

Egypt

Name: Egyptian Tunnelling Society

Type of structure: Non Governmental Organization - NGO

Number of Members: 405 Individual members, 14 Corporate members

MAIN ACTIVITIES

ETS held six lectures & presentations on the following subjects:

- Main regulations considered in the design of tunnels in the Suez Canal Region.
- An overview of the sequential tunneling method in soft ground.
- Tunnel monitoring system using optical fiber sensors or electric conductible.
- HDD Tunneling.
- Road Tunnels under the Suez Canal at Port Said.
- Road Tunnels under the Suez Canal at Ismail.

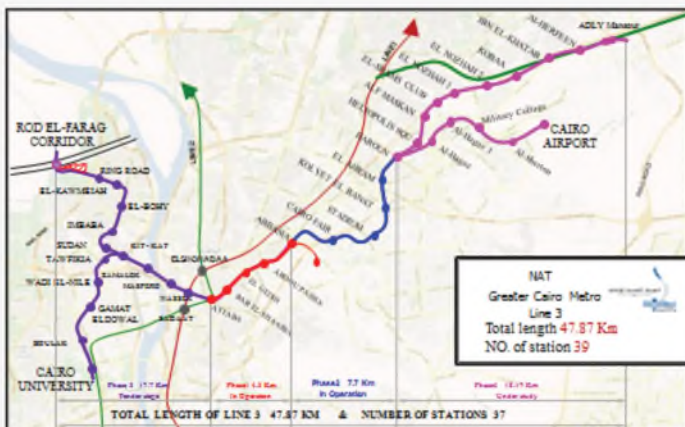
Publications :

ETS publishes a periodical newsletter every 6 months in Arabic.

TUNNELS – UNDERGROUND WORKS

CAIRO Metro Line 3

The Greater Cairo Metro Line 3 is 47km long of which nearly 29km is underground together with 38 stations. The route extends from Cairo Airport to Imbaba. An additional branch to Mohandeseen, of 6km, is being added also to be constructed underground. The line crosses the River Nile twice. The planned capacity of the line when completed is 2.1 million passengers / day. The works on the Cairo Metro Line 3 phase I, has already been in operation since February 2012. This phase includes 4.5km in deep tunnels & 5 underground stations. Also, Phase 2 which had already started in July 2009 parallel with phase 1, includes 6.5km & 4 stations, all underground. Phase 4A & 4B are under construction and it is planned to be operational in December 2018. Phase 4C to the airport is now under study. Also, Phase 3 (3A, 3B & 3C) is under construction and it is planned to be put into operation in December 2022.



Phase 3 of Line 3 Attaba / El Kit Kat & El Kit Kat / Imbaba & El Kit Kat / Cairo university

- Phase 3 consists of **15** stations with a total length of **17.7km** and is split as follows
- **Phase 3A:** with a length of **4km** and extends from Attaba to Kit Kat station and includes **4 underground stations** "Nasser - Maspero - Zamalek - Kit Kat."
- **Phase 3B:** with a total length of **6.6km** **1** Underground station (Sudan station), **1** On-grade stations (Rod El Farag Corridor station), and **4** Elevated stations (Imbaba, El Bohy, El Qawmia El Arabia and Ring Road stations)
- **Phase 3C:** with a total length of **7.2Km**, **3** Underground stations (Tawfikia, Wadi El Nile, and Gameat El Dwal Al Arabia stations), **1** At grade station (Boulak El Dakroul station), and **1** Elevated station (Cairo University station)



Greater Cairo Metro Line 3 (Al Thawra Line) - Phase 4



- Phase 4 consists of 15 stations "Haroun – Heliopolis Square -Alf Maskan - El Shams club- El Nozhah.1 – Nozhah.2- Qobaa – Omar Ibn ELKhattab - El Salam "10th of Ramadan"- Cairo International Airport" and has a total length of about **18.15km**

2017 ACTIVITIES PLANNED

Greater Cairo Metro Line 4

- The Greater Cairo Metro Line 4 is a new project that will be constructed in two phases and will ultimately run from Hadaek El Ashgar Station in west Cairo to a station at New Cairo in east Cairo, to the south of the International Airport. The overall distance will be approximately 43km.
- Phase 1, the current project, will be the western section with an overall length of about 18.8km, with a terminal station at El Malek El Saleh and an extension to a "Turn-back Point" for a further 1.3km to the east at El Fustat.
- NAT has selected a General Consultant for the revision of documents and supervision of implementation.
- NAT has so far launched two work packages, CP 401 for the Civil Works and CP 412 for the Rolling Stock.



Greater Cairo Metro Line 5

Metro Line No. 5 starts at Nasr City in the Eastern region of Cairo City in the Eighth suburb of Nasr City and crosses under Mostafa El Nahas St.,



Greater Cairo Metro Line 5 Alignment

then Hassan Maamoun St., reaching El Ahly Club and then down through El Nasr Road passing Makram Ebeed St. to reach El Gamaa El Omalia Square where it intersects with El-Nozha St. It then continues underneath to pass under El Galaa Square to intersect with Line No. 3 at Haroun Station from where it continues under Abu Bakr El Sedeek St. in Heliopolis to intersect with Line No. 1 at Helmyet El Zaitoun Station until El Mattaria Square and then El Sawah Square to intersect with Line 6. It then crosses down the railway to Ahmed Helmy St. and continues to intersect with Line 2 at El Khalafawy Station then Gisir El Bahr St. up to the El-Sahel district, which is the terminal of this line. The expected total length of about 24km with 17 stations.

Greater Cairo Metro Line 6

Line 6 starts from El Khosous at exit 18 of the Ring Road on viaduct and continues alongside the Ismailia Canal until the East of Shubra El Khaymah where it turns south to El Sawah Square. Here it continues above Port Said St. to cross over Line 1 at Ghamra Station then crossing above Line 3 at Bab El Shaaria Station then continuing to El-



Greater Cairo Metro Line 6

Sayeda Zeinab Square and on to El Fustat Park to intersect with Line 4. Here it continues to the New Maadi zone and extends to the convergence point between the intermediate ring road and Ein Al Sokhna road, which is the end of this line.

- The total length is about 50km with 35 stations.

LRT Project Overview



Phase 1

Total length: 64.94km
Stations: 11
Workshop: 1

Phase 2

Total length: 23km
Stations: 3
Depot: 1

10th of Ramadan LRT

- Serving the East Corridor & New Governmental Capital
- Daily Commute Service for over 10 Cities, 1 Million Passengers
- Move the populace from Central Cairo to the East Cairo Corridor
- Relieve the traffic pressure of Inner Cairo