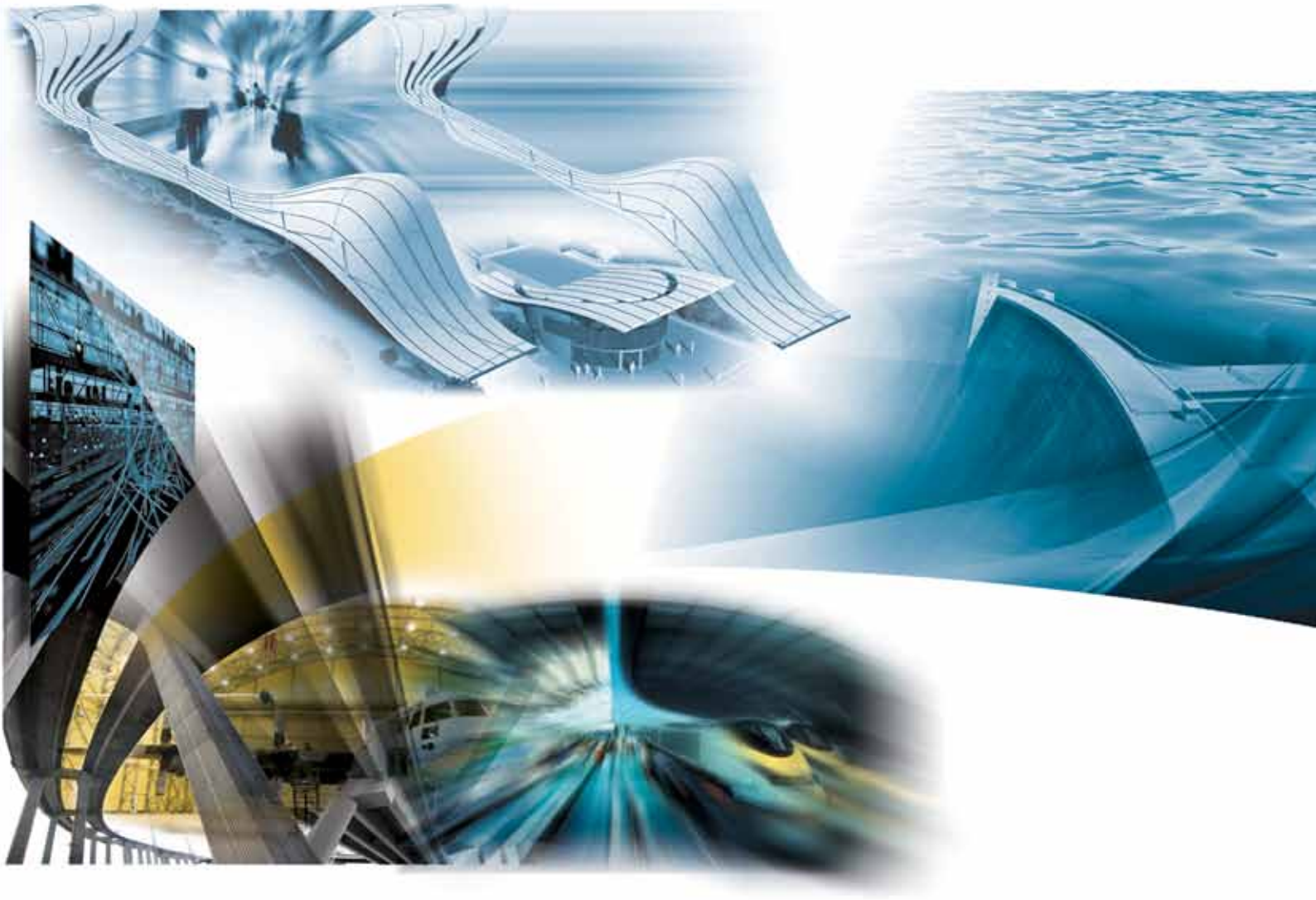
bir Engineering INC.



consultants | **engineers** | architects

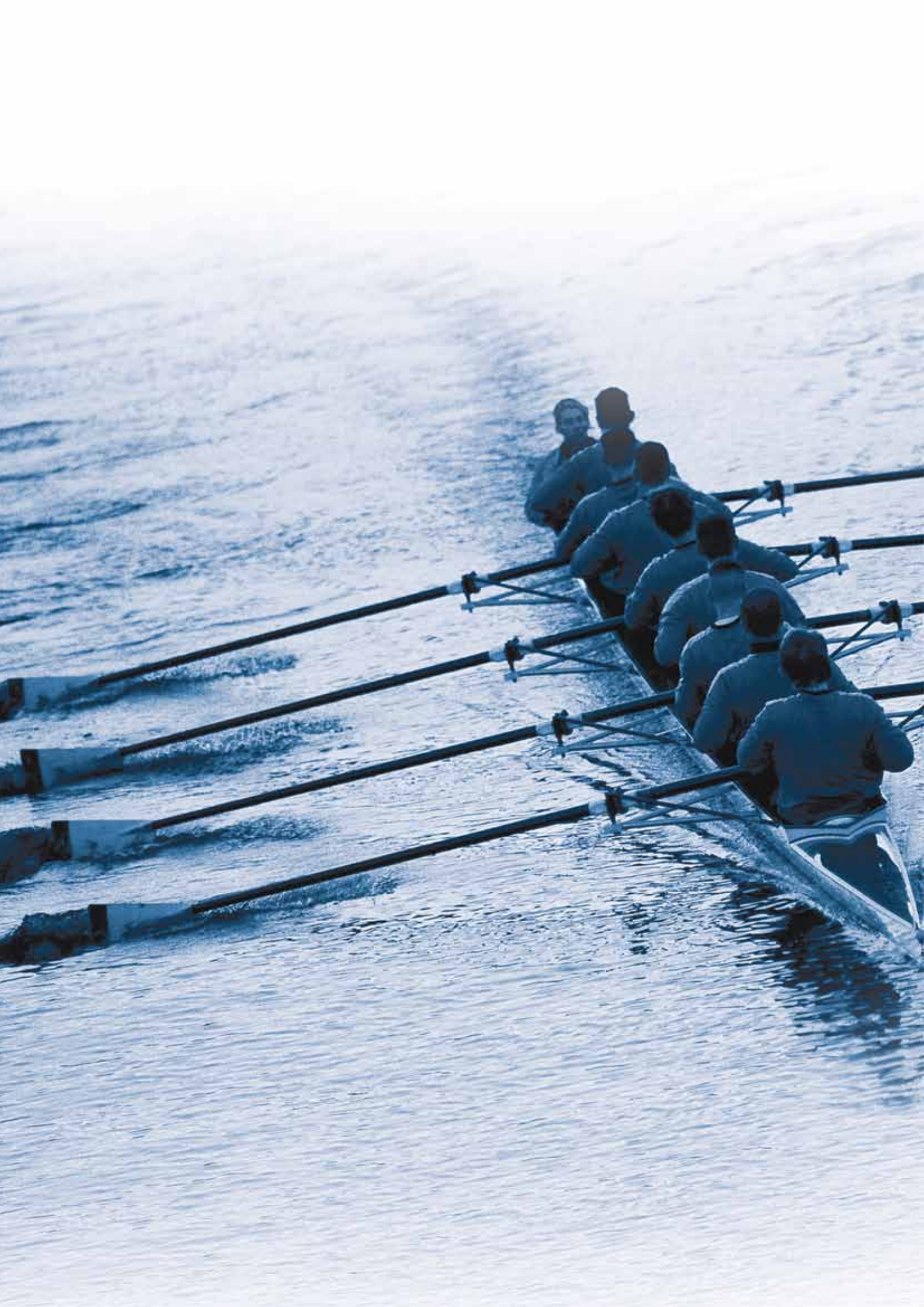
We built civilization

SINCE 1994

bir

provides multi-disciplinary design and
construction management services having architectural,
civil, structural, geotechnical, electrical and
mechanical experts together
under one roof.

Index



Our Vision

Our goal is always to add value...

We aim to increase the value of the company and life quality of humanity for our customers and employers. We intend to make profit proportional to our distinction in order to survive and achieve our goals.

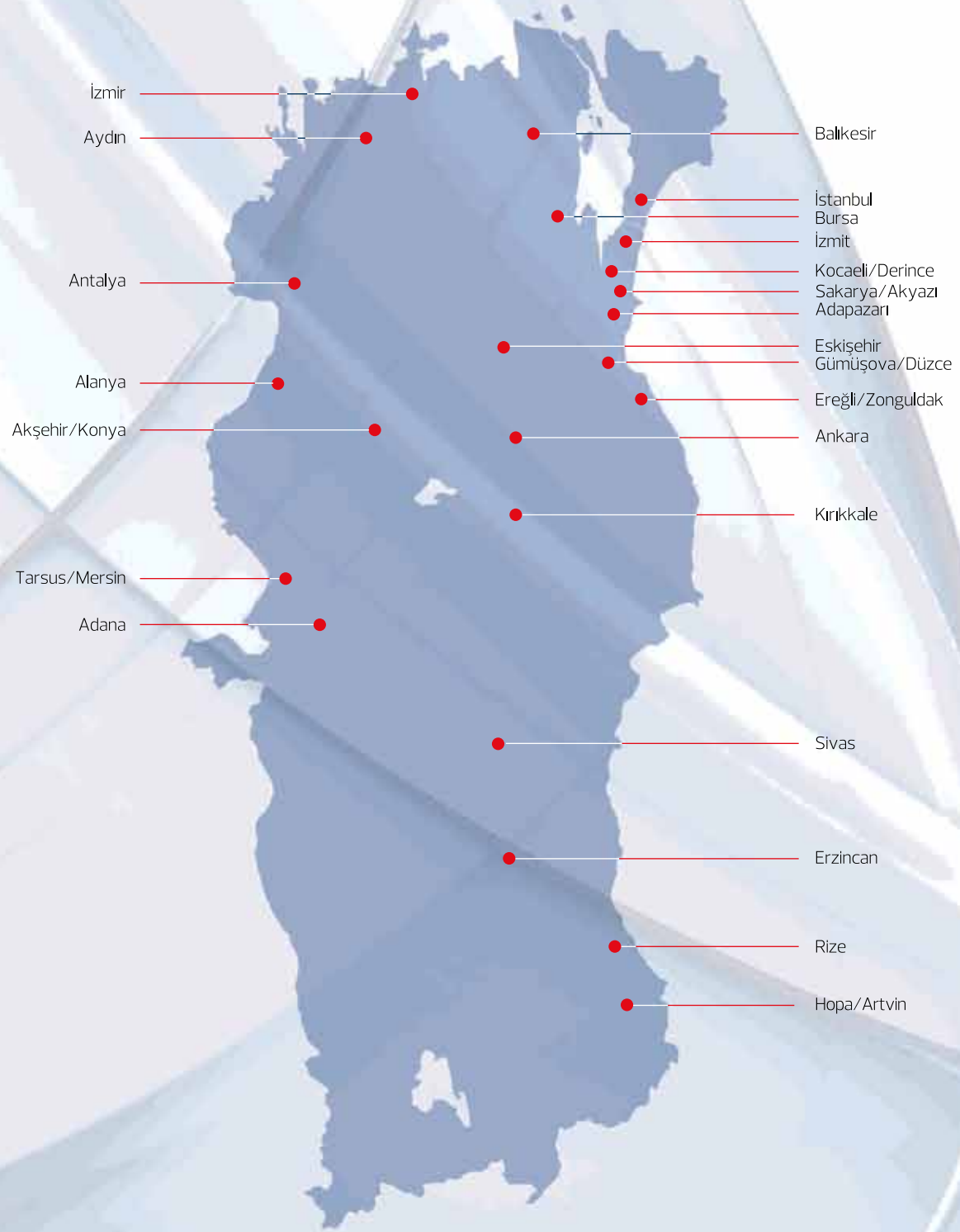
Our vision is underpinned by our values which are to be:

· Customer focused
· Professional
· Quality and goal oriented
· Innovative and continously improving
· Responsive

