

# Turkey



**Name:** Turkish Road Association

**Type of Structure:** TRA is an open association. Its function is to promote, coordinate and spread studies and research in the field of roads, highways, motorways, tunneling and other underground works.

**Number of Members:** As of January 1st, 2021, TRA has 503 members of which 437 are individuals and 66 are corporate members which represent Universities, Consultants, Contractors, Manufacturers and some of the other Governmental Organizations.

## ASSOCIATION ACTIVITIES DURING 2020 AND TO DATE

Due to the COVID-19 the 8th National Asphalt Symposium and Exhibition planned to be held in 2020 was postponed. The General Assemblies and meetings were also affected by regulations and restrictions. However, the courses and the seminars on tunneling at our Universities continued online.

## CURRENT TUNNELLING ACTIVITIES

### New Zigana Tunnel

The 14.5km long New Zigana Tunnel project in Turkey is currently under construction. The tunnel is a twin-tube, blast-and-drill NATM excavation, that will connect the state roads between the Gumushane and Trabzon provinces in Turkey's northeast, at an altitude of over 1,200m a.s.l. The construction of the tunnel will replace the existing route over the Zigana Pass, which reaches an altitude a.s.l of 2,032m. The construction schedule is 2016 - 2022. The tunnel's geometrical configuration accommodates all vehicles that use the

roads leading to the tunnel, including overweight vehicles. Upon completion of the tunnel, the existing road will be shortened by 8km. In 2020, 2 x 11,430m lengths of excavation and support, and 2 x 8,130m long final concrete lining were completed.

### Egribel Tunnel

The 5,905m long tunnel is a twin-tube, drill and blast excavation with a construction schedule between 2019 - 2022. The total length of the project with connection roads is 7.7km and connects the Eastern part of Black Sea Region to Central Anatolia. Currently, excavation and support is complete and of 4522m of final concrete lining, 4486m is complete in the right tube, and 36m in the left tube.

### Alacabel Tunnel

The Alacabel Tunnel is on the route connecting the Konya and Antalya provinces. The project is 19.2km long and consist of 2 x 7,360m of tunnel and an 11.8km long divided road. The construction time is from 2016 - 2021 and work progress

rate is at almost 99%. In 2020, 10,595m excavation and support, with 8,532m of final concrete works were completed.

### Kirik Tunnel

The project section is 15.78km long, situated on the axis between the Rize and Erzurum provinces. It includes the 7,105m long Kirik Tunnel. When the Kirik tunnel and the Ovit tunnel open to the traffic on the same route, it will negate sixmonths of road closure in the winter season. The construction time is 2013 - 2023. The progress rate of the project is 37%, and in 2020, 8,606m (61%) excavation and support and 1,537m (11%) of final concrete lining were completed.

### Kop Tunnel

The Kop tunnel lies on the 11.2km long section of the route from Askale to Bayburt and includes 6,500m twin-tube Kop tunnel and 4.7km of connection roads. When complete, access between the Gurbulak Border Gate and the Trabzon Port will be made easier. With the completion of the tunnel, economic and social structures of the Black Sea, Eastern Anatolia and Southeastern Anatolia will be greatly improved. The construction period is from 2011 - 2023 and work progress as of 2020 is 43% in total. 6,920m excavation and 53% of support with 3894m final concrete lining were completed in the tunnel on the previous year.

### Ilgar Tunnel

Ilgar Tunnel is on the route between Ardahan Province and Posof town which is on the Georgia border. There are 2 x 4.9km long twin-tube tunnels within the project. With the completion of the Ilgar Tunnel, the route will be shortened by 5km. The construction period is 2017 - 2023. In 2020, 320m of excavation and support, and 260m of final concrete lining were completed.

### Sertavul Tunnel

The tunnel is on the axis of the connection between the Karaman andmersin provinces. The project is 9.8km in total, with a twin-tube, 2 x 3,300m long tunnel and connection roads. The construction time is 2017 - 2022 and work progress is 25%.

