

Russia

Severomuisky Tunnel Opens in Baikal-Amur Railway

On 5th December, the opening of train traffic through the unique Severomuisky tunnel in the Baikal-Amur railway was celebrated in the Buryat Republic. Gennady Fadeyev, President of the Russian Railways Corporation, granted the awards to the tunnel builders. The first cargo train went through the 15,343 m tunnel, which is the second in length after the Channel tunnel and unique for the technical conditions of its construction. The Severomuisky tunnel was bored through a monolith rock under extremely severe climatic, hydro-geological and seismic conditions. The tunnel construction took about 30 years with some intervals. Now the specialists assure that all the obstacles for continuous through traffic have been removed and predict the tunnel life to be 100 years.

Switzerland

Saint Barbara Celebration at Gotthard Base Tunnel

On 4th December, traditional celebrations for Saint Barbara's Day were held at the construction sites of the AlpTransit Gotthard.

At Amsteg, the AGN consortium invited almost 300 people. In the area where the construction tunnel crosses the west tunnel, Holy Mass was celebrated by Father Peter Camenzind with sung accompaniment from the Altdorf Men's Choir. Tunnel godmother Gabi Huber then detonated "Barbara's blast", which was followed by an apéritif underground and a festive meal and celebrations in the canteen.

At the Sedrun construction site, the Transco Sedrun consortium held the Saint Barbara's Day celebration at the bottom of the shaft. Some 350 people were transported 800 m down the shaft in the large lift cage. After celebration of Holy Mass by the Abbott of Disentis, Daniel Schönbächler, an apéritif was served in the rescue cavern of tunnel crossover expansion 3. Lunch was then served to the guests in a large tent on the overground construction site.

In Ticino canton, the Saint Barbara's Day celebration for the miners in Faido and Bodio was organised by the TAT consortium on the Bodio construction site. Almost 600 people gathered in the main plant building for Holy Mass in honour of the miners' patroness and the subsequent apéritif. Mass was celebrated by the miners' priest, Father Sandro Colonna. Visit www.alptransit.ch



Picture 1: Saint Barbara celebration at the Gotthard base tunnel.

World Digest of Tunnels under Planning

New Zealand. An underground railway through the heart of Auckland's central business district (CBD) is back on the drawing board. The Auckland City Council says its 18-month investigation shows the link is a genuine engineering and economic possibility. The idea has been discussed several times in the past four years. But the council says new studies prove for the first time that an underground rail tunnel is feasible.

The 3 km tunnel would extend the rail network westward from Britomart and connect with the Western Line near Mount

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Eden Station. The project would be put in the same timeframe as the proposed third Waitemata Harbour crossing, 16 to 20 years. It is estimated to cost \$500 million. The link would allow trains to pass through Britomart and create the possibility of an inner-city loop. Three additional stations would be built – near Aotea Square, Karangahape Road and the top of Symonds Street – bringing most of the CBD within a short walk of a station. The study has also recommended a preferred route for the connection, via Albert Street, Mayoral Drive, Vincent Street, Pitt Street, under the central motorway junction to Exmouth Street and the Western Line. This would also leave open the possibility of connecting the CBD with the North Shore, via a rail tunnel under the Waitemata Harbour. The project would transform Britomart from a terminus to a gateway to the region, and provide more direct connections for passengers travelling to and from both Waitakere and Manukau cities. Britomart has been built at a depth that allows for this underground option for a high-speed, high-capacity rail link through the CBD. Read E-News Weekly 3/2003.

South Korea. Signs are that the long controversy over the construction of a tunnel through Mount Bukhan to open a beltway around Seoul will finally come to an end as the main Buddhist order that had opposed the project has relaxed its stand. The Korean Buddhist Chogye Order, the largest celibate Buddhist group in Korea, has been at the forefront of the protest moves in an alliance with environmental organisations, effectively halting the project for nearly two years. There are a number of Buddhist temples in the Mount Bukhan area north of Seoul.

An ad hoc committee of 11 experts, five recommended by the Chogye Order, another five chosen by the government and a chairman trusted by both sides, has recently concluded that the original route passing through the projected tunnel is the best possible course for the highway, economically and environmentally. Read E-News Weekly 41/2003.