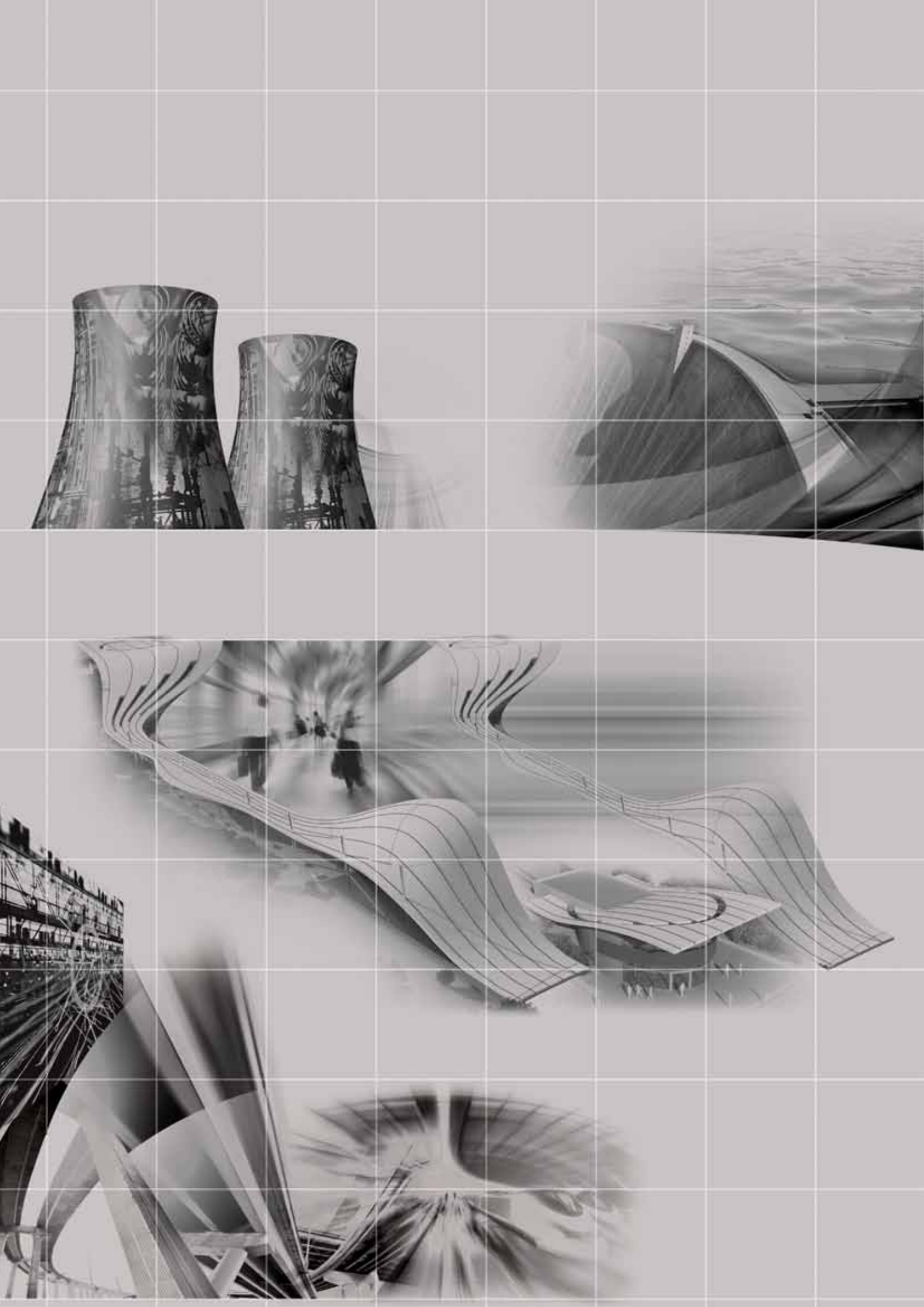
Multinational reach, local knowledge...

With international experience in

bir Engineering INC.



bir Engineering INC.



About Bir

We built civilization...

BIR is an international engineering, design, planning and consultancy firm. Since our founding in 1994, we provide multi disciplinary design and construction management services having civil, architectural, structural, geotechnical, electrical and mechanical experts in house.

We are familiar working with international clients both at home and abroad. Our experience covers both public, residential, and industrial works as well as transport, infrastructure, water and military facilities.

In all phases of design and consultancy work, we commit to provide the most beneficial and practical construction techniques to our customers right at the scheduled calendar.

Our technical knowledge and experience are supported by the project management capability that **BIR** brings to major projects, incorporating sustainability and safety principles to meet client and community requirements with the following areas:

Transport and Structures
- Bridges and Roads
- Railway Systems
- Tunnels
- Aviation and Airports
- Ski Slopes

Public Service Buildings
- Residential
- Defence
- Education
- Healthcare
- Manufacturing
- Corporate
- Sport & Leisure
- Transport

Water and Environment
- Water Infrastructure
- River Engineering
- Wastewater Treatment and Disposal
- Dam
- Sea Outfall

Industrial Projects
- Power Plant
- Mining Plant
- Factories

QUALITY POLICIES
(BS EN ISO 9001:2008
Quality Management System)

HEALTH & SAFETY POLICIES
(OHSAS 18001:2007
Health and Safety Assessment Systems

ENVIRONMENT POLICIES
BS EN ISO 14001:2004
Enviromental Management System


bir
Mühendislik A.Ş.

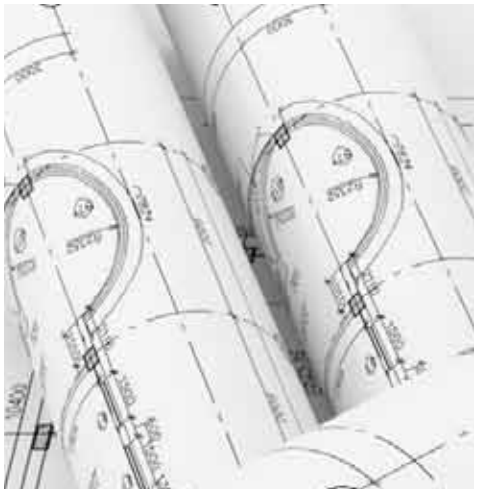
bir Engineering INC.

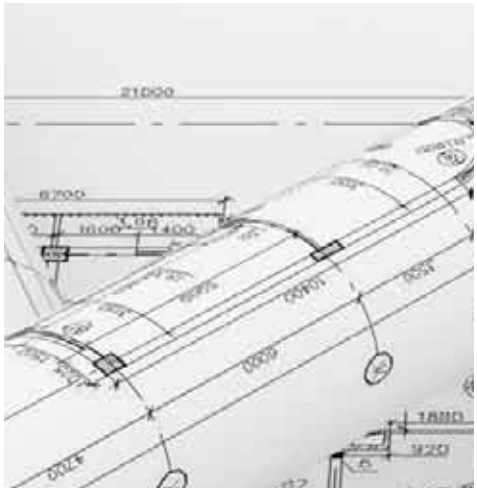
Services

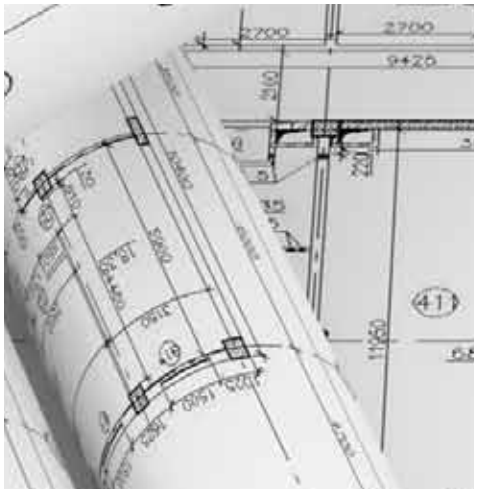
We remove the barriers to better business...

Services

1– Design & Planning







We consistently deliver innovative technical solutions to our clients through a collaborative and open work style where we develop a strong appreciation of the project's requirements.

Our teams of planning specialists in the field of constructive civil engineering elaborate technical solutions of the highest quality. Holistic concepts emerge from the interdisciplinary cooperation with infrastructure planners, engineers and experts within our company.

BIR delivers design & planning services to clients around the world – from project concept to completion and commissioning.

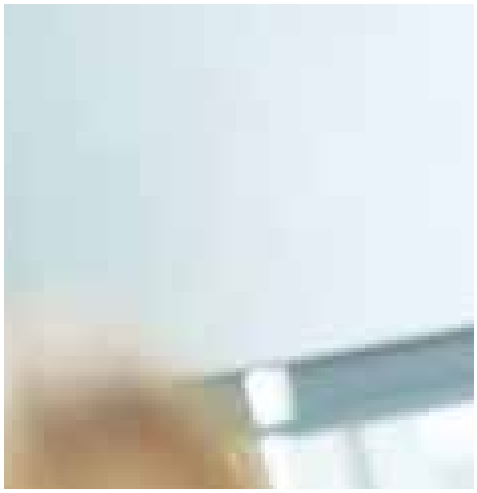
The core competencies of BIR are the design & planning of:

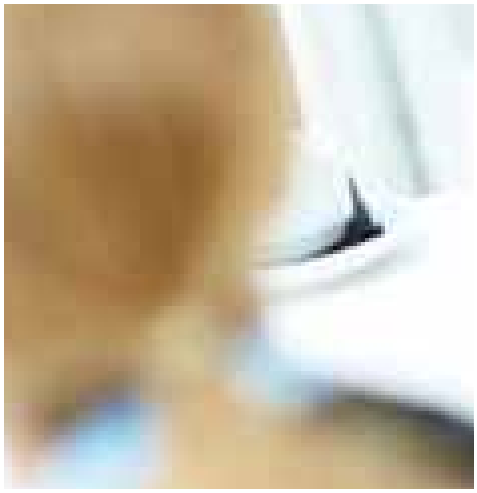
- Buildings
- Bridges & Roads
- Tunnel Structures
- Railway Systems
- Airports
- Ski Slopes
- Water Infrastructure
- River Engineering
- Wastewater Treatment and Disposal
- Dams
- Sea Outfalls
- Power Plants
- Mine Plants
- Factories
- Underground Stations
- Special Structures & Foundations

We work closely with our clients to provide sustainable investments...

Services

2- Consultancy





Our consultancy experts provide clients with an extensive range of pre-construction and construction related services and solutions for projects of varying scope, budget, schedule and complexity.

As a project progresses – or increases in complexity – we customize our consultancy services to fit each client's unique needs and requirements. Our suite of services cover every aspect of a client's project from design to completion.

BIR consultancy team ,with local knowledge and global expertise provides consultancy services starting from the feasibility studies to commissioning stage.

- Design Review
- Design Control & Project
- Implementation
- Feasibility Studies
- Business Plan Preparation
- Cost Estimating & Budgeting & Control
- Bid & Contract Evaluation
- Value Engineering
- Scheduling
- Document Control
- Project Quality Plan
- Health & Safety
- Test and Commissioning Management

We ensure projects are delivered successfully by managing solutions during all stages and fulfilling cost, time, quality and safety requirements....

Services

3-Project Management

Project development, from feasibility analysis, environmental assessment, geotechnical studies to preliminary and final design, construction supervision and multi-disciplinary support for technological systems.

On the basis of investment analyses and incorporating financing models and special financing models, we exploit a project in an optimum economic manner as a holistic product.

BIR will help you find the best solutions in the following issues:

- Master Planning & Scheduling
- Application Projects and Shop Drawings
- Construction Supervision
- Procurement,Testing and Handover
- Cost Estimating & Budgeting
- Cost Planning & Control
- Tender Documentation
- Bid & Contract Evaluation
- Contract Management
- Selection and Evaluation of Contractors
- Claim Evaluation
- Document Management
- Project Quality Plan
- QA/QC
- Risk Management
- Health & Safety Management

We deliver exceptional ideas and solutions...

