



# Argentina

**Name:** Asociación Argentina de Túneles y Espacios Subterráneos (AATES)

**Type of structure:** Non Profit Professional Association, acc. private law

**Number of members:** 46 affiliate (individuals), 8 corporate members (collective)

## 2016 – ACTIVITIES

### Main activities:

- Regular (monthly) ExCo Meetings
- Yearly Tunnelling Congress in September 2016, together with one 1-day ITACET Training Session (Mechanized Tunnelling)
- Present at other Congresses in Argentina (Transportation and Road Congress)
- WG: Finalization of the Working Group Shotcrete with a 2 days theoretical – practical Training Course at the Engineering Faculty of the State University of Bs. As., in April 2016
- Development of an online Tunnelling Course (streaming) within the calendar of courses of the Argentine Construction Chamber
- Initiation of the AATES Young Members Group by 4 young colleagues, with the aim to be operative mid 2017

### Extension of Metro Line H

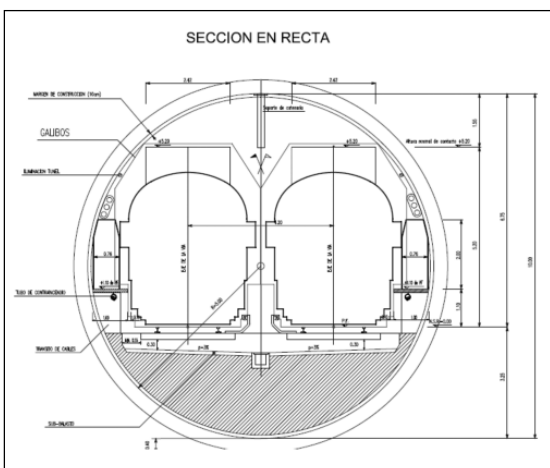
North section: 4 new stations constructed with the NATM method, featuring single large caverns of approx. 18m width and approx. 2km of single tube double track running tunnels. 2 Stations were opened in 2015, 1 in 2016 and the last in 2017.



South Section; 2 new stations and an associated running tunnel section, to be constructed with diaphragm walls. 2 parallel twin caverns, one for the train depot and the other for a workshop, constructed by the NATM Method, which will enter operation in 2017. Both stations were postponed.



### Sarmiento Railway Tunnel – Buenos Aires



Replacement of the present Railway Line “Sarmiento”, running from the Western Head Station of Buenos Aires (Station Once) to Station Castelar, located at a

distance of approximately 22km, by a double track tunnel, mainly excavated with a 12m dia EPB shield machine, and also with NATM along approx. 4km

The 1<sup>st</sup> section is the 22km, underground, with 9 Stations, 220m long, 2 in C&C and 7 in mined construction, with 280m<sup>2</sup> cross section; the 2<sup>nd</sup> section is 15km, at grade, with 5 stations.

After the re-launching of this project early in 2016, the 12m dia. EPB Machine finally started and is advancing (> 300m). Meanwhile, the station design is in development, with the start of the first 3 mined stations expected in mid 2017.



### Sewer Left Margin Riachuelo River and Emissary – Buenos Aires

This project comprises the construction of two main sewers: one located parallel to the Riachuelo River, on its left margin, with approx. 9.5km length, inner dia. of 3.2m, to be built with an EPB pipe jacking machine, and the second, coming from the city, with 4.5m inner dia. and 5.2km length, to be built with a EPB machine.