### Salarha Tunnel

The Salarha tunnel and connection road project is 4,300m in length and includes the 2 x 2,958m long, twin-tube Salarha tunnel, three bridges of 231m length, and 1,335m long connection roads. Construction time is 2019 - 2021. The progress is at 80% in total. In 2020, the right tube of the Salarha



Zigana tunnel

tunnel was completed with connection roads. The planned completion of the tunnel construction works is this year.

### Yusufeli Dam Relocation Road Tunnels

The Yusufeli Dam is located approximately 40km southeast of the Artvin Province and 10km downstream of the Yusufeli sub-province located on the Coruh River. When completed, the 275m high Yusufeli Dam will be highest dam in Turkey, and will be the third highest double curvature concrete arch dam in the world. The Yusufeli Dam Relocation Road has a total 32,911m long, 22 single tube tunnels, 14 of which have completed.

### Trabzon Askale State Road Tunnels:

The road is located in the North South axis of Turkey. The 214.2km long road features 20 twin-tube tunnels of a total 46,747m, and 11 single tube tunnel reaching 5,039m in length. These projects will give drivers amore comfortable and safer experience. Total construction progress is at 52% with 20,998m long of twin-tube tunnels, and 5,039m long single tube tunnels completed.

### Pirinkayalar Tunnel

The Pirinkayalar tunnel is on the 3.34km state road on the connection between Artvin and Erzurum provinces. The project consist of the 2,302m long Pirinkayalar tunnel with a single lane and 1.04km of connecting road. In 2020, 100% of excavation and support, and 50% of final concrete lining was completed in the tunnel. The construction time is 2017 - 2023.

### Mediterranean Coastal Road Tunnels

The mediterranean Coast Road between mersin and Antalya is 440km long and includes a total 45,685m length in 34 tunnels. The construction of 19 tunnels with total length of 15,084m has been completed to date.

### Dudullu-Bostanci Subway Line

The Dudullu-Bostanci Subway Line will be 14km long. The journey will take 21minutes on the Dudullu-Bostanci Subway Line, which will have 13 stations. With the connection to bemade at the Kozyatagi Station, the transfer to Kadikoy-Pendik Subway Line will be provided. In 2020, 70% of the tunnel excavation was achieved.

### Atakoy-Basın Express - İkitelli Subway Line

The Atakoy-Basın Express - İkitelli Subway Line will be 13km long and will have 12 stations. The line starts from İkitelli Guney Sanayi and the road follows a corridor



Yusufeli Dam Relocation Road Tunnels

parallel to the Basin Express Access Road. Construction progress to date is 61%.

### Umraniye – Atasehir – Goztepe Subway Line

This double decked tunnel will have a 13km length with a 21minute long journey. The Umraniye – Atasehir – Goztepe Subway Line is currently under construction. Five TBMs are working on the project.

### Halkali New Airport Subway Line Construction

The Halkali New Airport Subway Line is being excavated between Gayrettepe and Istanbul Airport. The tunnel's total length is 61,184m which and designed as double deck. The Line is under-construction using TBM and NATM methods. Nine percent progress, or over 33.2km has been achieved by TBM. In the NATM tunnel works 3.8% progress of 24.5km has completed.

### Gayrettepe - Kagithane New Airport Subway Line

The Halkali New Airport Subway Line is an under-construction project being built using TBM and NATM methods. The total length of the line is 61,184m with both single and double deck configurations. Excavation is at 97% and lining at 65%.

### Basaksehir – Kayasehir Subway Line

The Başakşehir – Kayaşehir Subway Line

is 6187m with 19minutes of travel time. Themethod of the orbicular subway line's construction is TBM with a double deck tube. Work progress is at 25%.

### Bakırköy Bahcelievler Subway Line

The Bakırköy – Bahcelievler Subway Line is totally 2063, 53m and includes seven stations. Within the scope of the project NATM and TBM tunnel designs are included in the double deck tube.

