

## Spain

### Duro Felguera and MHI Sign Deal on TBM JV

Duro Felguera has signed a letter of intent with Mitsubishi Heavy Industries to study the setting up of a joint venture to sell tunnel boring machines in Europe and Latin America. The machines will be made to Japanese design in its factory at Barros (Asturias). Duro Felguera is currently manufacturing two machines at the plant using Mitsubishi's technology. These machines will be used to bore the 7 km Abdalajís twin tunnels on the Cordoba-Malaga high speed rail line. Robbins and Mitsubishi Heavy Industries won in May a contract for the supply of two 10.2 m-diameter rock TBMs. One TBM is for Dragados, Seli and Jäger who have been awarded the Abdalajís tunnel west tube. The second TBM is for Sacyr and Somague for the east tube.

The expected growth in the high-speed rail sector in Europe over the next 10 years has prompted Duro Felguera and Mitsubishi to consider setting up the joint venture. The agreement between the two companies also includes the medium-term incorporation of other products using the Japanese group's technology, which can be manufactured and distributed in Europe.

Tedesa, one of Duro Felguera's subsidiaries, manufactures and markets TH and HEB steel supports, Bernold-type sheets and steel formworks for tunnels. Visit [www.gdfsa.com](http://www.gdfsa.com) and <http://www.sdia.or.jp/mhikobe-e/products/kenki/index.html>

## World Digest of Tunnels Under Planning

**Canada.** Energy minister John Baird and Niagara Falls MPP Bart Maves announced on 12<sup>th</sup> November a plan to expand the generating capacity of the Sir Adam Beck power plant in Niagara Falls, adding an additional 700 MW of electrical power to the grid. The project is expected to cost \$500-\$700 million and involves digging a 12.5 m-diameter tunnel, 10.5 kilometres under the city of Niagara Falls to the Queenston plant. This will be the third tunnel of its kind there, and the Beck 2 plant will then run at its full potential. The project could take up to four years to complete. The plan still needs legislative approval. The tunnel project received environmental approval in 1998, before it was temporarily shelved. Public/private partnership may be used to fund the project. Visit [www.ontariohydroenergy.com](http://www.ontariohydroenergy.com)

**Finland.** Ground investigation and design studies are underway for the Vuosaari harbour access in Helsinki, which comprises the 2 x 1.6 km Porvarinlahti highway tunnel and the Labbacka and Savio railway tunnels (620 m and 13.5 km). A construction management consultant, CM-Contracting Ltd, has also been selected for the traffic connection works (fairway, road and railway). The value of the contract is about €2.5 million. The contract will be signed in late December 2002 depending on what the Finnish parliament will decide regarding financing. If the decision is negative, the project will stop for some time and new methods of financing will be taken into consideration. If the parliamentary decision is positive, the schedule will be as follows: 1. Construction of the harbour starting in the beginning of 2003, levelling down the harbour area; 2. Dredging of the fairway starting in the summer 2003; 3. Tenders invited for earthworks and tunnelling in late 2003; 4. Construction of the road and railway to the harbour starting in early 2004 and 5. Partial opening in 2006 and full commissioning in 2008. The latest cost estimates totals €468 million allocated as follows: €260.6

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million for the harbour, €17 million for the fairway, €60.4 million for roadworks and €130 million for the railway. Visit [www.tunnelbuilder.com](http://www.tunnelbuilder.com), fi/18 and [www.vuosaarensatama.net/eng/index.htm](http://www.vuosaarensatama.net/eng/index.htm)

## World Digest of Bids

**Belgium.** Open call for bids, deadline 12<sup>th</sup> December, 2002 for technical design services for a road tunnel on Boulevard Leopold III near NATO in Brussels. This is a 218 m-long 5 m-wide cut-and-cover with two 149 m-long 8 m-wide accesses. Building will take place in 2004-2006. The project will be financed on the Belgian budget. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=165526-2002>, OJ S 209, or contact Service public fédéral mobilité et transport, Brussels, fax +32 27342020. E-mail [jdm@mcidfff.be](mailto:jdm@mcidfff.be)

