

No	Title of Contract, Location	Brief Description of the project	Client, person to be contacted, address, telephone number	Commencement of services	Completion of services	Total fee (in €)	Total construction costs (in €)	Services
1	2	3	4	5	6	7	8	9
1	Kuyuma Small Hydropower Plant, Turkey	Construction of a SHPP in the province of Samsun/Turkey with an installed capacity of 9,73 MW, 2 inlet structures, total length penstock: 7.86 km, diameter: 1.1. m (steel) and 1.6 /1.8 (GRP) tunnel length: approx. 280 m, 2 Pelton Turbines, powerhouse approx. 10 km transmission line.	Kuyuma Elektrik Üretim A.S. Teknik Yapı Deluxia Palace D:320 K:11 Mor Sümbül Sok, Barbaros Mah, Dereboyu Cad 34010 Bati Atasehir, Istanbul Turkey Wolfgang Kröpfl T: +902 16 969 1434 istanbul@enso.at	08/2019	10/2020	167 000	n.a.	Lenders Engineer Services
2	Gebze-Darica Light Rail System, Turkey	Detailed design for TBM-tunnels for approx. 14 km long LRT System, geomechanical design of 3 mined stations, tender design for stop walls (Portal walls) for TBM tunneling	ARUP Mühendislik ve Müsavirlik Ltd. Sti. MM Plaza Nispetiye Mh. Baslik Sk. No. 3 Kat 1 3430 Levent, Türkiye Ali Sengöz T: +90/212 318 6300 F: +90/212 274 7484 ali.sengoz@arup.com	2017	2018	95 0000	47 243 000	Detailed design for TBM-tunnels
3	Samsun- Kalin Railway Line, Turkey	Rehabilitation of approx. 390 km long single track Railway Line with approx. 40 tunnels with total length of 7.500 m. Rehabilitation works funded by EBRD.	ARUP Mühendislik ve Müsavirlik Ltd. Sti. MM Plaza Nispetiye Mh. Baslik Sk. No. 3 Kat 1 3430 Levent, Turkey Ali Sengöz T: +90/212 318 6300 F: +90/212 274 7484 ali.sengoz@arup.com	06/2016	09/2018	210 000	258 799 875	Detail design for tunnel rehabilitation measures, detail design of slab track in tunnels, detail design of tunnel portal extensions and rock fall protection measures at tunnel portals
4	Kocaeli Light Rail System, Turkey	Expert Consultancy for underground Structures (running tunnels, mined stations), approx. 32 km long LRT system,	Arup-Bogazici JV, Turkey Nispetiye Mahallesi, Başlık Sokak, MM Plaza Nr:3 Kat:1, 34340 Levent, Istanbul T: +90 (212) 318 63 00 Cem Budak cem.budak@arup.com	05/2014	11/2015	95 000	n. a.	Preliminary Design Underground Structures
5	Northern Marmara Motorway Project, Riva and Camlik Tunnels, Turkey	Motorway, Length: approx. 90 km, other connecting roads, Width: 2 x2 lane to 2x4 lane, cable stayed bridge, length: 1875 m, Bosphorus Bridge, Middle span, length: 1275 m, 17 twin tube tunnels, total length appr. 8.7 km	ICTAS - ASTALDI JV Selenium Plaza, 17. Kat. Fulya, Besiktas, Istanbul, Turkey Roberto Sorge Mutafa Ciliz	06/2013	2015	280 000	n.a.	Tender Design Services for the Contractor
6	Karacasu Dam, Turkey	dam crest length is of 650 m, the height is about 65 m	Limak Construction Industry and Trade Inc. Hafta Sokak No. 9, GOP 06700 Ankara, Turkey Atayla Varlik T: +90 (312)212 6214	1999	1999	21 802	n.a.	Consulting Geological Services

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7	Cine Dam Projekt, Turkey	Type of dam: RCC dam Total crest length: 300 m Max. dam heighth: 110 m	Cine Baraji ve HES Insaati, Eskicine mevkii baraj santiyesi Pk.8 Cine – Aydin, Turkey Mr. Bastas Mehmet +90/009/724-2235	05/1998	03/2002	60 000	750 000	consulting, detailed design, geology Geological and geotechnical model of dam site area, 3 Design of grout curtain, 3 Slope stability of reservoir area, 3 Coordination of all technical design with the Contractor, Özkar Insaat, and DSI (State water works)
8	Kavsak HEPP and Weir, Turkey	Power tunnel of appr. 9 km length and 10 m \varnothing ; Water reservoir of appr. 3 km length, water level of 318 m asl	ATA Construction Industry and Trade Inc. Emirhan Cad. No. 145 Atakule A Blok, Dikilitas 80700 Istanbul-Besiktas Mr. Ömer Naci Sezer T: +9/212-326 4800	03/1998	03/2002	56 685	85 106 340	geological studies for optimum tunnel location, construction methods, Study on reservoir permeability