### Babakaya and Silvan Irrigation Tunnels

Within the scope of Southeastern Anatolia Project, the Babakaya and Silvan Tunnels are being built to bring water from the Silvan Dam (under construction). The Babakaya Tunnel is 5,320m long, 7m i.d. with two tubes. The Silvan Tunnel is constructed as a single tube with a length of 13.4km and a diameter of 10m. The water in the dam will be transferred to the 97.6km long main canal through the Silvan and Babakaya Tunnels, 712.50m of progress has been made at the exit of the tunnel. Efforts are underway to adapt the TBM for trapped underground gas.

### Hadimi Irrigation Tunnel

The Hadimi Tunnel is an 18,136m long tunnel that will transfer water stored in the Afsar Dam to Bagbasi Dam. The Hadimi Tunnel is one of the biggest projects in the region, and in Turkey. 11,505m of the tunnel

Yusufeli Dam Relocation Road Tunnels



has been excavated by TBM, and 6,631m of the tunnel is constructed by conventional drill and blast.

#### Sabiha Gokcen Rail Systems

The Sabiha Gokcen Rail System is totally 14,536m and designed by NATM method. The rail systems are complete and are designed as double deck.

#### Istanbul Bakirkoy – Bahcelievler – Kirazli Subway Line

The Istanbul Bakirkoy – Bahcelievler – Kirazli Subway Line will be 13,111m long. The journey will take 13.5 minutes from Bakirkoy to Kirazli. The line contains eight stations and are designed as double deck and using TBM. TBM Tunnel construction features between the Bakirkoy Incirli stations. Upon completion of the Incirli Truss structure, TBM works resumed from Incirli Station to Kirazli. In this subway 66% of tunnel excavation works, 47% of Station reinforced concrete works, and 25% of rail laying works have been completed. Total progress on the project is 62%.

#### Omerler Underground Coalmine Tunnel

Omerler Underground Coalmine Tunnel in Kutahya, Turkey is currently under operation. It consists of coal production, which is carried out by fully mechanized excavation with block dent from the back using the recyclable longwall method. Panel sizes are in various lengths, and the lengths inside the feet vary between 90 - 110m. The galleries opened are used for the transportation of materials, coal and people.

### FUTURE TUNNELLING ACTIVITIES

#### Drinking Water Tunnels

- Yatagan Tunnel (Mugla) (12.199m)
- Merkez Karakent Pond (Burdur) (555m)
- Emirdag Pond (Afyonkarahisar) (410m)
- Mersin Pamukluk Dam Irrigation Lead Channel and Facilities Construction Work (Mersin) (4,618m)
- Mugla Yatagan Project mugla Drinking Water Transmission Line Project Construction (Mugla) (12,281m)

#### Irrigation Tunnels

- Cermik Kale Project - Kale Dam and Irrigation Project, main Irrigation Line (Diyarbakir) (9,505m)
- Adiyaman Buyukcay Irrigation Tunnel (Adiyaman) (9,269,35m)
- Erzurum Elmali Tunnel (Erzurum) (9,000m)
- Erzurum Pasinler Soylemez Dam and Irrigation (Gemlik Tunnel) (Erzurum) (5,800m)
- Goksu Araban Project Besni Keysun Kizilin and Pazarcik Kizkapanli Irrigation Project (Tunnel 2) (Adiyaman) (4,660m)
- Goksu Araban Project Besni Keysun Kizilin and Pazarcik Kizkapanli Irrigation Project (Tunnel 1) (Adiyaman)
- Asagi Cekerek Project Zile, masat Resadiye Cekerek and mamure Plain Irrigation (Tokat) (983m)
- Samsun Salipazari Dam Irrigation (Samsun) (289.35m)
- Erzurum Pasinler Soylemez Dam Irrigation (Gemlik Tunnel) (Erzurum) (5,625m)
- Erzurum Pasinler Soylemez Dam