**Canada.** Restricted tendering, deadline 17<sup>th</sup> December, 2002 including the construction of a tunnel and canals and concreting of the downhill portal for the Eastmain-1 hydropower project. Tender value C\$25-C\$30 million. Work will start in February 2003 and end in March 2004. Technical details from Marc Londot, tel. +1 514 2862020, ext. 2255, fax 2862028. Contact Société d'Énergie de la Baie James, Antoine Vidal-Andrews, Approvisionnement et Contrats, 888 boulevard de Maisonneuve Est, 7<sup>ème</sup> étage, Montréal (Québec) H2L 5B2 or Stéphane Roby, tel. +1 514 2862020 ext. 2268. Visit [www.hydroquebec.com/sebj/fr/appels\\_detail/1e225101.html](http://www.hydroquebec.com/sebj/fr/appels_detail/1e225101.html)

**France.** Restricted procedure, deadline 10<sup>th</sup> December, 2002 for construction of the Garibaldi access to the Paillon tunnel in Nice. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=173127-2002>, OJ S 218, or contact City of Nice, fax +33 497132919. Visit [www.ville-nice.fr/ao](http://www.ville-nice.fr/ao)

**Spain.** Open call for bids, deadline 23<sup>rd</sup> December, 2002 for technical design of the Puig-reig – Berga stretch of the C-16 road between Barcelona and Puigcerdà. There will be three tunnels totalling 835 metres. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=172470-2002>, OJ S 217, or contact GISA, Barcelona, fax +34 934300124. E-mail [dlh@gisa.es](mailto:dlh@gisa.es)

**Spain.** There are six bidders to manage the construction of the extension to the Cadí tunnel rescue gallery. They are Auditorías e Ingenierías in JV with Eurogeotècnica (lowest bid with €866,624.38); Ingeniería de Traçats i Estructures; Idom; Ingeniería y Sistemas; Intecasa (highest bid with €954,610.40); and Payma Cotas. More from [www.gisa.es](http://www.gisa.es). Read E-News Weekly # 23.

**Spain.** Open call for bids, deadline 27<sup>th</sup> December, 2002 for construction of 6.7 km motorway section in Condado de Treviño including a three-lane twin-tube tunnel, 320 m and 520 m, carriageway width 13.25 m plus two 1 m-wide roadsides and two 0.75 m-wide pavements. Tender value €63.2 million. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=176433-2002>, OJ S 222, or contact Ministry of development, Madrid, fax +34 915978537 / 8470. E-mail [cpublic@mfom.es](mailto:cpublic@mfom.es) and [jfernandez@mfom.es](mailto:jfernandez@mfom.es)

## World Digest of Contract Awards

**Canada.** TIR Systems Ltd, a leader in specialty lighting systems, has received a new order from the Wyoming Department of Transportation, this time to relight the Cody tunnel near Yellowstone National Park after the successful installation of the Green River tunnel earlier in the year. The lighting upgrade utilizes TIR's tunnel Light Pipe and Dual Beam products to provide safe, high quality, uniform lighting for day and night-time vehicle traffic traveling to the popular national park. Visit [www.tirsys.com](http://www.tirsys.com). Read E-News Weekly # 27.