9	Birecik Dam and HPP, Turkey	concrete gravity and clay-cored sand gravel filled dam Total crest length: 2.510 m; max. dam height: 62,6 m Capacity: 672 MW; Annual production: 2.779 Gwh Catchent area: 100.702 km ² ; Reservoir area: 56 km ² Total storage capacity: 1,2 billion m ³ Effective storage capacity: 622 million m ³ Max. operation level: 385 m a.s.l. Min. operation level: 372 m a.s.l	Civil Work JV (Holzmann-Gama-Strabag)	1995	1996	550 000	1 157 000 000	inspections on previous drill cores detailed geological mapping of dam site area geophysical investigations day to day site supervision for further investigation campaign and evaluation of water pressure tests and seepage tests quarry investigation (including geological mapping, supervision of drilling investigation, sample selection for laboratory tests and evaluation of results) for rip-rap material
10	Istanbul Sewerage Project Riva Works, Turkey	Sewer Tunnel Length: 29 000 m Cross section: 22 m ² Alternative design for TBM-Drive	LEAD J.V. Laing-Enka-ATA-Degrotont Istanbul, Turkey	1993	1993	54 000	8 460 765	Consulting NATM Alternatives
11	Metro Istanbul, Lot 1, Turkey	Subway system between Sisli and 4.Levent Station, Length of running tunnels between Sisli and Gayretepe Station: 2 x 1321,0 m Length of running tunnels between Gayretepe and Levent Station: 2 x 933,0 m Length of running tunnels between Levent Station and end of contract: 2 x 397,0 m 12 Cross Adits with total length: 307,2 m, Cross section: 30,96 m ² , Construction method: NATM for all running tunnels, Cut & Cover for all Stations	(Tefken-Gama-Nurol-Kiska Joint Venture) Tekfen Construction and Installation Co. Inc. Ulus Mah, Tekfen Sitesi, Etiler 80600, Istanbul, Turkey Mr. Ceyhan Kalafat - project manager tel. (1) 257 6100 fax. (1) 265 9869	1993	1993	3 180 000	70 635 747	Consulting Detailed Design Construction Supervision
12	Ankara Metro Project, Turkey	Total length: 14.7 km long (6.5 km underground, 4.5 km surface, and 3.7 km elevated railway) , 12 stations. Review of the Preliminary Design Ankara clay, silty sands, sandy silts	Gama/Güris Ankara, Turkey	1992	1992	39 000	27 012 352	Consulting

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13	Kürtün Dam I and II, Turkey	Kürtün Dam Powerhouse cavern, capacity: 80 MW Spans of caverns: 17 and 16 m Cross sections up to 580 m ² , Length: 55 m Transformer cavern: 300 m ² , Length: 38m Distance between caverns: 25 m Height: 34 m and 24 m, Length: 55 m and 37.5 m Rock mechanical consulting, detail design of support elements for caverns	NUROL Construction and Trading Company Inc., Turkey Bugday Sokak No. 9 06700 Kavaklıdere - Ankara Tel.: +90/312 455 1500	1991	1993	101 750	269 347 299	Consulting Detailed Design
14	Izmir Ring Road-Aydin Motorway, Turkey	Karsiyaka and Balçova tunnels, cross section: 120/140m ² , Length: 2 x 3200 m, 2 x 420 m, 2 x 290 m, 2 x 2175 m, 2 x 275 m	EMG Izmir, Turkey	1991	1992	n.a.	n.a.	Detailed design, feasibility study, geological services, mechan. design Cost estimating, ventilation design
15	Anatolian Motorway Gümüşova-Gerede, Stretch No. 2, Bolu Mountains, Turkey	Length of section: 6,4 km, Tunnel length: 2 x 3340 m, cross section: 150 - 260 m ² are separated by a 40 m wide rock pillar Overburden: 10 – 250 m Method of construction: Mined tunnel 3 pedestrian and 3 vehicular cross adits Total Volume of Underground Rock Excavation (m3): ~ 1.150.000 m3, overburden up to 250 m Side galleries on east drive, fault gauges and claystone	Astaldi S.p.A. Turkish Branch Armada Is merkezi Eskisehir Yolu 6/A Blok, Kat. 9, No. 11 - 06520 Söğütözü - Ankara, Turkey Sr. Luigi Realini T:+90/312-219 2100	05/1990 2003	2002 12/2006	5 475 000	232 865 100	Feasibility study, geological investigations, route planning, preliminary project, implementation project, local construction supervision, geotechnical engineer on site