- Irrigation (T1 Tunnel) (Erzurum) (2,848.99m)
- Erzurum Elmali Tunnel (Erzurum) (9,000m)
- Kalaba-Seyfe Irrigation Transmission Tunnel-1 (Kayseri/Yamula) (3,360m)
- Kalaba-Seyfe Irrigation Transmission Tunnel-2 (Kayseri/Yamula) (650m)
- Antalya Demre Cevreli Neighborhood Taskin Protection Construction Work (Antalya/Demre) (1,595m)
- Egirdir Tepeli Pond (Isparta) (406m)
- Egirdir Caykoy Dam (Isparta) (372m)
- Sinanpasa Kayadibi Pond (Afyonkarahisar) (116m)
- Merkez Karakent Pond (Burdur) (555m)
- Cavdir Buyukalan Pond (Burdur) (269m)

#### Highway Tunnels - Double Tube

- East-West Ring Road T-1. Tunnel (Samsun) (2,700m - 2,700m)
- East-West Ring Road T-2. Tunnel (Samsun) (2,700m - 2,700m)
- East-West Ring Road T-3. Tunnel (Samsun) (2,700m - 2,700m)
- (Mersin - Tarsus motorway) Ayr.mersin OSB Connection (Mersin) (279.37m - 279.37m)
- Silifke -mut - 3. Bl. Hd (2. Part) T4 Tunnel (Mersin) (861m - 858m)
- Erdemli - Silifke - Taşucu - 13. Regional Border Road Cut Construction (Mersin) (3,975m - 4,015m)
- Refahiye-Kuruçay-İliç Highway Arpayazi Tunnel (Erzincan) (4,615m - 4,615m)
- Refahiye -Kuruçay -İliç Highway Gümüşakar Tunnel (Erzincan) (1,580m - 1,580m)
- İmranlı-(Refahiye - Suşehri) Kızıldağ Tunnel (Erzincan/Sivas) (6,471m + 6,410m)
- Sakaltutan Tunnel (Erzincan) (8785m - 8775m)
- Ahmediye Tunnel (Erzincan) (6,315m - 6,315m)
- Zara-Geminbeli -Suşehri Highway Bozkır Tunnel (Sivas) (2,545m - 2,545m)
- Şebinkarahisar Ring Road T1 Tunnel (Giresun) (4,440m - 4,440m)
- Palandoken Tunnel (Erzurum) (12,140 - 12,155m)
- Karasu Tunnel (Sakarya) (18m - 7,575m)
- Seferihisar - Kuşadası Highway T1 Tunnel (İzmir) (1,349m - 1,360m)
- Seferihisar - Kuşadası Highway T2 Tunnel (İzmir) (1,616m - 1,651m)
- Seferihisar - Kuşadası Highway T4 Tunnel (İzmir) (2,830m - 2,840m)
- Seferihisar - Kuşadası Highway T6 Tunnel (İzmir) (1,225m - 1,245m)
- Seferihisar - Kuşadası Highway T7 Tunnel (İzmir) (798m - 796m)
- Ankara İzmir Highway T1 Tunnel (Manisa) (3,830m - 3,830m)

- Ankara İzmir Highway T2 Tunnel (Manisa) (3,245m - 3,275m)
- Ankara İzmir Highway T3 Tunnel (Manisa) (1,745m - 1,690m)
- Ankara İzmir Highway T4 Tunnel (Manisa) (2,850m - 2,850m)
- Ankara İzmir Highway T5 Tunnel (Manisa) (4,610m - 4,610m)
- Ankara İzmir Highway T6 Tunnel (Manisa) (3,860m - 3,860m)
- Zonguldak Ring Road T3 Tunnel (Zonguldak) (1,625.8m - 1,367.8m)
- Zonguldak Ring Road T4 Tunnel (Zonguldak) (1,613m - 1,588m)
- Karabük Ring Road T1 Tunnel (Karabük) (8,534.59m - 8,525.4m)
- Karabük Ring Road T2 Tunnel (Karabük) (3,286m - 3,290m)
- Karabük Ring Road T3 Tunnel (Karabük) (229.15m - 210.4m)
- Refahiye - Kuruçay - İliç Devlet Road Sünebeli Tunnel (Erzincan) (5,217.5m - 5,230.5m)