Services

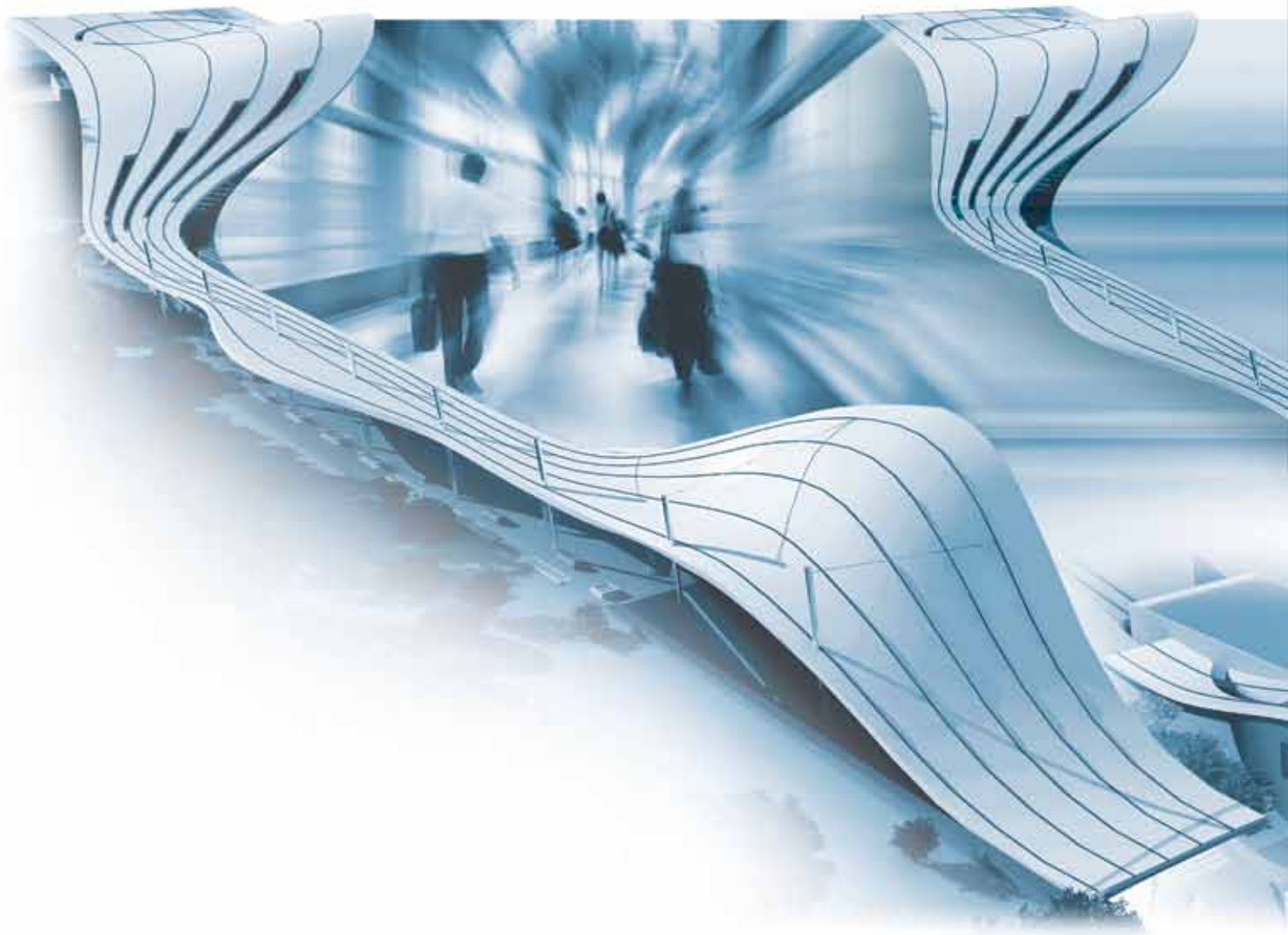
4-Geotechnical & Survey Engineering

Construction of every structure takes place under or on ground, therefore proper geotechnical investigation, analysis and design play a vital role in the civil engineering design. Geotechnical considerations, calculations and limitations affect the civil/structural design, safety and service ability of the structure.

BIR ensures safe and economical geotechnical solutions by following the latest developments in the geotechnical engineering literature and utilizing the most comprehensive design methods.

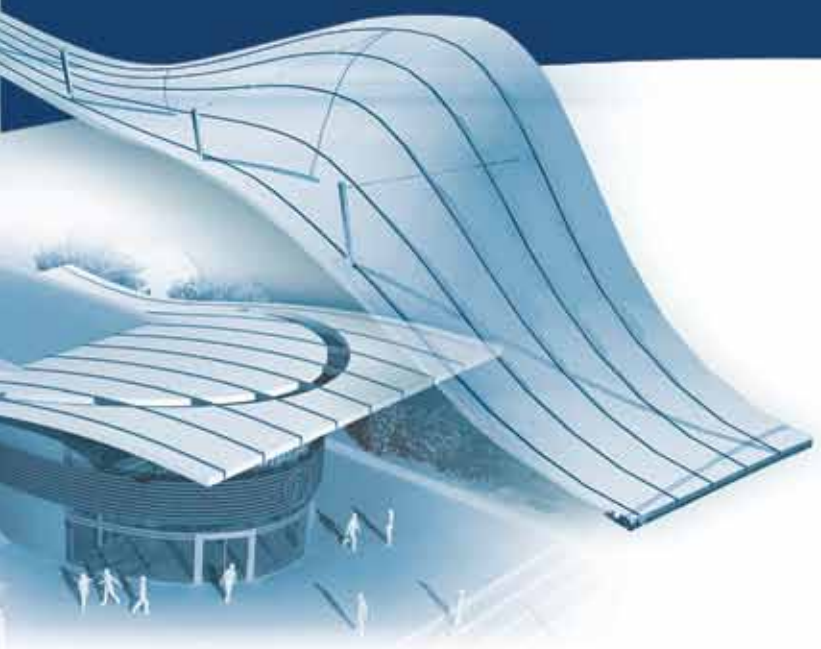
Field of activities:

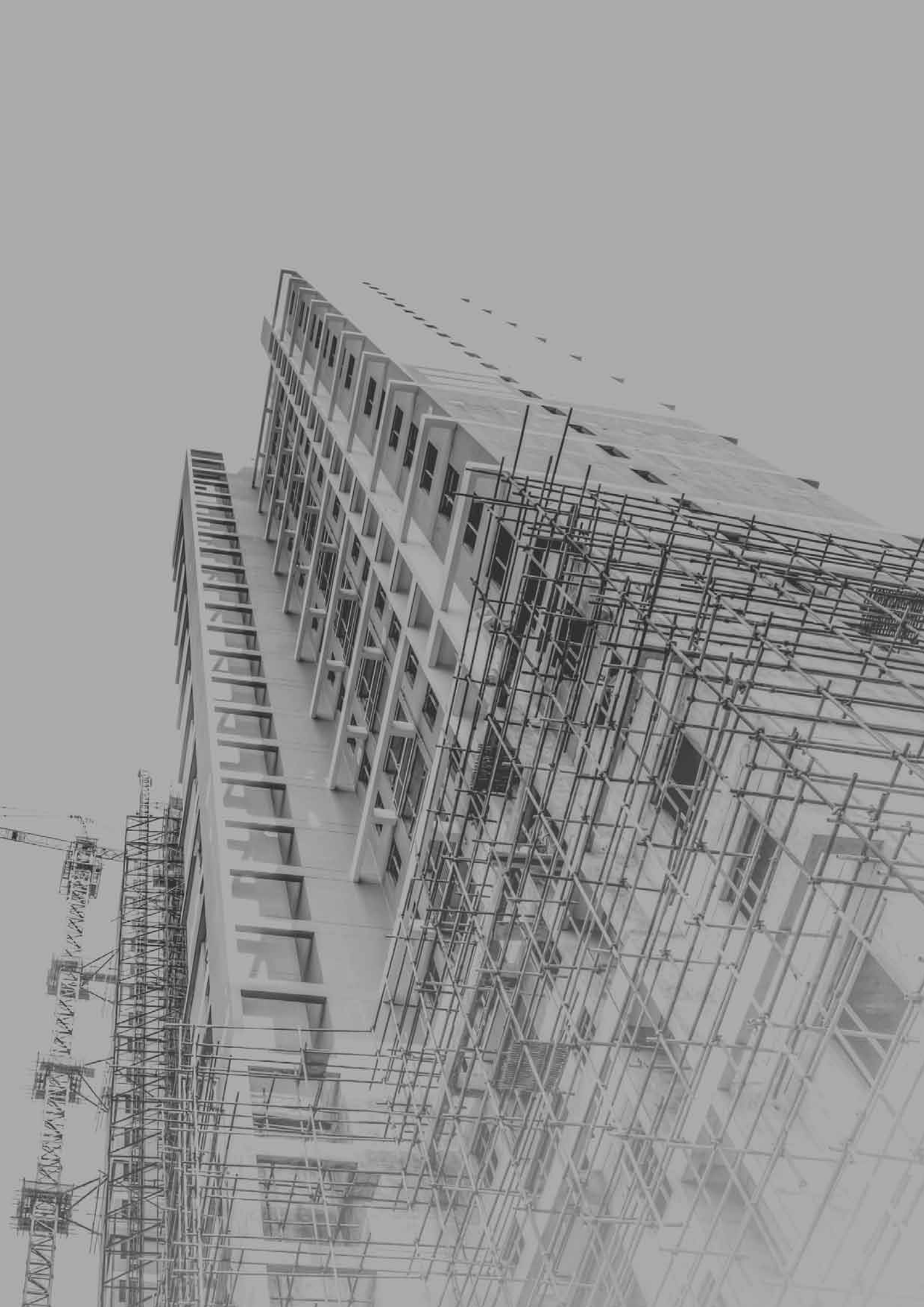
- Deep Excavations
- Tunneling
- Shallow and Deep Foundations
- Soil & Rock Slope Stability
- Retaining Walls
- Soil Improvement
- Seismic Resistant Design



bir Engineering INC.

Public Service Buildings





Public Service Buildings

Balance between art & technology, form & function, beauty & purpose, vision & result...

Our team of architects and engineers have been successfully ensuring the efficient implementation of building projects at home and abroad.

Sectors;

- Residential
- Hospitality
- Defence
- Education
- Healthcare
- Manufacturing
- Transport

BIR Services;

- Master Planning
- Civil & Structural Engineering
- Architectural & Interior Design
- Landscape Architecture
- Geotechnical and Survey Engineering
- Electrical & Mechanical & Plumbing Engineering
- Infrastructure and Roads Design
- Seismic Retrofitting
- Construction Supervision
- Project Management

We have **Building Information Modeling (BIM)** solutions for planning, design, construction, and management of your building, infrastructure or plant projects.

- Schedule Simulations & Reports
- Allows cost estimation of human resources, raw materials and structural components
- Site Planning & Construction Management
- Eliminate clashes & errors earlier
- Enabling the team to make better informed decisions
- Save time
- Better coordination
- Fewer errors
- Easy revision
- Save resources
- Greater productivity
- Higher quality
- Effective marketing presentation

Our Electrical / Mechanical experience;

BIR designs reliable, comfortable, controllable, easily maintained, economic electrical & mechanical systems for the benefit of building users, operators and investors.

- Edge and Flood Lighting of Aviation Surfaces
- Grounding & Lightning Protection of Paved Areas
- Interior Power Distribution of Buildings
- Fire Alarm Systems
- Communication Systems
- Lighting Design of Buildings
- Power Distribution
- Building Automation
- Heating Infrastructure
- Building Systems (HVAC, Fire and Plumbing)
- Water Transmission and Pump Stations

bir Engineering INC.

Project	Al Fateh University, Economy and Law Faculty Buildings
Client	ODAC (Organization for Development & Promotion of Administrative Centers) / Nurol Construction Co.
Country	Tripoli / Libya
Project Period	2008–2010
Services	• Detail Design & Planning

The contract covers design of 27,500 sqm of Faculty of Economy and 16,000 sqm of Faculty of Law Buildings located within the campus of Al Fateh University. Al Fateh University is one of two biggest universities in Libya.