16	Tarsus - Adana – Gaziantep Motorway Section 3 – Tasoluk Tunnel (P1), Turkey	Motorway tunnels, total length: 2 x 376 m, cross section: 125/145 m ² , highly weathered agglomerates, overburden up to 150 m	Tekfen-Impresit J.V. Ulus Mah, Tefken Sitesi Etiler 80600-Istanbul, Turkey Mr. Ümit Özdemir T: +90/212-359 3500	01/1990	03/2002	146 500	116 432 550	Corridor and alignment selection, preliminary design, detailed design, geological-geotechnical investigation, construction supervision with continuous residence on site
17	Tarsus - Adana – Gaziantep Motorway Section 3 – Ayran Tunnel (P2), Adana, Turkey	Motorway tunnels, total length: 2 x 595 m, cross section: 125/145 m ² , highly weathered agglomerates	Tekfen-Impresit J.V. Ulus Mah, Tefken Sitesi Etiler 80600-Istanbul, Turkey Mr. Ümit Özdemir T: +90/212-359 3500	01/1990	03/2002	270 300	116 432 550	Corridor and alignment selection, preliminary design, detailed design, geological-geotechnical investigation, construction supervision with continuous residence on site
18	Tarsus - Adana – Gaziantep Motorway Section 3 – Kizlac Tunnel (P3), Adana, Turkey	Motorway tunnels, total length: 2 x 2.850 m, cross section: 125/145 m ² Highly weathered agglomerates, overburden up to 180 m	Tekfen-Impresit J.V. Ulus Mah, Tefken Sitesi Etiler 80600-Istanbul, Turkey Mr. Ümit Özdemir T: +90/212-359 3500	01/1990	03/2002	1 142 500	116 432 550	Corridor and alignment selection, preliminary design, detailed design, geological-geotechnical investigation, construction supervision with continuous residence on site
19	Tarsus - Adana – Gaziantep Motorway Section 3 – Aslanli Tunnel (P4), Adana, Turkey	Motorway tunnels, total length: 2 x 1.230 m, cross section: 125/145 m ² , highly weathered agglomerates, overburden up to 100 m	Tekfen-Impresit J.V. Ulus Mah, Tefken Sitesi Etiler 80600-Istanbul, Turkey Mr. Ümit Özdemir T: +90/212-359 3500	01/1990	03/2002	520 000	116 432 550	Corridor and alignment selection, preliminary design, detailed design, geological-geotechnical investigation, construction supervision with continuous residence on site

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20	Selatin Tunnel, Turkey	Expressway tunnel Twin tube, three lane Cross section: 130 m ² (155 m ²) Length: 2 x 3000 m	Impregilo S.p.A., Turkey Via Livenza, 1a 00198 Roma, Italy T: +39 (06)854 2741	1989	1991	proportional from 1.890.867	19 000 000	Consulting Construction Supervision
21	Izmir Aydin Motorway, Turkey	6 lane motorway, total length: 149 km, width: 2 x 15.25, Length of bridges: ~ 14.000 m Length of tunnels: ~ 8.950 m including all structures as bridges, over- and underpasses, tunnels, culverts, 4 maintenance and operation centers, 2 service areas, 5 parking areas, 7 toll plazas	General Directorate of Highways Ankara, Turkey (former KGM Karayollari Genel Müdürlüğü Ihsan Akbiyik) 06100 Ankara – Yücepete Mr. Ali Agaoglu T: +90/418 0502	08/1988	09/1993	1 890 867	388 108 500	Consulting Construction Supervision
22	Izmit Bypass Tunnel, Anatolu Motorway, Turkey	Expressway tunnel Cross section: 120/140 m ² Length: 2 x 1100 m, 2 x 600 m three lane Ground conditions: Rock Construction method: NATM	Impregilo S.p.A., Turkey Via Livenza, 1a 00198 Roma, Italy T: +39 (06)854 2741	1987	1990	504 000	49 289 780	Consulting Detailed Design Eelctr. Design Feasibility Study Geological Services Mechan. Design Construction Supervision Ventilation Design
23	South-East Anatolia Irrigation project, Turkey	The Urfa tunnel system is the longest irrigation tunnel system of the world, consisting of two tunnels each with a cross section of 10,4 m and a length of 26.400 m, discharging water from the reservoir of Atatürk Dam.	Akpınar Yapi Sanayii A.S., Ankara, Turkey	1984	1984	38 000	17 858 208 481	Consulting
24	Sincan Ayas Tunnel, Turkey	double track railway tunnel, length: 10,164 m cross section: 85-90 m ²	Rella, Vienna Turkey	1976	1979	25 000	n.a.	Consulting, geotechnical measurements