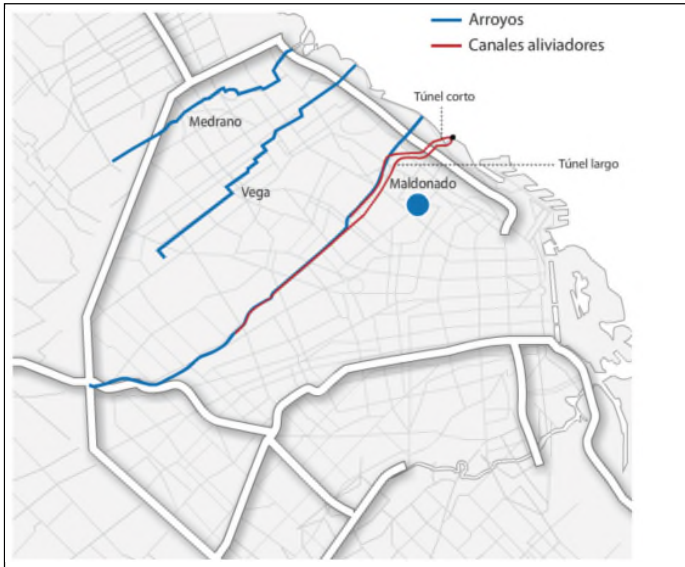


Additionally, it features a treatment plant and an emissary of approx. 12km length with 4.3m inner dia. to be excavated into the La Plata River, also using an EPM machine. Three contracts were awarded in 2015 (sewers, plant, emissary), which presently are all in construction. End of 2017 the first EPB machine will start excavating.

### Relief Tunnel for Underground River Vega – Buenos Aires

This project comprises the construction of 1 EPB relief tunnel for the existing underground “Vega River”, with a total length of 8.4km (6km with EPB machine, iD 5m, and the rest using NATM construction).

The project was awarded mid of 2016 and is currently in development. The construction of the launch shaft for the EPB



Machine started in March 2017 and by end of 2017 the machine will have started excavation.

### Underground Water Main Río Subterráneo a Lomas – Buenos Aires

This project comprises the construction of an approx. 13.5km long water main, to be excavated with an 4.5m dia EPB machine, and a pumping station, with a capacity of 17.000m³/h.



The project was awarded early 2017 and its detail design and construction will start within 2017.

### Red de Expresos Regionales RER

In 2016, the new national government presented this very challenging project, considering the underground inter-connection of the 3 main railway head stations in Buenos Aires: West Station “Once”, South Station “Constitución” and North Station “Retiro”.



The project comprises 20km of new railway lines, approx. 85% located in twin track tunnels and the rest on viaducts. Besides the underground enlargement of the head stations, 4 new underground stations will be constructed. Currently 2 contracts are ready for tender for the construction works, envisaged to be financed under a PPP model. In parallel, the design of the connection “Once – Retiro” and 3 stations was tendered, and are expected to start mid 2017. The whole project will require at least 8 years before construction completion.

### Trans-Andean Tunnels

#### 1) Agua Negra Road Tunnel -14km (North):

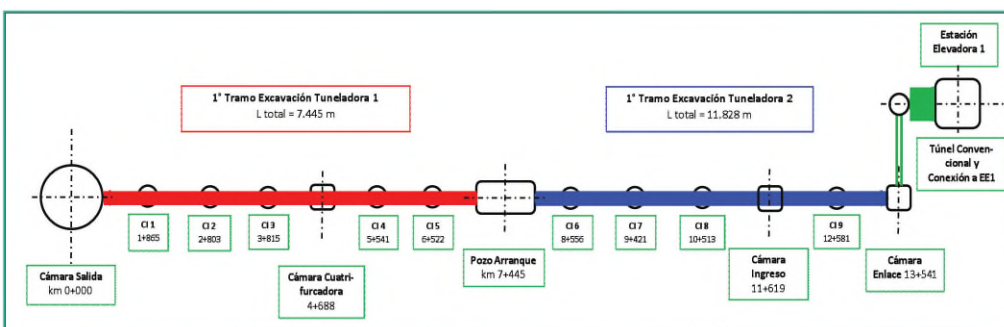
This is the project of the highest priority for both countries. Its financing will be provided by the IDB. A new pre-qualification process for contractors was launched at the end of 2016. Construction may start at the end of 2017 or in 2018.

#### 2) Corredor Bioceánico del Aconcagua - 52km Railway Tunnel (Centre):

This private initiative, which is currently developed to a Preliminary Design, has still not been finally approved by both countries. Currently, this project is on hold.

#### 3) Las Leñas Road Tunnel – 11.6km (South):

This project is officially recognized by both countries as the second most relevant bi-national base tunnel. Currently, a tender has been launched for the development of the tender design of the tunnel before mid 2017.



### FUTURE ACTIVITIES

- WG: Tunnel Drainage and Waterproofing, initiated early 2017.
- Tunneling Course, to be held directly by AATES in different provincial capitals
- Activation of the Young Member Group of AATES, mid of 2017.