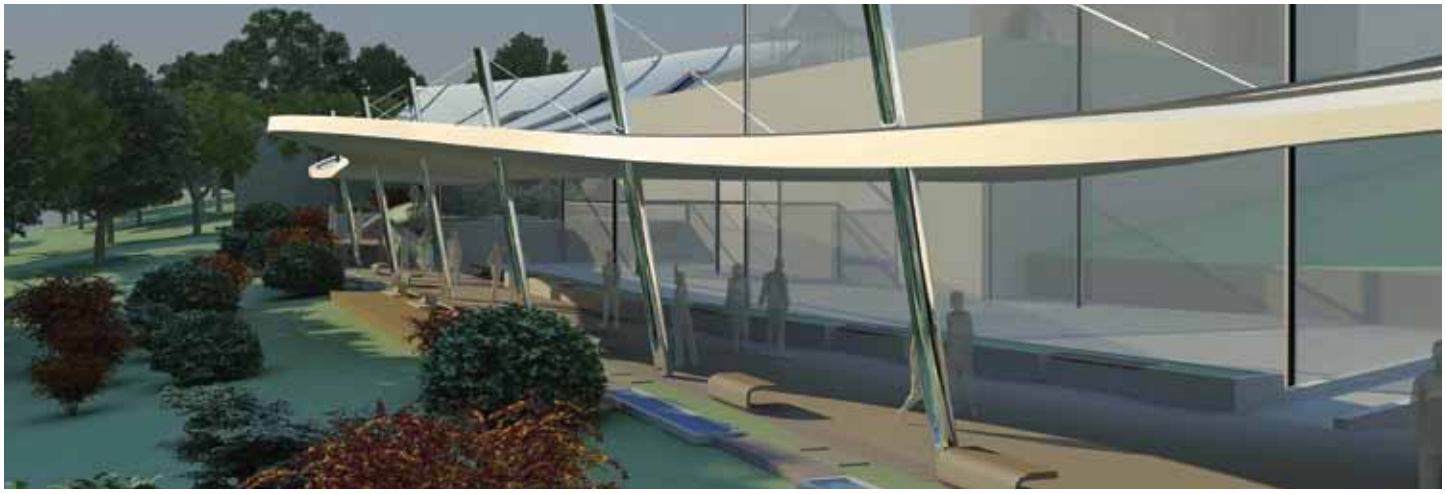
Project	Al Fateh University, Economy Agriculture, Veterinary and Science Faculty Buildings
Client	ODAC (Organization for Development & Promotion of Administrative Centers) / Yüksel Construction Co.
Country	Tripoli / Libya
Project Period	2008–2010
Services	• Detail Design & Planning

The contract covers construction of Faculty of Agriculture Building, Faculty of Veterinary Building and Faculty of Science Buildings located within the campus of Al Fateh University. Al Fateh University is one of two biggest universities in Libya. Faculty of Science complex also consists of separate Geophysics, Geology, Zoology and Meteorology Buildings. The total construction area of the project is 66,300 sqm.

Project	Shahdag Winter & Summer Tourism Complex
Client	Azerbaijan Republic Ministry of Culture and Tourism/DIA Holding
Country	Gusar / Azerbaijan
Project Period	2010–2012
Services	• Detail Design & Master Planning • Architecture • Landscape Architecture • Interior Design • Structural Engineering, • Mechanical/Electrical/Plumbing Engineering • Infrastructure Engineering (grading, site distribution of potable water, wastewater, storm water, heating & cooling, electrical, snowmaking) • Transport Engineering (Roads, Ski Slopes, Tunnels and Bridges) • Water & Environment Engineering (Reservoirs of Snowmaking, River Engineering)

The goverment of Azerbaijan – Ministry of Culture and Tourism– is developing a Winter & Summer Tourism Resort in the Caucasian Mountains. Total planning area of resort is 2050 ha. BIR team of architects and engineers of all disciplines have been provided design and planning services. Shahdag complex is situated in the province of Gusar, between an altitude of 1300 m. to 3200 m. and is at 2–3 hours driving distance from Baku. Final Resort capacity of 10000 visitors per day– including a hotel capacity of about 3090 rooms.

Project	Baku Funicular System
Client	Azerbaijan Republic Ministry of Transport/DIA Holding
Country	Baku / Azerbaijan
Project Period	2010–2011
Services	Conceptional Design & Planning of: • Structural Engineering • Landscape Architecture • Technical Specifications and Bill of Quantities



Project	Suleymaniyah International Airport Cargo Village
Client	GULFMAR Co. / Azmar Air. Co.
Country	Suleymaniyah / Iraq
Project Period	2010–2012
Services	• Architecture • Interior Design • Structural Engineering • Geotechnical Engineering • Mechanical/Electrical/Plumbing Engineering • Infrastructure Engineering • Landscape Architecture • Preparation of Full Tender Documents • Technical Specifications and Bills of Quantities • Preparation of Capital Cost Estimates

Suleymaniyah Cargo Village Project consists of Cargo Apron, Connection Taxiways, Cargo Warehouse, Airside Cargo Yard, Forwarder Units, Airside Roads, Landside Roads, Accommodation, Security & Reception Building, Transformer Room, Guard Room and Fence Lines.

Project	Incirlik Airbase Consolidated Community Center
Client	USACE (U.S. Army Corps of Engineers) / Emta Construction Co.
Country	Adana / Turkey
Project Period	2010–2012
Services	• Architecture • Structural Engineering • Mechanical/Electrical/Plumbing Engineering • Infrastructure Engineering • Landscape Architecture • Preparation of Full Tender Documents • Technical Specifications and Bills of Quantities

Design of Consolidated Community Center at Incirlik Base in Turkey. The facility includes Community Activity Center, Base Theater, Education Center and Base Library. Construction consists of reinforced concrete foundation, floor slabs, structural frame, masonary walls and pitched roof. Supporting facilities include pavements, site improvement, demolition passive force protection measures, communications support and relocation softball field. Project meets with the Silver LEED conditions.

bir Engineering INC.

Transport and Structures

Transport & Structures

Transport & Structures have long been one of our core business..

BIR has experience in the design of tunnels, bridges, viaducts and similar large scale facilities, including all other civil structures associated with transportation systems, regional and national basis. Our works include:

- Architecture
- Structural Engineering
- Mechanical and Electrical Engineering
- Tunnelling and Shafts
- Geotechnical Engineering
- Preparation of Full Tender Documents
- Technical Specifications and Bills of Quantities
- Preparation of Capital Cost Estimates
- Project Management
- Seismic Retrofiting and Repairing

Roads & Bridges

We are committed to design services in highway / railway transportation projects. Design services include route selection and analysis, comprehensive topographical, hydrological and geological investigations and studies. We develop bridge solutions for road, rail and pedestrian traffic. For structural analysis of bridges and viaducts completed to date we have typically employed:

- Advanced finite element modelling (Time History, pushover)
- Construction staged effects
- Second-order buckling analysis

The majority of our designs for clients are undertaken to British Standards and AASHTO to suit the requirements of the approving authorities in the local market.

The services delivered by our bridge design specialists include:

- Concept design of footbridges
- Full design of pre-tensioned, post-tensioned, reinforced, steel and composite sections road and rail bridges
- Assessment of existing reinforced and pre-stressed concrete road bridges

Tunnels

BIR delivers design services to clients in tunnelling design:

- Geological, hydrogeological and geotechnical analysis, stress analysis and design of the final lining
- Monitoring of soil behaviour during and after construction
- Techniques of prestabilisation and support
- Assessment of excavation methods

Our role includes the full multidisciplinary design and management of the civil works including:

- Geotechnical and site surveys
- Bored tunnels (using earth pressure balancing TBMs)
- Cut and cover tunnels
- Viaducts and bridges (utilising post- tensioned, segmental bridge construction)
- Route alignment
- Elevated, at-grade and underground stations (utilising top down constructed station boxes with diaphragm walls)

Railways

BIR follows the national and international specifications to find the most economic and functional solutions in the transportation projects. In the design stages, all possible alternative routes and superstructure systems are investigated and assessed for comparison with the relevant cost-benefit analyses.

Our rail design services include:

- Civil design for railways
- Building design for stations
- Station boxes and diaphragm walls
- Architecture, structure and building services
- Ventilation and fire engineering
- Underground, at grade and elevated stations
- Depots

Airports

BIR offers overall planning of airports combines the architecturally demanding and economically rigorous design of passenger terminals with the planning of airside areas and facilities as well as landside traffic development.
We offer overall planning solutions for air traffic facilities embracing the following services:

- Master planning
- Passenger terminals
- Operation-specific buildings
- Technical building equipment
- Aircraft manoeuvring areas
- Engineering structures
- Landside traffic development
- Project management

bir Engineering INC.

Project	Dubai International Airport Roads, Phase II, Expansions Beirut Road / Al Nahta Junction / Tunnel & Bridge
Client	Dubai Road and Transport Authority / Yüksel Construction Co.
Country	Dubai / UAE
Project Period	2007–2009
Services	• Detail Design and Shop-drawings • Consultancy

The project is part of Phase-II improvement of Dubai International Airport. It consists of constructing a bridge (along Beirut road) including improvement and reconstruction of Beirut and Al Nahda roads at grade intersection. Project also covers construction of roadway signs landscaping, street lighting, irrigation and drainage systems, relocation of utilities and tunnel safety related activities.

Concrete bridge is 353.2 meter long, seven spans, with the midspan of 63.20 meters. Continiously post tensioned box girder having 29.3m. width and 2.5m. depth. 7.7m. high piers constructed on 24.5 x 7m. pile caps founded on 26 bored piles having 1m. diameter.

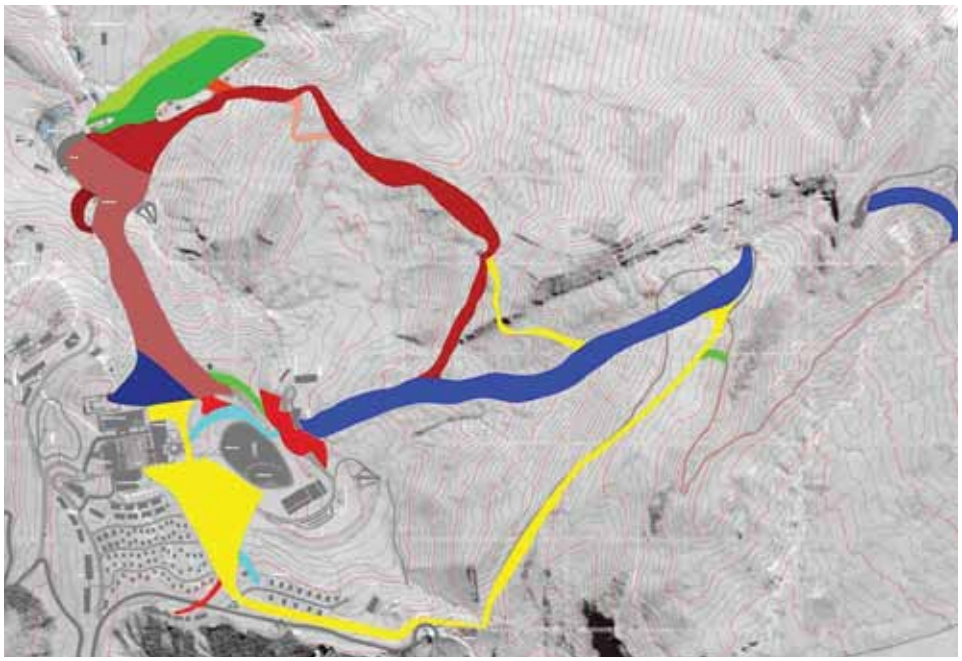
The 600 meter long underpass is divided into 20 sections having average of 31m. length. 17 of these sections are designed as U-Sections and remains as Box-Sections. Width sections are approximately 31m. In U-Sections, height of the wall varies between 1.5m. and 8.5m. and foundation thickness starts with 50cm. in shallow parts and increases upto 200cm. in deeper parts.

