

The Swedish Rock Construction Committee is an independent group of tunnelling professionals with 86 members. BK arranged the BK-day in march 2010 with 560 visitors.

Members of the committee was represented in Vancouver from 14th – 17th May including meetings in six ITA Working groups. The Swedish Rock Construction Committee have representatives in 12 Working Groups.

### **Some Tunnels and Caverns under Constructions**

#### **Stockholm City Line**

The two railway tracks at the southern approach to Stockholm are unable to handle both current and future rail traffic, for freight-, commuter-, regional- and national railway. Leading the commuter traffic into a separate tunnel makes it possible to double the capacity of both the existing tracks and the commuter traffic.

The City Line is a six-kilometer commuter train tunnel from Tomtebodavägen to Stockholm South Station and new commuter stations at Odenplan and T-Centralen in Stockholm City.

We're also building a 1,4 kilometer railway bridge over the track area in Årsta, south of Stockholm.

The City Line is today the biggest infrastructural building project in Sweden and will be finished in 2017.

#### **The North Link**

Runs between Norrtull and Värtan and connects to Roslagsvägen at Stockholm University. Together with Södra Länken and Essingeleden, Norra länken forms a centrally located, continuous traffic route system. Norra länken is a route of national interest through its connection to Värtahamnen and Frihamnen, Sweden's most important seaports for cargo and passenger traffic to the Baltic States, Finland and Russia.

The work on Norra länken started 2007 and involves the construction of rock tunnels, concrete tunnels and a new interchange.

There will be a total of 11 km of road tunnel, of which 9 km are rock tunnels and 2 km concrete tunnels.

To construct Norra länken, over one million cubic meters of rock and 0.4 million cubic meters of soil have been excavated.

In the tunnels there will be 13 electrical power substations, 140 jet fans and 100 emergency exits.

Outside the tunnels, 2 km of new and up-graded road will be constructed as well as

a 200 m long new railway bridge, a 400 m temporary railway bridge, 1 km of railway station track and 1.5 km of new pedestrian and cycle paths.

There will be 140 000 m<sup>2</sup> of asphalt paved road in the tunnels and 60 000 m<sup>2</sup> outside the tunnels.

### **Bypass Stockholm**

The E4 Stockholm bypass is a new route for the European highway west of central Stockholm. The new route will improve the quality of every-day life in the fast growing Stockholm region, by linking the southern and northern parts of the county and reducing the vulnerability of the road traffic system.

To minimize the impact on sensitive natural and cultural environments, just over 17 of 21 km of the motorway are in tunnels. The tunnels are built as separate tubes with three lanes for each direction, all together measuring a length of 54 km of tunnels, including ramps. The construction work is planned to start in 2012 and it will take at least eight years to finish. Volumes of approximately 18 million tons of rock will be blast out over a period of five years.

When the link opens for traffic it will be one of the longest road tunnels in the world. By 2035, the Swedish Transport Administration (Trafikverket) estimates that the E4 Stockholm bypass will be used by approximately 140,000 vehicles per day.