#### Highway Tunnels - Single Tube

- (Borçka - Artvin) Ayr.murgul (Dokap) Province Road (Artvin) (1,131m)
- Hopa - Borçka Devlet Road (Artvin) (538m - 597m)
- Seferhisar -Kuşadası Devlet Road T4 Tunnel (İzmir) (455m)
- Seferhisar -Kuşadası Devlet Road T5 Tunnel (İzmir) (690m)
- (Düzce-Akçakoca) Yiğilca Tunnel (Düzce) (292m)
- Tarsus-Pozantı Devlet Road Tunnel (Mersin) (1,420m)
- Tomarza-Tufanbeyli (Göksun-Sarız) Dist. Road Tunnel (Kayseri) (5,955m)
- Aydıncık-Ermir-Sorgun Province Road Aydıncık Tunnel (Yozgat) (2,850m)
- Fatsa Çatalpınar T1 Tunnel (Ordu) (2,373.7m)
- Palu-Beyhan-Gökdere Province Road T1 Tunnel (Elazığ) (1,890m)
- Mardin-Midyat-Savur Province Road T1 Tunnel (Mardin) (440m)
- Mardin-Midyat-Savur Province Road T2 Tunnel (Mardin) (198m)
- Mardin-Midyat-Savur Province Road T3 Tunnel (Mardin) (290m)
- Eruh-Fıfık-Bağgöze Province Road T1 Tunnel (Siirt) (2,190m)
- Tonya-(Tirebolu-Torul) Province Road T1 Tunnel (Trabzon/Gümüşhane) (333m)
- Tonya-(Tirebolu-Torul) Province Road T2 Tunnel (Trabzon/Gümüşhane) (2,260m)
- (Borçka - Artvin) Ayr.murgul (Dokap) Province Road (Artvin) (1,131m)
- Hopa - Borçka Devlet Road (Artvin) (538m - 597m)
- Seferhisar -Kuşadası Devlet Road T4 Tunnel (İzmir) (455m)



Alacabel tunnel

- Seferhisar -Kuşadası Devlet Road T5 Tunnel (İzmir) (690m)
- (Düzce-Akçakoca) Yiğilca Tunnel (Düzce) (292m)
- Tarsus-Pozantı Devlet Road Tunnel (Mersin) (1,420m)
- Tomarza-Tufanbeyli (Göksun-Sarız) Dist. Road Tunnel (Kayseri) (5,955m)
- Aydıncık-Ermir-Sorgun Province Road Aydıncık Tunnel (Yozgat) (2,850m)
- Fatsa Çatalpınar T1 Tunnel (Ordu) (2,373.7m)
- Palu-Beyhan-Gökdere Province Road T1 Tunnel (Elazığ) (1,890m)
- Mardin-Midyat-Savur Province Road T1 Tunnel (Mardin) (440m)
- Mardin-Midyat-Savur Province Road T2 Tunnel (Mardin) (198m)
- Mardin-Midyat-Savur Province Road T3 Tunnel (Mardin) (290m)
- Eruh-Fıfık-Bağgöze Province Road T1 Tunnel (Siirt) (2,190m)
- Tonya-(Tirebolu-Torul) Province Road T1 Tunnel (Trabzon/Gümüşhane) (333m)
- Tonya-(Tirebolu-Torul) Province Road T2 Tunnel (Trabzon/Gümüşhane) (2,260m)
- Tonya-(Tirebolu-Torul) Province Road T3 Tunnel (Trabzon/Gümüşhane) (493m)
- Tonya-(Tirebolu-Torul) Province Road T4 Tunnel (Trabzon/Gümüşhane) (3,640m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T1 Tunnel (Trabzon) (184.65m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T3 Tunnel (Trabzon) (98.88m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T4 Tunnel (Trabzon) (718.82m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T5 Tunnel (Trabzon) (915.84m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T6 Tunnel (Trabzon) (1,276.65m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T7 Tunnel (Trabzon) (597m)
- Yağlıdere-Şebinkarahisar-Alucra Roads

