill between the participants.

During October of 2008 two representatives from Rhode Island, Mr. Jeffrey Cathcart, the Director of the Technology Transfer Center at the University Rhode Island Transportation Center and Mr. John Nickelson, Director of Public Works for the City of Providence, Rhode Island (and retired maintenance engineer for the Rhode Island Department of Transportation) visited the Slovak Republic, Rhode Island’s twinned partner. Mr. Cathcart, Mr. Nickelson and others have been involved with the exchange program for several years and have participated in information exchanges in Central Europe and also acted as hosts and coordinators for visits by Central European guests to Rhode Island. The travel in Central Europe was by car which gave Cathcart and Nickelson the opportunity to see the terrain, roadway details, signage and traffic markings and other transportation related items.

The attendance at the Slovak Road Association annual meeting was a primary focus of the visit as Mr. Cathcart was invited to give a presentation on workforce development issues and Construction Career Days at the conference. It was also the intent to initiate other activities including developing relationships with Poland and Hungary. Our colleagues, Joseph Mikulik of the Czech Republic and Milan Rezetka of Slovakia, offered their assistance in these matters.

With Mr. Mikulik planning the first international Summer Transportation Institute in 2009 near the Czech - Polish border, it was our intent to discuss program items and logistics. Efforts to continue working with the Slovak Road Association to establish a national construction career day in one of the autonomous regions are also underway. We believe the SRA is the most logical organization to spearhead this effort as they have relationships with equipment dealers and government agencies and a track record of coordinating successful programs. Additionally, they have a vested interest in promoting their industry to the next generation.

There is a maintained interest in developing short span steel bridges in the Žilina region of Slovakia where site visits with Mr. Milan Rezetka and a representative of the transportation office are planned. Recognizing that Europeans have been dealing with high fuel prices for years, we also wish to discuss how they train operators to conserve fuel and what methods they utilize to measure effective programs and transportation or public works environment.

During the week, we drove across portions of Austria, Hungary, and the Slovak Republic. We noted roadway details and technologies that might be appropriate for consideration in Rhode Island and/or other areas of the United States.

KTI - Hungary

Mr. Cathcart and Mr. Nickelson met with Erno Grieger, Head of Office and Klaudia Meynhert representatives of KTI Institute for Transport Sciences in Miskolc, Hungary; (picture right) Botond Aba Passenger Transport Director and Balaazs Aacs Head of Budapest Office were scheduled to attend but were unable due to a scheduling conflict. The office in Miskolc is center for the Northeast Regional Transport Organizing Office, one of seven of regional offices operated by KTI.



Mr. Grieger made a presentation concerning the M-30 motorway that is being developed as

a connection between Miskolc, Hungary's third largest city, and the M-3. Many of these roadways are required under agreement with the European Union. He also presented a discussion of winter operations in Hungary including scenes from a severe blizzard which impacted the area a few years ago.



Mr. Cathcart gave a PowerPoint presentation of Construction Career Day and we discussed workforce development and how it is impacting industries in the U.S. and in Hungary. The Hungarians advised us that younger members of society do not wish to be trades workers, they want white-collar jobs. It was our first contact with representatives of Hungary in an effort to make new contacts in the central Europe area.

Žilina, Slovak Republic

Mr. Cathcart and Mr. Nickelson met with Milan Rezetka of the Žilina office of TRI and one of the Transport Ministry engineers to review concrete bridges in the Žilina region. We noted during previous visits that many bridges in Slovakia are concrete and the structures are either precast or cast in place. The Federal Highway Administration has expressed an interest in a cooperative effort to demonstrate an effective prefabricated steel short span bridge. In discussions with Mr. Rezetka and the accompanying engineer we found that the concrete bridges in Slovakia are in generally good shape. However, we visited a village which had a pre-stressed bridge posted at 24 tons due to a partial failure in the pre-stress cable. The bridge of approximately 68 meters, has been stabilized and remains open to two lane traffic. (The bridge is shown above). Currently, Dopp and Dopp Associates of Hudson, New Hampshire are working with their engineers to propose replacing the concrete structure with a pre-fabricated steel bridge.



SRA - Kosice, Slovak Republic

The primary purpose of this visit was to attend the Slovak Road Association's 13th annual meeting. The mission of the SRA is to disseminate technical knowledge and to provide opportunities for creative discussion about various issues related to roadway transport in Slovakia. The SRA membership is open to individuals with an interest in the roadway systems and includes representatives from the academic community, the construction industry, and operational staff from the national and regional levels. The annual meeting includes formal presentations by researchers and practitioners ranging from economic theory to best maintenance practices. Mr. Cathcart was invited to make a presentation concerning work force development including discussion of the Summer Transportation Institute, Construction Career Day, Engineering Career Day and the Construction, Engineering and



Business Academies that are offered at the URI Transportation Center.

The annual SRA meeting includes opportunities to make new friends and renew past acquaintances. A formal dinner with entertainment is provided, and an indoor football tournament is held – the various participating organization

sponsor the eight or so teams in the tournament. The SRA held its fourth annual snowplow rodeo this year with 14 participants, including the winner of the Czech Republic's event. We are proud to have initiated this wonderful event in Central Europe.

The SRA event provided an opportunity to meet again with Josef Mikulik of the Czech Republic and Monika Kowalska-Sudyka, head of the International Cooperation Division of the Road and Bridge Research Institute of Warsaw, Poland. Ms. Kowalska-Sudyka had learned about the twinning relationship with Slovakia, and was interested in the workforce development programs that are being advanced through this association. Mr. Mikulik is planning to hold the Czech Republic's first Summer Transportation Institute this year.