**Germany.** Award to Berger Bau and Porr Technobau of a €44.9 million contract for construction of a

1,455 m cut-and-cover tunnel and its access ramps on motorway A99 west in Aubing. Visit [www.berger-bau-gmbh.de](http://www.berger-bau-gmbh.de) and [www.porr.at/ptu/FSTART.html](http://www.porr.at/ptu/FSTART.html)

**Italy.** Rete Ferroviaria Italiana has commissioned to a joint venture of Gemmo Impianti, Sirti and CIET the upgrading of the 8 km Borgallo rail tunnel. The assignment deals with lighting, telecommunication, sound and anti-fire systems. Visit [www.gemmo.com](http://www.gemmo.com)

**Spain.** Award to Ferrovial-Agromán of a €76.1 million contract for construction of the Albuñol junction-Adra bypass on the Mediterranean motorway, which requires two twin cut-and-cover tunnels, 150 m and 200 m in length. E-News Weekly # 30 & 35. Visit [www.ferrovial.es](http://www.ferrovial.es)

**Spain.** A joint venture of Vicsan Torredembarra and Rodio Cimentaciones Especiales has clinched a €7 million contract to build the emergency rescue gallery of the 1,887 m Collabós tunnel in Catalonia (read E-News Weekly # 26). The ten bidders for the work control and supervision are Auditorías e Ingenierías in JV with Eurogeotècnica; Catalana d'Enginyeria; Cetres Enginyers (highest bid with €469,382.40); G.O.C.; Intecasa (lowest bid with €418,899.20); Payma Cotas; Pigra Engineering; SGS Tecnos; Tec-Cuatro; and Typsa. Read E-News Weekly # 42. More from [www.gisa.es](http://www.gisa.es). Visit [www.rodio.es](http://www.rodio.es)

**Vietnam.** A build-operate-transfer (BOT) contract for the construction of a tunnel through the Ngang Pass on trans-national Highway 1A was signed in Hanoi on 13<sup>th</sup> November between the ministry of transport and communications and the Song Da Corporation. The tunnel will be 495 m-long, 11.5 m-wide and 7.5 m-high. The project will also include 165 m of road leading to the tunnel, a 184 m bridge at the northern end and a 51 m bridge at the southern end. Work on this US\$10 million project will start in February 2003 and completion is scheduled for February 2005.

## World Digest of Ongoing Tunnelling

**Singapore.** Transport minister Yeo Cheow Tong launched on 11<sup>th</sup> November the S\$1.8 billion Kallang/Paya Lebar Expressway (KPE) project. The 12 km-long expressway is scheduled for completion in 2007 and about 75% or nine kilometres of the KPE will be built underground. It will be the longest road tunnel in southeast Asia when completed. The KPE will connect the East Coast Parkway (ECP) in the south to the Tampines Expressway (TPE) in the northeast, and intersect the Pan-Island Expressway (PIE) in the middle. The contractors for the different contracts are SembCorp Engineers and Constructors, SembCorp-Daewoo JV, Samsung, Taisei, Tyco Building Services, Guthrie Engineering and Chevalier Singapore Holdings. Visit [www.tunnelbuilder.com](http://www.tunnelbuilder.com), sg/17 and [www.lta.gov.sg](http://www.lta.gov.sg)

**Spain.** Catalan government officials and the mayor of Barcelona officially launched extension works of metro Line 5 to Vall d'Hebron. The contractors, a JV of FCC, Copisa and Comsa, will build a 2.7 km tunnel and two stations. The Teixoneira-Coll station will be the noteworthy structure of the project, with four distant accesses serving the Coll-Vallcarca, El Carmel and La Teixonera areas. The station will be situated at a depth of 75 metres, in the middle of the mountain separating these areas. Commuters from Coll-Vallcarca will use an inclined lift, two escalators and a staircase to get to the platforms. There will also be a second access from a hall, located on the other side of the hill, accessible through a 120 m tunnel. Entry in service is expected for the first-half of 2006. The project will cost €94 million, an expensive sum due to the tricky topography which obliges to drill under the El Carmelo mountain. The scheme will be financed by Generalitat de Catalunya (66%) and the Spanish government (33%). Visit [www.tunnelbuilder.com](http://www.tunnelbuilder.com), es/22.