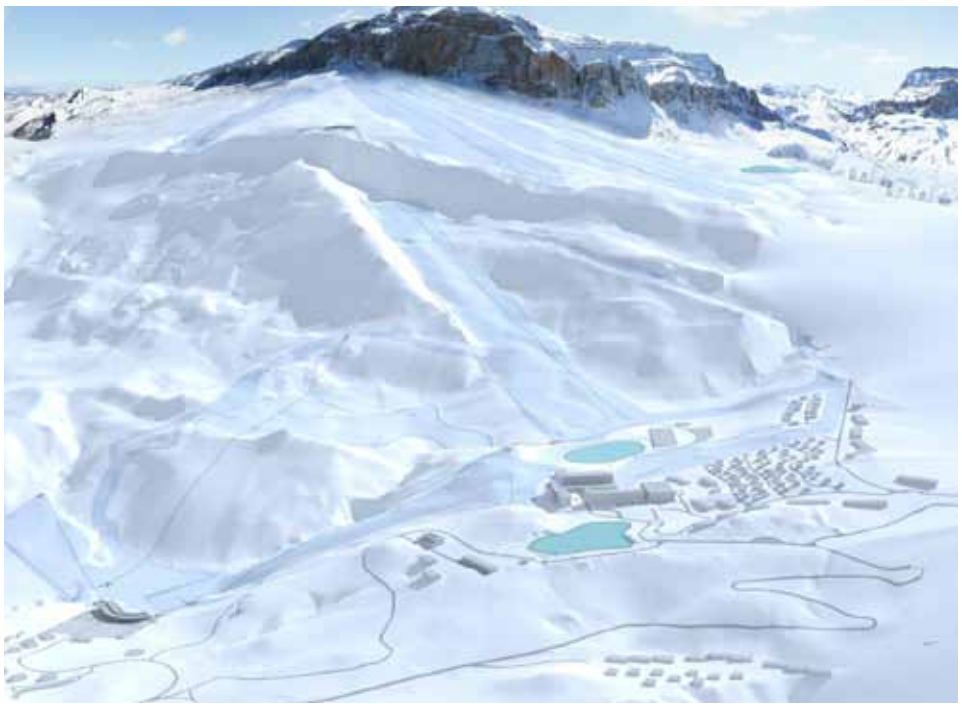
Project	R 762/1I & II Section Dubai Bypass Road Expansion Work, Al-Awir Interchange Bridge
Client	Dubai Road & Transport Authority / Yüksel Construction
Country	Dubai / UAE
Project Period	2007-2009
Services	• Detail Design and Shop-drawings • Consultancy

The project of 24 km. road to be realized in the eastern part of Dubai starts from the border of Sharja, which is the neighboring Emirate in the north, and ends by intersecting with Dubai- Al-Ain Road in the south. Contract covers upgrading the existing two lane highway to four lanes in both directions and arranging the infrastructure to allow increasing to six lanes in the future and expanding the existing four underpasses and construction of a new underpass and relocation of existing street lighting, services and other superstructures. Al-Awir interchange bridge is rebuilt, having 52+52m. two spans with a total length of 104m. with 42° skew angle. The section is post tensioned double trapezoidal with a height of 2.5m.

Project	Shahdag Winter & Summer Tourism Complex Ski Slopes Roads and Bridges
Client	Azerbaijan Republic Ministry of Culture and Tourism / DIA Holding
Country	Gusar / Azerbaijan
Project Period	2010–2012
Services	• Detail Design & Master Planning • Infrastructure Engineering • Transport Engineering

The slopes (pistes) of the Tourism Complex of Shahdag has been graded and shaped in such a way that the impact on the existing vegetation is reduced to a minimum. The boundaries of the slopes have been surveyed and staked out, slope areas at which extensive slope modification works with heavy construction equipment have been performed. The complete slope surface is 47.6 ha. and the total lengths of the slopes are 7.9 km. The pistes have been designed with 30% maximum and 6–7% minimum slope without any inclination change. Complete earthwork of the slopes is nearly 436.000 m^3 cut and 515.000 m^3 fill. The elevation difference between the beginning and the end of the most inclined slope is 500 m. 21 roads have been designed with total length 10,500 m., 650 m. height difference. Total excavation volume for roads is 520,000 m^3 and fill volume is 240,000m^3. Two bridges have been designed with 14.5 m. and 39 m. span lengths.





Project	Istanbul Ikitelli– Olimpic Village Metro Line, Olimpic Viaduct
Client	Istanbul Metropolitan Municipality / Gülermak–Doğus JV
Country	Istanbul / Turkey
Project Period	2006–2012
Services	• Detail Design and Shop–drawings • Geotechnical Engineering

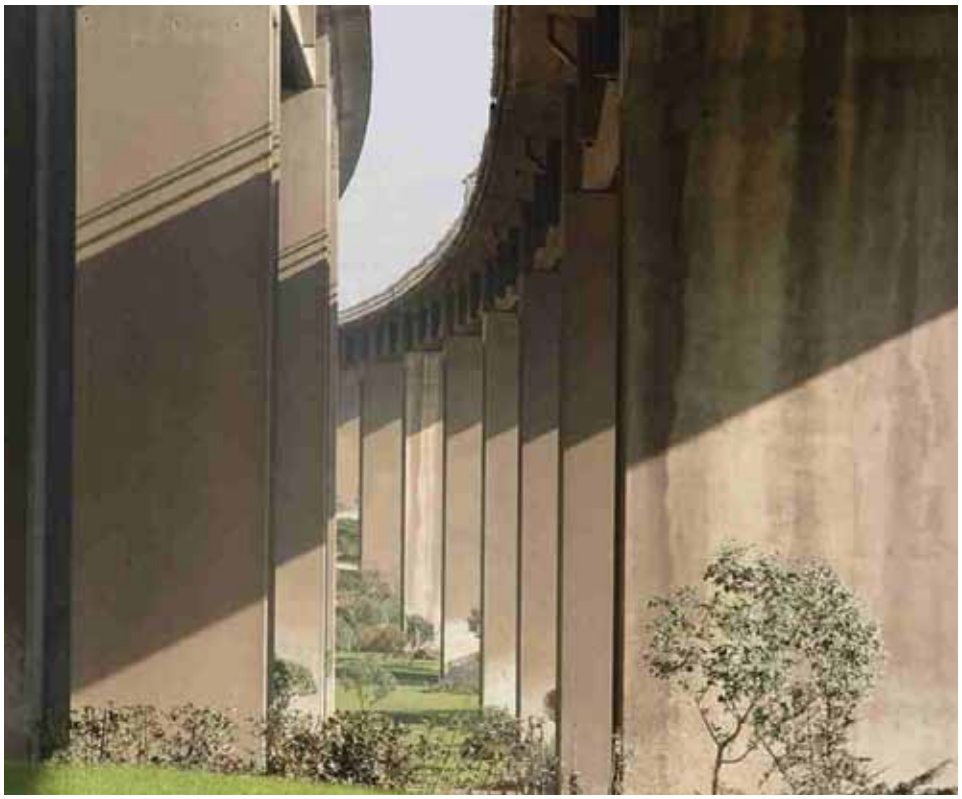
Olimpic Viaduct is 450 meters long, 10 meters wide with prestressed precast concrete beams and cast in place slab composite superstructure on hollow box concrete pier max 38 meters high founded on shallow and bored pile foundations.

Project	Immediate Seismic Evaluation and Retrofit of Viaducts, Overpasses and Underpasses of TEM Motorway, Gümüşova – Adapazarı Section after Marmara Earthquake 17/08/1999.
Client	State Highway Department 1st. Division-Istanbul / Akyapı Co.
Country	Adapazarı / Turkey
Project Period	2000–2001
Services	• Detail Design • Technical Assessment on Site • Nondestructive Testing • Geotechnical Engineering

Seismic evaluation and retrofitting of almost 60 structures including viaducts, overpasses and underpasses. The structures had earthquake damage at different levels. Damages can be classified as major pier cracks, elastomeric bearing deformations, seismic block failures, approach fill settlements and expansion joint ruptures. Repair methods vary from simple superstructure jacking for bearing replacement to special applications like CFRP (Carbon Fibre Reinforcement Plates) strengthening.

Project	Seismic Evaluation and Retrofit of Tunnels and Viaducts of Anatolian Motorway, Çamlıca–Gümüşova Section and Motorway Connection Roads
Client	Client State Highway Department, 17 th Division – Istanbul / Temelsu Co.
Country	Gümüşova / Turkey
Project Period	2004
Services	• Detail Design • Technical Assessment on Site • Nondestructive Testing • Geotechnical Engineering

There are 44 Viaducts along TEM Motorway Çamlıca–Gümüşova section with heights less than 50 m. In scope of this project, the present status and seismic evaluation of each viaduct has been determined and then, the retrofit projects have been prepared. Total surface area of these viaducts is around 105,000 m^2. All viaducts have been analysed by elastic analysis methods according to AASHTO and by inelastic analysis methods (pushover and time history) according to Caltran and ATC–40. All design checks have been made and the retrofit projects have been prepared for the viaducts in need.



Project | Historical Kilezdere Bridge Relocation

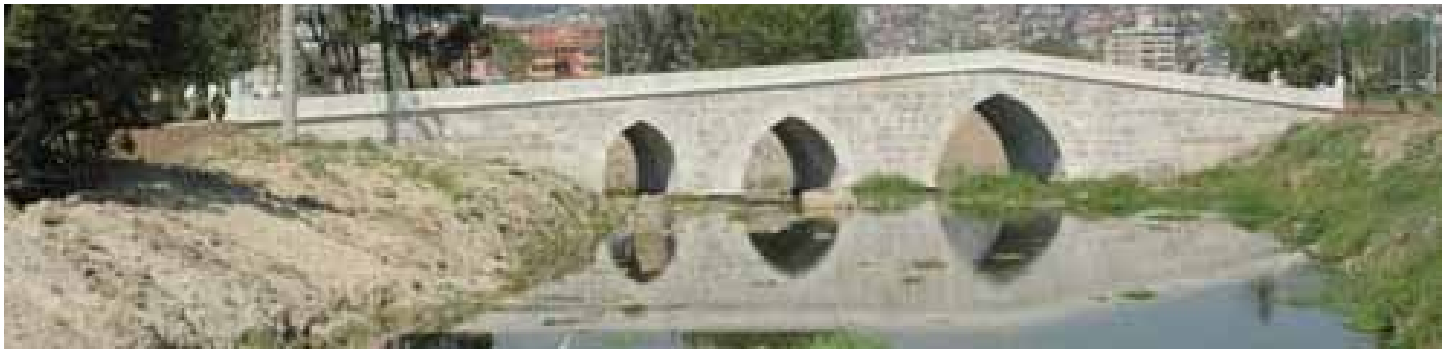
Client | Turkish Railways, Harbours And Airports Authority (DLH)

Country | Izmit / Turkey

Project Period | 2005

Services
- Detail Design and Shop-drawings
- Geotechnical Engineering

Due to construction of Izmit Urban Railway project, the existing historical bridge from 14th century has been disassembled with special techniques and reconstructed at a different site. Special methods have been used in reconstruction to preserve the historical value of the construction art. The relocated bridge has been founded on RC bored pile foundations to avoid future damages due to earthquakes and settlement problems.



Project | Erzincan-Kemaliye Road Başpınar Bridge

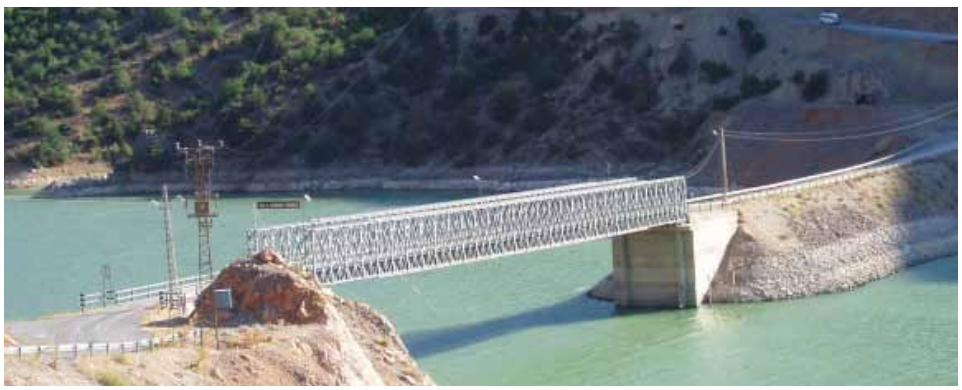
Client | Governorship Of Erzincan Village Service Association/Akana Co.