Spain. The high speed train alignment in Vigo and its connection to the harbour would require to sink underground 1.8 km of tracks in Teis between San Lorenzo bridge and Urzaiz and to build a nearly 2 km tunnel under Vázquez Varela street, south of the city, up to Sárdoma.

Spain. The Catalan government approved the west option for the future Tarragona-Valls-Montblanc highway, which has already been approved by the ministry of public works. The 29 km road link will run on the right bank of the Francolí river up to Rourell and from there cross the Sierra de Miramar through a 1.8 km tunnel. This alternative will cost €190 million.

United States. About 340,000 riders arrive and depart from Penn Station daily on Amtrak, Long Island Rail Road and NJ Transit. That number is expected to grow to about 432,000 by 2010. A new Hudson River rail tunnel and an expansion of Penn Station are the best ways to relieve increasing commuter congestion. Plans call for the tunnel to be constructed under the Hudson, south of the existing tube. Additional tracks would be built below 34th Street, between Sixth and Eighth avenues. The project is expected to cost up to \$5 billion and would probably not be built for more than 10 years. Citing prohibitive costs, officials said they have temporarily put aside another initiative, to extend the tunnel through Manhattan to the Sunnyside Yards in Queens. That East River tube would free up space in an adjacent Amtrak-owned tunnel that NJ Transit now uses to bring trains for storage. They also have apparently dropped proposals to bring NJ Transit to Grand Central Terminal.

United States. After two years of talks, the University of Washington and Sound Transit announced they are considering a new light train tunnel on the north line in Seattle, on the east fringe of campus near Montlake Boulevard instead of beneath some science and engineering buildings. University officials have said they were unwilling to allow a route that disrupts research. Sound Transit has to approve studies of the environmental effects as well as engineering and costs. Sound Transit said the change could add 200 m of tunnel and increase the potential construction cost by \$20 million to \$30 million. Sound Transit had considered a tunnel slanting through the middle of campus between the Montlake Cut and 15th Avenue Northeast. But that location threatened to cause vibrations and electromagnetic interference that the University says would have eliminated some research involving interferometry, the study of acoustic and electromagnetic waves. Another tunnel proposal, to the far west of campus, would have required digging beneath soft soils at Portage Bay,

where expected costs were higher. Construction costs for a north line are \$1.3 billion to \$1.6 billion from Convention Place to Capitol Hill to Northgate, rising to \$1.75 billion if a First Hill station is added. The agency broke ground last month on its initial 22.5 km segment from Westlake Center in downtown Seattle to Tukwila. The line is scheduled to open by mid-2009. Read E-News Weekly 13/2003. Visit www.soundtransit.org

World Digest of Contract Awards

France. Chantiers Modernes and SLEG won a €2.6 million contract to renovate the west bore of the La Vierge tunnel (475 m) on highway A75, section Pégairolles-Lodève south, north of Montpellier.

Spain. Ayesa in JV with Geoconsult won a €1.9 million contract for the conceptual design of the 28 km-long N-230 road section between the Vielha tunnel and the French border. The Vall d'Aran general council requested to the Ministry of public works to opt for the east alignment, which would include seven tunnels for a total length of 9 km (33%). The longest tunnel, 5 km in length, would run under the Baricauba woods. Two more tunnels, each one kilometre in length, would be built in Bossòst and Les. There would be also four 400 m tunnels. The cost to build this road section is estimated at €250 million. Visit www.ayesa.es and www.geoconsult.es



Spain. A JV set up by FCC and Ortiz e Hijos will build the Mercado Central underground station of the Alicante-Altea section on the Alicante-Denia tram line. The contract is worth €16.1 million. A second underground station will be built in Luceros. Both stations will be finished in 2005. The line will run underground in Alicante beneath Alfonso X El Sabio Avenue between Luceros and Mercado Central. This section spans 712 m and

will cost €33.7 million. A construction contract will be awarded in May or June 2004 for two tunnel sections on each side of the Luceros station. The first tunnel portion is 73.6 m-long between Luceros and the Renfe intermodal station at the west end of the line and the second stretch is 507.8 m-long to Mercado Central. Construction will take 20 months. The Luceros station is located at the crossroads between Alfonso X El Sabio Avenue, Rambla de Méndez Núñez and Jaime II Avenue. It will be 80 m-long with two 4.2 m-wide platforms. From Mercado Central, the line continues underground until Museo Arqueológico. Then, it exits at grade. Altogether, the tramway in Alicante will be 33 km in length, whereof 2.4 km in tunnel, with 43 stops (26 on Line 1 and 16 on Line 2). Visit www.fcc.es, www.tramalicante.com and www.tunnelbuilder.com, es/81.