**Switzerland.** The Raimeux tunnel (3,211 m), a single bidirectional tube with two lanes, on the 9.5 km Choindez-Moutier north section of the Transjurane A16 highway, has been holed through on 31<sup>st</sup> October. The contractors are GTR (Groupement du Tunnel de Raimeux), a consortium of Marti

Tunnelbau AG, Marti AG, Marti Travaux Spéciaux SA, Parietti & Gindrat SA, Pro Routes SA, and Georges Chételat SA. Its commissioning is programmed in 2006. Visit [www.martiag.ch](http://www.martiag.ch). On the same day, a Herrenknecht TBM has started tunnelling the first bore of the 1.2 km-long 11.7 m-diameter Moutier tunnel. Mechanised excavation is unusual for a 1.2 km tunnel but was chosen as it appeared to be the most economical solution that could avoid overbreaks. The TBM advances at an average daily speed of 13.6 metres. Its cutting head weighs 180 tonnes. The tunnel will be lined with concrete segments. The segment production plant is installed in Klus near Oensingen. From there, the segments will be transported to the south portal. The non-reusable excavated material will be transported by loaders up to the north portal of the exploratory gallery of the Graitery tunnel. There, a conveyor belt crossing the 2.5 km gallery will transport the muck until the south portal in Court. The debris will then be loaded on trucks to be sent and stored at the final storage in Chaluet. Excavation of both tubes is scheduled to be completed at end-2003 and commissioning is expected in 2008. The tunnel is built by consortium GTM (Groupement du Tunnel de Moutier), composed of the same companies as the GTR consortium. Read E-News Weekly # 35 and visit [www.tunnelbuilder.com](http://www.tunnelbuilder.com), ch/34. Also visit [www.jura.ch/services/pch/rn/raimeux/0001.htm](http://www.jura.ch/services/pch/rn/raimeux/0001.htm) and [www.a16.ch](http://www.a16.ch)

**Taiwan.** The drilling of a 1.37 km tunnel passing under Taipei's Sungshan Airport has been completed and is expected to be opened to traffic in 2006. The tunnel project was first conceived in the early 1980s and construction began in 1997 but was halted for four years because of objection from residents neighbouring the tunnel's south-end who thought Fuhsing North would be too narrow for downtown-bound traffic, creating congestion. A design change to re-route the south-end exit to Mintzu East Road won support from the neighbours, allowing the drilling to continue this year.

**United States.** Crews working on the Mission Valley East Transit Extension (MVE) have punched through into the underground station at San Diego State University. The 1,219 m-long tunnel is part of the MVE extension connecting the Orange (Santee to downtown) and Blue (Mission Valley to the border) trolley lines and is expected to carry more than 11,000 passengers daily.

## World Digest of Inaugurations

**Italy.** The new Stava tunnel, between Naturno and Castelbello in Bolzano province, has been opened to traffic on 13<sup>th</sup> November, 2002. However, transit through the tunnel is one-way only to date, heading to Resia. The Merano-bound drivers still have to cross Stava until the opening of the Naturno tunnel scheduled for 6<sup>th</sup> April, 2003.

## World Digest of Tunnel Renovation & Maintenance

**France.** Negotiated procedure, deadline 26<sup>th</sup> November, 2002 for reinforcement of the crown of the Voltaire Malaquais Conti tunnel on Line C of the RER line. Length to treat is 233 m, width 12 m using injection. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=175914-2002> and <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=175916-2002> OJ S 221, or contact SNCF, Paris, fax +33 140480192. Read E-News Weekly # 43.

**Montenegro.** General procurement notice for rehabilitation of the Montenegrin section of the Belgrade-Bar rail line during the 2002-2005 period. The programme includes structural rehab of tunnels and galleries and will mainly be financed by the European Investment Bank at an estimated cost of €15 million. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=172021-2002>, OJ S 217, or contact Ministry of maritime affairs and transport, Podgorica, fax +381 81633017. E-mail [zcg-uprava@cg.yu](mailto:zcg-uprava@cg.yu)