Country | Erzincan / Turkey

Project Period | 1994-1999

Services
- Detail Design and Shop-drawings
- Consultancy

65+13m span of steel bridge 150 tons designed to erect as panel bridge. Bridge designed for cantilever launching. Single lane H20-S16 load rating. The bridge has been constructed as an economical alternative to conventional reinforced concrete bridges with shorter construction time. The low self-weight allowed low cost foundation at highly seismic and remote area. This bridge is the first panel bridge designed and manufactured in Turkey with span 67.5 meters.



Project	Istanbul Ikitelli Olimpic Village Metro Line Cut & Cover Tunnel
Client	Istanbul Metropolitan Municipality / Gülermak–Doğuş JV
Country	Istanbul / Turkey
Project Period	2006–2012
Services	• Detail Design and Shop-drawings • Geotechnical Engineering

Istanbul Ikitelli–Olimpic Village cut & cover tunnels about 2000 meter length 20–30 meter buried have been designed. Tunnels are box type and width and height varies according to track line and soil profile. As soil profile changes from top to down, the excavation and bracing type varies. Fill layer design and excavated with slopped open trench. Limestone or stiff layer braced with soil nailing and anchored piles. There are eight structurally different types of tunnels including double floored type. Tunnels divided into 36 meter lenght blocks with expansion joints to avoid thermal expansion forces.

Project	Rize-Ispir Road Avalanche Protection Tunnels T9 & T8
Client	General Directorate Of Highways / Güntekin Co.
Country	Rize / Turkey
Project Period	1998
Services	• Detail Design and Shop-drawings

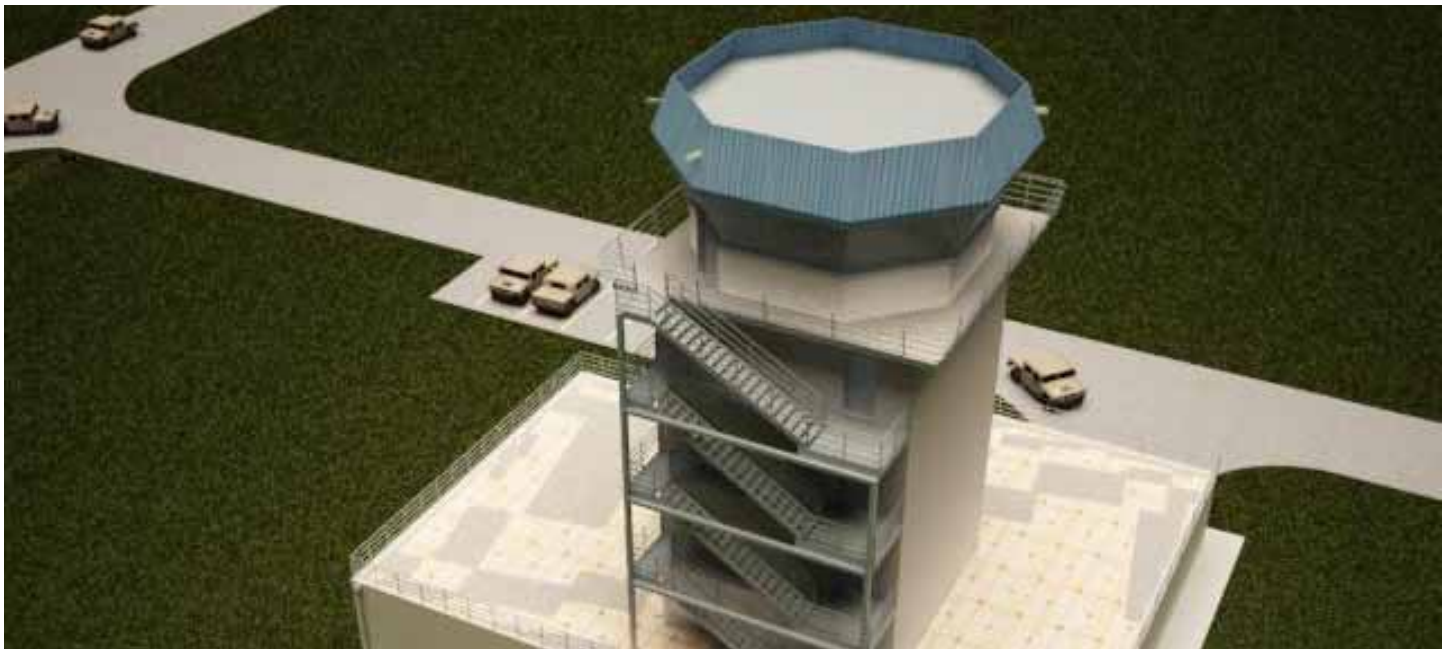
10x5m solid box type concrete avalanche protection sheds total 150m. Design based on Swiss Codes.

Project	Istanbul Ikitelli Olimpic Village Metro Line Olimpic Stadium Station
Client	Istanbul Metropolitan Municipality / Gülermak–Doğuş JV
Country	Istanbul / Turkey
Project Period	2006–2008
Services	• Detail Design and Shop-drawing • Geotechnical Engineering

Station has been designed for 90 sec. peak hour train interval with 70,000 passenger/hour/direction. Three storey, completely buried station is about 300 meter long and 50 meter wide. Station has been designed as reinforced concrete. Platform is under the ticket hole. The roof is wave formed steel girders standing on the ticket hole beams. The platform level is standing on wall fixed to foundation. The interior and ticket hall have been designed with columns, ribbed beams and slab on the top.

Project	Kandahar Air Traffic Control Tower
Client	NATO Maintenance and Supply Agency (NAMSA) / Yenigün Construction Co.
Country	Kandahar / Afghanistan
Project Period	2009–2010
Services	• Detail Design • Geotechnical Engineering • Structural Engineering • Transport Engineering • Infrastructure Engineering

Project	Camp Bastion Air Traffic Control Tower
Client	NATO Maintenance and Supply Agency (NAMSA) / FEKA Construction Co.
Country	Bastion, Afghanistan
Project Period	2010–2011
Services	• Detail Design • Geotechnical Engineering • Structural Engineering • Transport Engineering • Mechanical/Electrical Engineering • Infrastructure Engineering • Technical Specifications and Bills of Quantities



Project	Bagram Airbase FY08-09
Client	USACE (U.S. Army Corps of Engineers / CH2M Hill – Dragados – Soluziona Joint Venture / Yüksel Construction Co.
Country	Bagram / Afghanistan
Project Period	2009–2012
Services	• Detail Design • Architecture • Structural Engineering • Geotechnical Engineering • Mechanical/Electrical/Plumbing Engineering • Infrastructure Engineering

The scope of work for this project includes the design of following facilities within the Bagram Airbase in Afghanistan: FY-08 Parallel Taxiway Phase 2, FY-08 Strategic Ramp, FY-08 Helo-Apron, FY-09 C-130 Maintenance Hangar, FY-09 Cargo Handling Area Expansion, FY-09 Refueler Ramp with a total paved area of 400,000 sqm. Helicopter Hangar having 94.15m length by 40.75m width and 3,836 m^2 of closed area is designed to accomodate two CH47 and one UH60 rotary wing helicopters in 3 bays. Steel building also accomodates office/equipment/storage areas with some very special machinery and 3 ea 10 ton capacity overhead cranes. Dual bay C-130 Maintenance Hangar having 119.15m length by 52.85m width and 6,297 m2 of closed area is designed to accomodate two C-130 Fixed Wing Aircrafts. Steel building also accomodates electrical/mechanical areas with some very special machinery and two 15 ton capacity overhead cranes.

Project	KAIA North Superstructure
Client	NATO Maintenance and Supply Agency (NAMSA) Yüksel Construction Co.
Country	Kabul / Afghanistan
Project Period	2008–2010
Services	• Detail Design & Master Planning • Geotechnical Engineering • Structural Engineering • Mechanical/Electrical Engineering • Infrastructure Engineering • Technical Specifications and Bills of Quantities

The contract includes the construction of 30 buildings which are used as terminals, central office, permanent and temporary housing, dining hall treatment facility, maintenance and repair with a total construction area of 30,000 m^2. The project includes the substructure design of an area approximately 1.000.000 m^2 within the boundary of Kabul Airport.

bir Engineering INC.

Industrial Projects

Industrial Projects

We work closely with our clients to provide sustainable industrial investments...

BIR provides its demanding customers with services such as technical and economic pre-feasibility studies, tender design for power plants and combined heating and power plants (gas, oil, coal, biomass and residues), plants and factories. For industrial buildings, we also undertake tasks of planning, design, supervision and commissioning of heavy equipment foundations, power supply and distribution, water supply and distribution, sewerage, drainage, central heating systems, roads and landscaping.

Our services include planning works regarding extension and modernization of existing production facilities as well as new planning of manufacturing sites. We offer our services according to customer requirements beginning with project idea over feasibility studies, planning and supervision of plant construction up to commissioning. This includes the following focal points:

- **Phase 1:** Definition of basic and boundary conditions.
- **Phase 2:** Elaboration of new building/modernization variants, evaluation and development of preferred variant.
- **Phase 3:**Development of new building/modernization concept.
- **Phase 4:**Three dimensional presentation.
- **Phase 5:** Permit planning.
- **Phase 6:** Invitation to tender, evaluation of quotations and proposals for awarding of contracts.
- **Phase 7:** Project management.

bir Engineering INC.

Project	Bozshakol Copper Mine Plant
Client	Kazakhmys Bozshakol LLP / Alsim – Alarko Co.
Country	Pavlodar / Kazakhstan
Project Period	2012–2015
Services	• Master Planning & Detail Design • Civil & Structural Engineering • Infrastructural Design • Mechanical and Electrical Design • Shop Drawings • Technical Specifications and Bills of Quantities • Project Management

The project has a capital cost about of $1.8 billion, and is being funded from an existing $2.7 billion financing facility provided by the China Development Bank and Samruk-Kazyna. Bozshakol, 220 km. north east of the capital Astana will have a production life of over 40 years, with average output of 75 kt. of copper in concentrate per annum, although the production will average 100 kt. for the first 14 years. Bozshakol is the largest single mine development in Kazakhstan by both volume and value and employment. A new railway to the site will be built from the existing Bozshakol railway station to provide transport for supplies together with a new road that will connect the site to the existing Astana– Pavlodar road. Scope of BIR is plannning and civil, structural, infrastructural, mechanical and electrical detail design of non-process buildings, maintainance workshops, warehouses, permanent camp and fuel facility and shop drawings of process buildings.

Project	Aktogay Copper Mine Plant
Client	Kazakhmys Aktogay LLC / Alsim – Alarko Co.
Country	Aktogay / Kazakhstan
Project Period	2012–2015
Services	• Architectural Design • Interior Design • Structural Design • Mechanical/Electrical/Plumbing Design • Infrastructural Design • Landscape Design • Preparation of BOQ Tables

The Aktogay deposit will support a large open-pit mine and concentrator project located in the Ayoguz region in the east of the Republic of Kazakhstan. The deposit has an estimated reserve of approximately 5 million tons of copper with a forecast annual production of 25 000 tons of copper concentrate and a mine life of 40 years. The project has a capital cost of around $2 billion. BIR will deliver detail engineering and consultancy services of architectural, civil, mechanical and electrical works of the Copper Plant for Non Process Buildings and Permanent Camp.