World Digest of Ongoing Tunnelling

Vietnam. Construction of a 495 m tunnel across the Ngang Pass, linking the central provinces of Quang Binh and Ha Tinh, is nearing completion. A test of the tunnel is slated for 3rd February, 2004. The Da River Construction Corporation is currently finishing infrastructure inside the tunnel, including lighting and automatic surveillance systems. Started in May, 2003, the tunnel, which is 11.5 m-wide and 7.5 m-high, is expected to be fully completed in the first quarter of 2005 at a total cost of VND150 billion. Read E-News Weekly 22/2003, 7/2003 & 47/2002.

World Digest of Inaugurations



Italy. The 318 m-long 11.25 m-wide San Vigilio tunnel on the Cadine road bypass in Trento province, south Tyrol has been opened to traffic on 4th December for Santa Barbara, the patroness of miners and tunnellers. This Trento-bound tunnel doubles the existing Forte tunnel. It accommodates two lanes. Breakthrough took place on 25th July, 2003. Read E-News Weekly 32/2003.

Picture 2: Opening of the San Vigilio tunnel in south Tyrol.

World Digest of Tunnel Renovation & Maintenance

France. Open invitation to tender, deadline 21st January, 2004 for engineering as part of the upgrading of safety in the 3.2 km Tende tunnel between France and Italy, 1.5 km of which is on the French territory. The first phase includes crown reinforcement on 60 m, the construction of seven safety niches, three recess chambers to install core drilling equipment to do boreholes for the second tube and a turnaround cavern for rescue vehicles. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=209821-2003>, OJ S 235, or contact DDE des Alpes-Maritimes, Nice, fax +33 493727382.

France. Open invitation to tender, deadline 27th January, 2004 for rehabilitation of 11,300 m of sewer mains in Botzaris-Belleville in the 19th and 20th districts of Paris. Oval cross sections, 1.05 x 2 m and 3.1 x 3.6 m. Also tenders invited for assistance to work control. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=211154-2003>, OJ S 237, and <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=212285-2003>, OJ S 238, or contact City of Paris, fax +33 142768710.

France. Open invitation to tender, deadline 27th January, 2004 for rehabilitation of 9,200 m of sewer mains in Saint-Sulpice in the 6th district of Paris. Oval cross sections, 1.7 x 0.7 m and 2.3 x 1.4 m. Also includes the Four sewer, length: 462 m, cross sections: 2 x 2 m and 3.5 x 3.5 m and the Odéon sewer, length: 130 m, cross section: 2.5 x 2.8 m. Tenders also invited for assistance to work control. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=211146-2003>, OJ S 237, and <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=212269-2003>, OJ S 238, or contact City of Paris, fax +33 142768710.

France. Eiffage TP, EHTP and Soleffi won a €2.3 million contract to rehabilitate a 962 m-long 1.9 x 1 m sewer in Pantin and Romainville. Visit www.eiffagetp.fr, www.groupenge.fr/assain_reseau.html and www.soleffi.fr. Read E-News Weekly 27/2003.

France. Bouygues, Razel and Soletanche Bachy won a €4.5 million contract to rehabilitate a 1,120 m-long 2.3 x 1.3 m sewer in Pantin. Visit www.bouygues-construction.com, www.razel.fr and www.soletanche-bachy.com. Read E-News Weekly 27/2003.

France. Negotiated procedure, deadline 14th January, 2004 for safety upgrading in the Mirabeau and La Baume twin-tube dual-lane tunnels. Lengths: 351 and 392 m for Mirabeau and 350 + 335 m for La Baume. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=213288-2003>, OJ S 239, or contact Escota, Puget-sur-Argens, fax +33 492291490. Read E-News Weekly 2/2002.