From left to right: Mr. Nickelson, Ms. Kowalska-Sudyka, Mr. Mikulik, Mr. Cathcart

One of the goals of the twinning relationship is to develop goodwill between the agencies. An indicator of this goodwill was one of this year's attendees was wearing a shirt provided by the City of Providence at the 2007 snowplow rodeo.



Roadway Features – Hungary, Slovak Republic, Austria

We began the trip in Vienna and followed the motorway to the southeast to Budapest, Hungary. The European motorways are designed as high speed roadways very similar to the US interstate system. Immediately noted is that it is no longer necessary to show passport or travel documents when traveling between countries of the European Union. The structures remain at the borders but they are not staffed and there is no need to stop.

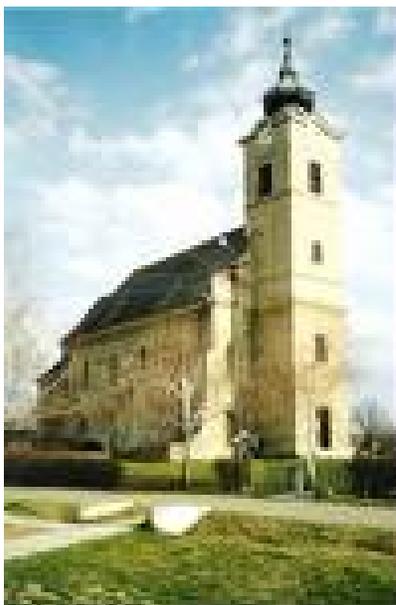


Along the motorway we noticed what we would commonly refer to as tourist information signs. However the

Hungarian highway department has gone a step further by displaying an image from area on their signs.

As an

example the sign to the left for the town of Győr depicts the town hall as shown in the photograph to the right. (The sign enticed us to exit and visit the village.)



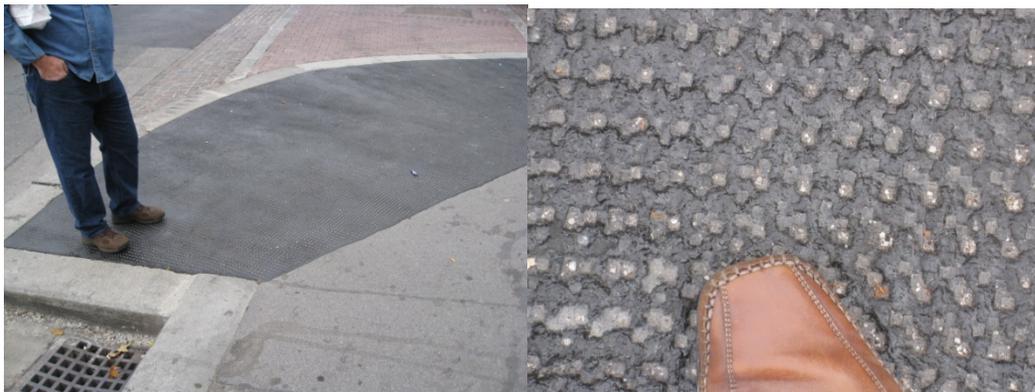
The most significant structure in Feldebrő, Hungary is the Roman Catholic Church; originally a burial church constructed in the first half of the 11th century. A photograph of the church is shown to the left, and is depicted on the sign to the right.



The European Union utilizes pavement markings to provide information concerning proper exit lanes. As an example the marking to the right shows the “pull through” lane for the M3 motorway. These types of markings might be useful to designate the proper traveling lane for motorist utilizing the highway interchange in Providence, Rhode Island.



One of the new items we encountered appears to be an asphaltic material that serves multiple functions including an antiskid surface, a surface sealer, and possibly a wearing surface. The material appears to be applied to sidewalks as a liquid and then where required (driveways, curb cuts), rolled with a hand roller to provide texture. In other areas the surface was smooth or untextured. This item could prove to be a beneficial maintenance material for concrete or asphalt sidewalks. It could also be used to indicate curb cuts as required in the ADA requirements.



Vienna provides a good example of a multi-modal city. The photo below shows a traffic calming mid-block speed table and choke point that provides a crosswalk and a protected shoulder area for bicycle parking and a bus stop.



On the motorway in Hungary we noted signs that advise motorists to maintain headway – without understanding the Magyar language, the information provided on the sign and on the pavement is clear.



At the highway garage in Žilina we noted a brush on a street sweeper that is much heavier than what we have seen, the brush uses a steel braided cable instead of the usual steel bristles, would be great for “digging” built-up sand or leaves at the curb line. *Picture at right*



Other observations

In the four and a half years since our first visit to the Slovak Republic there are clearly visible and dramatic changes. Whether brought on by entry into the European Union or the energy pent up during the decades under communist rule, the economy in the fall of 2008 was booming [*the situation at this time is not known; our visit was the first week of October 2008, when the stock markets began to implode*]. During our first visit in mid 2004, the contractors and the government agencies operated old Tatra trucks that appeared to be surplus military equipment. In 2008 the agencies purchased new Mercedes trucks and state of the art loader backhoes. The residents drove small Asian or European cars in 2004. Now there are a significant number of high-end luxury vehicles including BMW, Mercedes, Audi, Volkswagen and Lexus (along with the new car dealerships to sell and service them). There are still very few pick-up trucks, but we did see a Cadillac Escalade SUV and a Chrysler PT Cruiser.

There is a construction boom in the Slovak Republic. Roads, bridges and tunnels are under construction everywhere while residential and commercial building is seen in the cities and the villages. The equivalent of Best Buy, Home Depot and Wal-Mart are springing up along the motor ways and vacation homes are being built in the country near amusement parks. It sure has changed a lot in the last four years.