Project	Design and Construction of Eight Wheat Silo Plants in Turkmenistan
Client	Association ''Turkmengallaonumleri'' / Tepe-Turkmen
Country	Tejen, Babadayhan, Boldumsaz, S. Turkmenbasy, Garagum, Altyn Sahra, Garashsyzlyk, B. Turkmenbasy / Turkmenistan
Project Period	2012-2015
Services	• Architectural Design • Interior Design • Structural Design • Mechanical/Electrical/Plumbing Design • Infrastructural Design • Landscape Design • Preparation of BOQ Tables

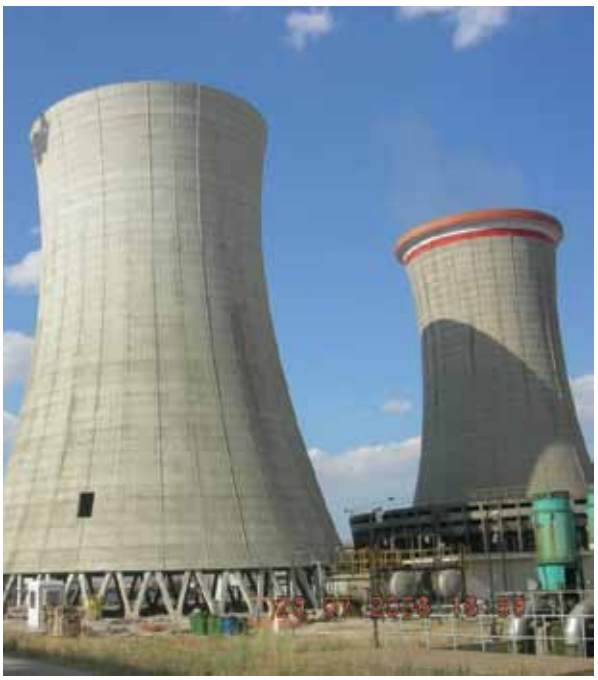
Wheat Silo Plants are planned to be constructed at 8 different locations in Turkmenistan. 6 plants each have a capacity of 50,000t and 2 of them have 30,000t total capacity. Each plant will be constructed on 5Ha area. Plants with 50,000t storage capacity have railway connections. Process units are composed of Silo Units, Elevator Tower (100t/hr), Dryer Unit, Cleaning & Weighing Unit, Wet Wheat Silo Bins, Waste Silo Bins, Tip-up Platform, Conveyor systems, Truck & Train Loading – Unloading Units, Truck & Train Weighbridges and Screed Processing structure. Non-process structures are Admin, Laboratory, Truck Scale, Security, Depot Buildings, Perimeter Walls, Pump Station, Waste Water Tanks, Fire Water & Potable Water Tanks, Shelters and Paved Areas.

Project	Ankara Natural Gas Combined Cycle Power Plant
Client	Baymina Energy/ Va-Tech & Yüksel Construction Co. Consortium.
Country	Ankara / Turkey
Project Period	2001-2003
Services	• Detail Design Review • Value Engineering • Project Management of Design

770 MWa Power plant with two gas and one steam turbines. Plant includes Machine Hall, Electrical Annex Building, Demineralisation Building, Cooling Tower, Cooling Tower Pump House, Heat Recovery Steam Generator, Fire Fighting Pump House, Piperacks and Cable Trenches. Construction period is 26 months (95% in the first 12 months).

Project	Kırıkkale Tüpraş Refinery, Construction of New Reformer and Diesel Desulphurization Unit, Natural Draft Cooling Tower, Forced Cooling Tower, Demin Water Building, TPP (Turbo Power Plant) Extension
Client	TÜPRAŞ / Alsim-Alarko Co.
Country	Kırıkkale / Turkey
Project Period	2005-2007
Services	• Civil & structural, detailed engineering works

A hyperbolic paraboloid shell structure supported by columns over a ring foundation constructed as natural draft cooling tower of the sulphure removal unit of the refinery. The height of the tower is 46.80m. The base diameters is 35.66 m., the throat diameters is 34.66 m. The thickness of the shell varies from 20 cm. to 40 cm. along the height of the tower.
The forced ventilation cooling tower has a rectangular form in plan with a dimension of 40x18m. and a height of 12.18meters. Structure is a rigid multicell reinforced concrete building with shear walls seperating water chambers.
Structural steel building with 22.8x15.8m. dimensions for water process to produce demineralised water for process with a steel platform outside the building.
Existing power plant has been enlarged to facilitate one extra turbo-generator unit. All structural elements of existing building extended and connected to the new building and a new turbine foundation has been designed. New building has electrical rooms and transformers section.



Project	Kemalpaşa Natural Gas Combined Cycle Power Plant
Client	Akenerji Co.
Country	Izmir / Turkey
Project Period	2004–2005
Services	• Detail Design • Consultancy

127 MWa Power plant with two gas and one steam turbines. Gas Turbine area consists of a number of pedestals for different types of mechanical equipment. Steam Turbine is placed in a steel building of 250 ton in weight. The design work includes Electrical Annex Building, Demineralisation Building, Heat Recovery Steam Generator, Air Cooled Condensator, Gas Insulated Substation, Diesel and Water Tanks, Piperacks and cable trenches. Additionally, the road and the drainage system have been designed.

Project	Rigips Kırıkkale Gypsum Plant
Client	Saint Gobain
Country	Kırıkkale / Turkey
Project Period	2007–2008
Services	• Structural Engineering • Geotechnical Engineering • Infrastructural Design • Tranportation Design (Roads & Railway) • Mechanical/Electrical/Plumbing Engineering • Infrastructue Engineering (grading, site distribution of potable water, wastewater, storm water, heating & cooling, electrical) • Landscape Architecture • Preparation of Full Tender Documents • Technical Specifications and Bills of Quantities • Preparation of Capital Cost Estimates

Kırıkkale Gypsum Plant designed to produce powder gypsum with a daily capacity of 450 ton/day. A gypsum board production facility proposed for future. The main production tower is about 36 m high structural steel building with approximately 600 tons of steel. The warehouse building is 4500 sqm prefabricated concrete building with railway access along the northern site. Plant has been designed with all civil and structural facilities including roads, railroad connection to main station, drainage, waste water treatment, landscape, water tank, garbage collection, rock crusher area, offices and weighbridges as well as the building systems electrical and mechanical works.

Project | Buxton Lime Industries Ltd., Replacement Cement Plant

Client | F.L.Smidth A/S & Monberg & Thorsen A/S

Country | Buxton-Manchester / England

Project Period | 2002

Services | • Detail Design and Planning

751-Coal Grinding Building, which has a height reaching about 40 meters with an irregular structural geometry. There are two stair towers at each side of the building. Another reinforced concrete service building also connected to the Coal Grinding Building. The structure has a lot of intermediate floors and platforms for heavy crushers, such as atox mill and silos. The total steel weight is approximately 250 tons. Design has been based on BS standarts.

Project | Preheater for Rotary Kiln

Client | Eskişehir Magnesit Co./Entem Co.

Country | Eskişehir / Turkey

Project Period | 2003

Services | • Detail Design
• Construction Supervision

Supports for diameter 1600 mm. pipe, kiln shed, support tower and ancillary facilities with foundations. Pipe elevation reaches to 35 meters above ground.

bir Engineering INC.

Water and Environment

The main objective of **BIR** Infrastructure and Environment Group is to perform the necessary engineering, consultancy and supervision services for rehabilitation of existing projects or development of totally new projects in the following areas:

- Dams
- Potable Water and Sewerage
- Rain Water and River Engineering
- Water Reservoir, Pump Station
- Waste and Potable Water Treatment
- Solid Waste and Sanitary Landfills
- Sea Outfalls
- Hydrologic Forecasting and Risk Assessment
- Preliminary Planning With Alternative Sediment Control Measures
- Detailed Design
- Construction Supervision/ Inspection
- Enviromental Impact Assessments
- Planning and Feasibility Studies

Project	Baysh Dam
Client	Kingdom of Saudi Arabia Ministry of Water & Electricity / Yüksel Construction Co.
Country	Jizan / Saudi Arabia
Project Period	2003–2009
Services	• Detail Design

The scope of the project is to build concrete gravity Dam. Baysh Dam is located in Baysh Valley, which has a road distance of 113 km. to the City of Jizan, Saudi Arabia. The purpose of the dam is flood control and supply of water to downstream farmlands for irrigation. Total storage capacity is 192 million m^3. Uncontrolled overflow ogee type spillway of 8,200 m^3/sn, capacity and 4 units of bottom outlets take place on the main dam body. Catchment area: 4600 km^2, Mean Annual Flow: 74.48 MCM, Maximum Storage Volume: 192.75 MCM, Wadi Bed Elevation: 265 m.a.s.l., Foundation Elevation: 233 m.a.s.l., Dam Type: Concrete Gravity,Volume of Concrete: 670 000 m^3, Dam Crest Length: 340 m., Height Above Foundation: 106 m., Spillway Crest Length: 112.0m., Number of Bottom Outlets: 4.

Project	Shahdag Winter & Summer Tourism Complex Infrastructural Engineering
Client	Azerbaijan Republic Ministry of Culture and Tourism / DIA Holding
Country	Gusar / Azerbaijan
Project Period	2010–2012
Services	• Detail Design & Master Planning • Infrastructure Engineering

The water supply system has been designed for the project area "Tourism Complex Shahgag" to provide reliable drinking, waste, storm and fire fighting water, heating & cooling system. Total distribution line length of the designed potable water system is 13,800 m. where its 4,900 m. long line has been designed to pump up to 650 m high. The sewer system has been designed to collect the waste water produced in the project area and discharge it into the sewer system. The waste water system consists of 12,350 m. length pipe construction and 234 manholes. 3750 m. of the waste water system has been designed for 650 m. height difference. Energy compensating shafts have been designed for the inclined terrains (for 3750 m. of the system) in order to reduce the high energy and velocity affects to the manholes.The storm water disposal system has been designed to collect the storm-water run-off from the roofs and from the sealed surfaces in the project area "Tourism Complex Shahgag" and has been discharged into the nearby effluent receiving water body. The storm water system consists of 7,900 m. length pipe construction and 193 manholes.

Project	Shahdag Winter & Summer Tourism Complex River Engineering
Client	Azerbaijan Republic Ministry of Culture and Tourism / DIA Holding
Country	Gusar / Azerbaijan
Project Period	2010–2012
Services	• Detail Design & Master Planning • Geotechnical Engineering • Infrastructure Engineering

The river engineering works in Shahdag Tourism Complex have been comprised all required structures and measures to stabilize the creeks, to retain the sediment and to prevent clogging of the culverts and the residual flow pipe. Special emphasis have been placed on high water charges including mud, stone and cobble transportation as well as sedimentation processes and erosion protection of natural banks. The Gondola Creek has been stabilized with a pavement in concrete of the whole creekbed and the creek banks. Approximately 750 m. of creekbed pavement has been designed with cobbles on a coarse gravel layer. The spacing between the stones shall be filled with well compacted concrete. In order to prevent erosion of silt and other fine material, a geotextile has been placed below the coarse gravel. The sediment basin is approximately 65 m. long, approximately 20 m. wide next to the basin entrance structure and approximately 65 m. wide next to the outlet structure. The sediment retention basin has an approximate solid sediment capacity of 10.000 m^3. In order to achieve the retention volume ,the original terrain has been landscaped accordingly. Slope stability of the embankments (R.C retaining walls and masonary gravity walls) have been designed.

Project	Shahdag Reservoir for Artificial Snow Making System
Client	Azerbaijan Republic Ministry of Culture & Tourism – DIA Holding
Country	Gusar / Azerbaijan
Project Period	2011–2012
Services	• Detail Design & Master Planning • Geotechnical Engineering • Infrastructure Engineering

By snowmaking systems it is possible to extend the snow availability from winter to all four seasons. Reservoir, Pump Station and Pipeline are needed to be constructed for this system. High pressure water and compressed air are required for the production of artificial snow. Stored water in the reservoir is supplied to the pipeline by means of submerged pumps. Reservoir Shahdag is the main point of the snowmaking system and is used for the water storage in order to guarantee a fast production of artificial snow for the snowmaking areas. The existing layout leads to a useable water capacity of 159.000 m^3. The slope gradients vallyside are between 1:2,3 and 1:2,5. The max height of dam crest above dam base is 24 m. The reservoir is equipped with a membrane sealing. Among the membrane sealing, there is an area draining system, which is made of crushed stone at the bottom. Bentonite layer a strength of 50 cm. has been designed at the complete bottom area.