- 1.Part T8 Tunnel (Trabzon) (82.08m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T9 Tunnel (Trabzon) (194m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T10 Tunnel (Trabzon) (232m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T11 Tunnel (Trabzon) (296.4m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T12 Tunnel (Trabzon) (1086m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T14 Tunnel (Trabzon) (164.3m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T15 Tunnel (Trabzon) (283.3m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T16 Tunnel (Trabzon) (248.24m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T17 Tunnel (Trabzon) (749.75m)
- Yağlıdere-Şebinkarahisar-Alucra Roads 1.Part T18 Tunnel (Trabzon) (157.75m)
- (Borçka-Artvin) -murgul (Dokap) Province Road Tunnel -4 (Artvin) (101m)
- (Borçka-Artvin) -murgul (Dokap) Province Road Tunnel -5 (Artvin) (232m)
- Bulancak-Kovancık Province Road 3. Part T1 Tunnel (Trabzon) (2,330m)
- (Muş -Solhan) Kızılağaç -9. Bl.Hd. Road T1 Tunnel (Muş) (797m)
- (Muş -Solhan) Kızılağaç -9. Bl.Hd. Road T2 Tunnel (Muş) (921m)
- Tortum -İspir Road Tunnel Crossing (Erzurum) (6,849m)
- Ankara İzmir Highway T7 Tunnel (Manisa) (2,810m - 2,833m)
- Ankara İzmir Highway T8 Tunnel (Manisa) (860m - 830m)
- Bodrum Ring Road T1 Tunnel (Muğla) (6,647m - 6,407m)
- Bodrum Ring Road T2 Tunnel (Muğla) (2,380m - 2,440m)
- Bodrum Ring Road T3 Tunnel (Muğla) (695m - 695m)
- Bodrum Ring Road T4 Tunnel (Muğla) (1,390m - 1,390m)

Kırık tunnel



- Akşehir - Yalvaç - Şarkikaraağaç Road Cankurtaran Tunnel (Konya) (4,373,6m - 4,403,6m)
- Ankara İzmir Highway T1 Tunnel (Ankara) (3,465m - 3,465m)
- Ankara İzmir Highway T2 Tunnel (Ankara) (1,148m - 1,142m)
- Ankara İzmir Highway T3 Tunnel (Ankara) (1,076m - 1,064m)
- Ankara İzmir Highway T4 Tunnel (Ankara) (2,692m - 2,666m)
- Eskişehir - Seyitgazi - Kırka 3. Bl. Hd. Road T1 Tunnel (Eskişehir) (640.5m - 640.5m)
- Eskişehir - Seyitgazi - Kırka 3. Bl. Hd. Road T2 Tunnel (Eskişehir) (620m - 620m)
- Eskişehir - Seyitgazi - Kırka 3. Bl. Hd. Road T3 Tunnel (Eskişehir) (1,924m - 1,924m)
- Nallıhan -mudurnu Road T-2 (Hodan) Tunnel (Ankara) (4,371m - 4,366m)
- Nallıhan -mudurnu Road T-5 Tunnel (Ankara) (969.4m - 949.6m)
- Nallıhan -mudurnu Road T-6 (Tavşansuyu) Tunnel (Ankara) (305m - 390m)
- Nallıhan -mudurnu Road T-7 (Dokurcun) Tunnel (Ankara) (2,844.9m - 2,809.3m)
- Erdemli - Silifke -Taşucu T4 Tunnel (Mersin) (300m - 288m)
- Erdemli - Silifke -Taşucu Limankalesi Tunnel (Mersin) (850m - 850m)
- (Mersin - Tarsus Highway) D400 Bağcılar Tunnel (Mersin) (135m - 110m)
- Mardin Ring Road T2 Tunnel (Mardin) (426m - 358m)
- Mardin Ring Road T3 Tunnel (Mardin) (1,961m - 1,881m)
- Diyarbakır -Silvan Bingöl road T1 Tunnel (Diyarbakır) (1,662m - 1,667m)
- Rize - İspir (Dap) (Dokap) Road İkizdere - 2 Tunnel (Rize) (1,218m - 1,229m)
- Giresun Ring Road T1 Tunnel (Trabzon) (683.23m - 646.25m)
- Giresun Ring Road T2 Tunnel (Trabzon) (4,150m - 4,162m)
- Giresun Ring Road T4 Tunnel (Trabzon) (1,761m - 1,761m)
- Giresun Ring Road T5 Tunnel (Trabzon) (1,289m - 1,259m)
- Giresun Ring Road T6 Tunnel (Trabzon) (1,310m - 1,310m)
- Giresun Ring Road T7 Tunnel (Trabzon) (1,672m - 1,672m)
- Giresun Ring Road T8 Tunnel (Trabzon) (2,415m - 2,425m)
- Giresun Ring Road T9 Tunnel (Trabzon) (1,108m - 1,115m)
- Giresun Ring Road T10 Tunnel (Trabzon) (125m - 90m)
- Fatsa Ring Road T1 Tunnel (Ordu) (4,080m - 4,100m)
- Fatsa Ring Road T2 Tunnel (Ordu) (1,240m - 1,275m)
- Fatsa Ring Road T3 Tunnel (Ordu) (1,055m - 1,040m)
- Fatsa Ring Road T4 Tunnel (Ordu) (195m - 190m)
- Fatsa Ring Road T5 Tunnel (Ordu) (1,055m - 1,040m)
- Fatsa Ring Road T6 Tunnel (Ordu) (190m - 190m)
- Fatsa Ring Road T7 Tunnel (Ordu) (595m - 575m)
- Fatsa Ring Road T8 Tunnel (Ordu) (1,380m - 1,380m)
- (Van-Gürpınar) Güzelsu Devlet Road T1 Tunnel (Van) (298m - 358m)
- (Van-Gürpınar) Güzelsu Devlet Road T2 Tunnel (Van) (320m - 330m)
- Van-Tatvan Devlet Road Küçüksü (Koruklu) Tunnel (Van) (1,518m - 1,338m)
- Tortum - Uzundere Devlet Yolu T-1 Tunnel (Erzurum) (1,619m - 1,619m)
- Tortum - Uzundere Devlet Yolu T-2 Tunnel (Erzurum) (481m - 481m)
- Tortum - Uzundere Devlet Yolu T-3 Tunnel (Erzurum) (366m - 366m)
- Tortum - Uzundere Devlet Yolu T-4 Tunnel (Erzurum) (189m - 189m)
- Tortum - Uzundere Devlet Yolu T-5 Tunnel (Erzurum) (309m - 309m)
- Tortum - Uzundere Devlet Yolu T-6 Tunnel (Erzurum) (855m - 855m)
- Tortum - Uzundere Devlet Yolu T-7 Tunnel (Erzurum) (309m - 309m)
- Merzifon-Gürbulak Highway T1 Tunnel (Erzurum) (1,555m - 1,555m)
- Merzifon-Gürbulak Highway T2 Tunnel (Erzurum) (1,365m - 1,340m)
- Tercan Aşkale Road T1 Tunnel (Erzurum) (3,166m - 3,184m)
- Tercan Aşkale Road T2 Tunnel (Erzurum) (437m - 402m)
- Tercan Aşkale Road T3 Tunnel (Erzurum) (970m - 992m)
- Tercan Aşkale Road T4 Tunnel (Erzurum) (4,717m - 4,679m)
- Palandöken Tunnel (Erzurum) (12,103m - 12,109m)
- (Yenilehir-Bilecik)-(Bozüyük -Osmaneli) Province Road T1 Tunnel (Bursa) (1,627m - 1,585m)
- (Yenilehir-Bilecik)-(Bozüyük -Osmaneli) Province Road T2 Tunnel (Bursa) (911m - 930.4m)
- (Ankara-İzmir) Bursa Highway Tunnel (Bursa) (7,300m - 7,510m)
- Zonguldak Ring Road T1 Tunnel (Zonguldak) (1,369m - 1,392m)
- Zonguldak Ring Road T2 Tunnel (Zonguldak) (4,884m - 4,969m)

#### Subway Lines - Double Tube

- Halkali New Airport Subway Line Construction Extension (Istanbul) (26,391.5m + 27,237.5m)
- Kirazli-Halkali Subway Extension (Istanbul) (5,960m + 5,940m)
- Halkali New Airport Subway Line Construction Extension (Istanbul) (4,120m + 3,826m)
- Kirazli-Halkali Subway Extension (Istanbul) (1,134m + 1,121m)

#### Subway Lines - Single Tube

- Sefakoy - Beylikduzu - Tuyap Subway Line (Istanbul) (19,000m)
- Haciosman - Sariyer Subway Line (Istanbul) (6,000m)
- Sultanbeyli - Kurtkoy Subway Line (Istanbul) (5,400m)
- Hastane - Sarıgazi - Çekmeköy -Taşdelen

- Yenidoğan Subway Line (Istanbul) (6,900m)
- Eyup – Bayrampasa Streetcar Line (Istanbul) (3,200m)
- Uskudar – Harem Streetcar Line (Istanbul) (2,200m)

### Highway Tunnels - Railway Tunnels

- Burdur – Antalya Railway Projects (5,5870m)
- ITU – Istinye Funicular Railway (3000m)
- Erzurum – Kars Railway Projects (10,800m)
- Erzincan – Erzurum Railway Projects (57,145m)
- Şanlıurfa –mardin Railway Projects (850m) (Mardin)
- Siirt – Kurtalan Railway Projects (16,620m) (Siirt)
- 3. Airportmüselles – Çatalca Railway Projects (7,385m) (İstanbul)
- Malatya – Elazığ Railway Projects (41,750m)
- Elazığ – Diyarbakır Railway Projects (43,335m)
- Eskişehir – Afyon Railways Projects (15,560m)
- Afyon – Burdur Railways Projects (23,940m)
- Merzifon – Samsun Railways Projects (50,611m) (Amasya – Samsun)

- Aksaray – Kayseri Railways Projects (13,460m)
- Gaziantep – Şanlıurfa Railways (2,110m)
- Adiyaman – Golbasi Railway Project (34,110m)

- Nusaybin – Cizre – Silopi – Habur Railways Projects (Mardin – Sırnak) (9,390m)
- Toprakkale - Bahçe BT04 / KT01 – KT06 Railways Project (Osmaniye) (4,891m)

## STATISTICS

### 1. Length or volume excavated - % mechanized / % conventional during 2020:

Length 153,104m - (Mechanized 26,84%, Conventional 73,16%)

Volume 123,078,713m<sup>3</sup> - (Mechanized 22.84%, Conventional 77.16%)

### 2. Amount (USD or EUR) of tunnelling / underground space facilities awarded in 2020: 2,538,048,024 USD

## EDUCATION ON TUNNELLING IN THE COUNTRY

Afyon Kocatepe University  
 Aksaray University  
 Bilecik Seyh Edebali University  
 Bingol University  
 Bursa Technical University  
 Canakkale Onsekiz Mart University  
 Dicle University  
 Dokuz Eylul University  
 Duzce University  
 Erzincan Binali Yildirim University  
 Giresun University  
 Istanbul University – Cerrahpasa  
 Istanbul Technical University

Karabuk University  
 Konya Technical University  
 Kutahya Dumlupınar University  
 Middle East Technical University  
 Mugla Sıtkı Koçman University  
 On Dokuz Mayıs University  
 Recep Tayyip Erdogan University  
 Sivas Cumhuriyet University  
 Sırnak University  
 Toros University  
 Yalova University  
 Zonguldak Bulent Ecevit University