Project	Bagram Airbase Drainage Project
Client	USACE (U.S. Army Corps of Engineers)/ Yüksel Construction Co.
Country	Bagram / Afghanistan
Project Period	2012
Services	• Detail Design & Master Planning

Coyote Creek project realized in Bagram Airfield in Afghanistan to improve the existing deformed and eroded retention basin and to avoid the frequent flood problems. An additional 10,000 m^2 retention storage within the channel as a part of excavation has been designed and this area has been used as a reservoir for flows greater than 100 year storm. This situation results in the realignment of the existing Coyote Creek Channel and improvement of the cross section of the existing channel to convey the runoff without flooding. The Coyote Creek Channel has also been designed to convey and reserve 50 cms storm water collected from 240 ha basin for a 100 year storm. Another design activity of this project is the construction of a 150 meter long, 2200mm diameter auger tunnel beneath an active ramp to improve the discharge capacity of the Coyote Creek.

Project	Adana East & West Wastewater Treatment Plant
Client	Adana Metropolitan Municipality-Water & Sewarage Head Office/Yüksel-Ener-Serco-Vatech Wabag Consortium
Country	Adana / Turkey
Project Period	1999
Services	• Detail Design and Planning • Geotechnical Engineering

West Adana Plant designed for year 2010 for an equivalent population of 1.2 million and year 2025 with the population of 1.8 million. East Adana Plant designed for year 2010 for an equivalent population of 0.75 million and year 2025 with the population of 0.97 million. The discharge is estimated to be 398,300 cu.m^3/day for year 2010 and 515,940 cu.m^3/day for year 2025. Contract value of project is approximately 38 million Euro totally financed by European Investment Bank credit. All the structural design have been based on BS (British Standards).

Project	Tarsus Wastewater Treatment Plant
Client	Tarsus Municipality Water &Sewerage Facility / Güriş- Arı-Preussag Consortium
Country	Tarsus / Turkey
Project Period	2000-2001
Services	• Detail Design and Planning

The project has been funded by KFW Credit of 23.9 million DM designed for an equivalent population of 320,398.

Project	Demirtaş Industrial District Wastewater Treatment Plant
Client	DOSAB (Demirtaş Organized Industrial Zone) / Client ALKE-HIDROTEK-BETA-ALKATAŞ
Country	Bursa / Turkey
Project Period	2005
Services	• Detail Design and Planning

This treatment plant has been designed for a daily discharge of 105.000 m^3 and involves a biological process including nitrogen and phosphor removal.

Project	Wastewater Treatment Plant KAF
Client	NATO Maintenance and Supply Agency (NAMSA) / Yenigün Construction Co.
Country	Kandahar / Afghanistan
Project Period	2008–2009
Services	• Detail Design and Planning

Construction cost 7.3 M Euro. Planning of construction, mechanical, process, instrumentation enginnering. Construction a mechanical biological wastewater treatmant plant for 30,000 population equivalents as Sequencing Batch Reactor (SBR) plant with aerobic sludge stabilization and UV treatment.

Project	Antalya Sea Outfalls (Tekirova, Çamyuva, Kemer, Beldibi, Obaköy)
Client	Alanya Local Tourism Development Administration/Altaş Co.
Country	Antalya /Turkey
Project Period	1999–2001
Services	• Bathymetric Studies • Seismic Studies • Geotechnical Studies • Oceanographic Studies • 3D Numeric Model Studies • Detail Design

Bathymetric, seismic, geotechnical, oceanographic, numeric model studies made for design of sea outfall line for treated water discharge. HDPE pipes are app 2000 meter long under sea water. Diffusers are at appr –30m. depth. General Method for Sea Outfall Projects Bathymetric Studies; A number of GPS equipment and an echo-sounder type depth meter have been used to record position versus water depth. Then the data obtained have been used to plot the bathymetric map showing depth versus local coordinates by using special mapping software. 3-D Mathematical Model Studies; In order to determine the distribution of the pollutants resulting from the wastewater discharge into sea, three-dimension hydrodynamic models were prepared by using software Telemac 3D Version 2.2, developed by Electricitéde France, Département Laboratoire National D'Hydraulique (EDF-LNH), and Plume-RW (3D), developed by HR Wallingford. Seismic Studies; In order to determine the geological and lithological structure below 5 to 10 meters of the sea bottom, the seismic work over three different lines was performed. Geotechnical studies; In order to identify the stratigraphy, morphology and soil properties of the sea bottom, a series of boreholes have been drilled along the proposed discharge line . The samples of sediments extracted by means of Van Veen Grap type sampler. Oceanographic Studies; In order to determine the properties of seawater at the outlet of the discharge line and its surrounding environment, oceanographic studies were carried out. Salinity, Temperature, Density, BOD (Biological Oxygen Demand), DO (Dissolved Oxygen) and Conductivity of the seawater were measured at each station located at the depths of 10 m., 20 m., etc., along the discharge line. ValePort Model 302 type instrument was used to measure the current velocity and direction in project region around proposed location of the diffuser and at various depths. Combining all these information application drawings for pipe profile, trenching, diffuser, fixing blocks, buoys and pumps details have been prepared.


bir
Engineering INC.

Certificates

Our success is built on care and respect for our Employers and our Employees....

BIR implements a comprehensive range of fully certified and integrated quality safety and enviromental management systems that distinguish us from our competitors. This means we can guarantee unrivalled performance standarts. All of our operations are externally certified to all three internationally recognised QSE management systems.


NİSSERT
SERTİFİKA / CERTIFICATE
BİR MÜHENDİSLİK İNŞ. SAN. ve TİC. LTD. ŞTİ.
TS EN ISO 9001:2008
Kalite Yönetim Sistemi


NİSSERT
SERTİFİKA / CERTIFICATE
BİR MÜHENDİSLİK İNŞ. SAN. ve TİC. LTD. ŞTİ.
OHSAS 18001:2007
Occupational Health and Safety Management System


NİSSERT
SERTİFİKA / CERTIFICATE
BİR MÜHENDİSLİK İNŞ. SAN. ve TİC. LTD. ŞTİ.
EN ISO 14001:2004
Environmental Management System

BS EN ISO 9001:2008
Quality Management System

BS EN ISO 14001:2004
Enviromental Management System

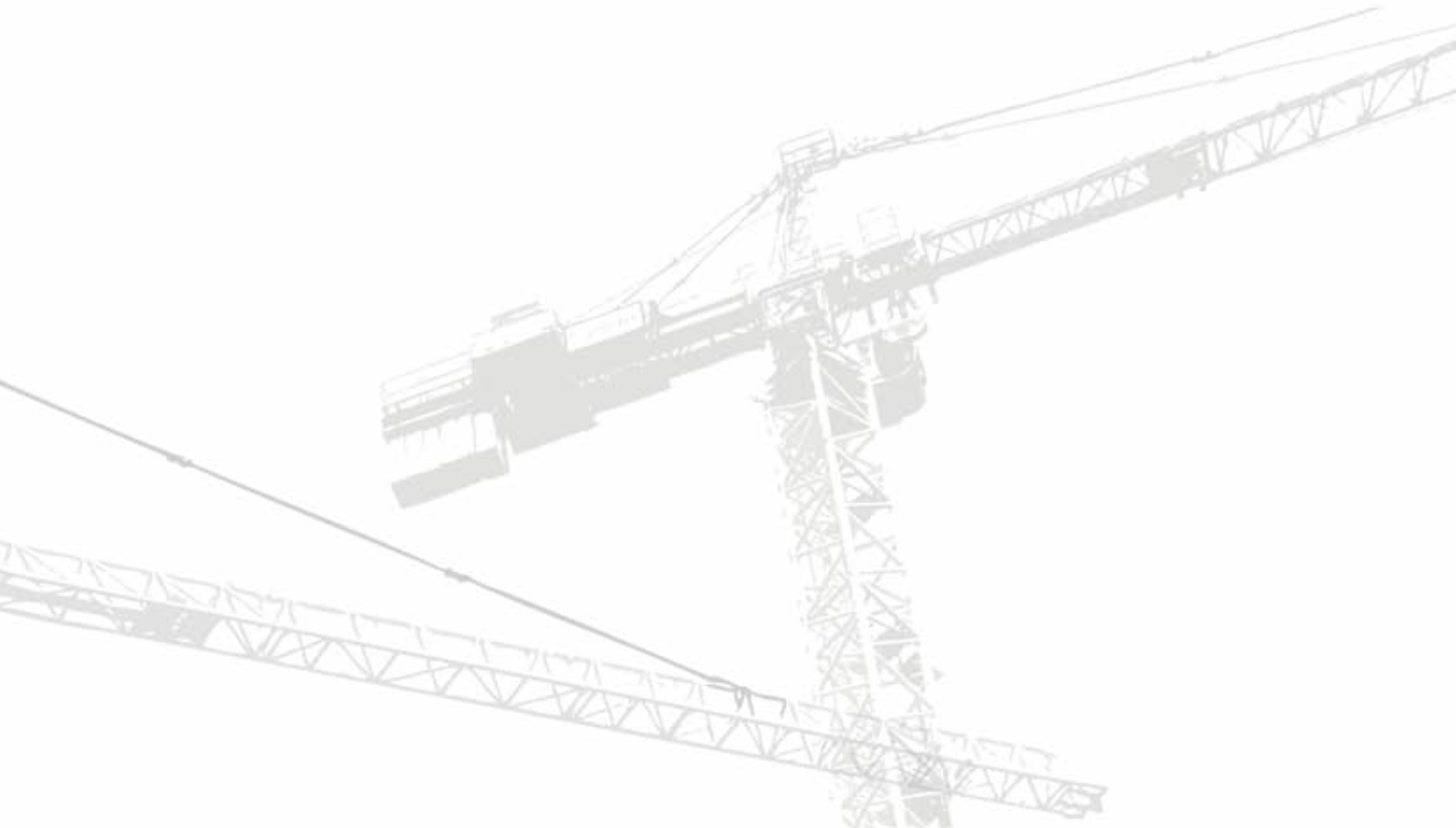
OHSAS 18001:2007
Occupational Health and Safety Assessment Series

bir Engineering INC.

List of References

Military and Airfield Projects

Project	Year	Location
KAIA -US NSE and AAFEES Buildings	2012	Kabul, Afghanistan
KAIA -New Dining Facility POL-E,Charki	2012	Kabul, Afghanistan
Waste Water Treatment Facilities	2012	Camp Dwyer, Afghanistan
Bagram Airfield Drainage System Phase-1, Coyote Creek and Kilo Culvert	2012	Bagram, Afghanistan
Crash Fire Rescue Building	2011-2012	Camp Bastion, Afghanistan
Bagram A/B, PAX and Cargo Terminal Buildings	2010-2012	Bagram, Afghanistan
Camp Bastion Air Traffic Control Tower	2010-2011	Camp Bastion, Afghanistan
Kabul, KAIA North, North Gate Entry	2010	Kabul, Afghanistan
Bagram A/B, Aviation Support Building	2010-2011	Bagram, Afghanistan
Kandahar Air Base, Rotary Apron Phase-II	2010	Kandahar, Afghanistan
KAF WWTP Plant	2010	Kandahar, Afghanistan
RLB Troop Housing Phase-II	2010	Bagram, Afganistan
New Shooting Range	2010	Kandahar, Afghanistan
Perimeter Fencing, KAF	2010	Kandahar, Afghanistan
SOF HQ Facility, BAF	2010	Bagram, Afghanistan
KAIA North Medical Clinic Extension	2010	Kabul, Afghanistan
NAMSA PEB Buildings	2010	Bagram, Afghanistan
KAIA North, North Gate Entry	2009	Kabul, Afghanistan
Kandahar Air Base, ENG142, 157, 169 Apron	2009	Kandahar, Afghanistan
Kandahar Air Base, ENG156 Apron	2009	Kandahar, Afghanistan
Kandahar A/B, Canadian Apron (X-Ramp)	2009	Kandahar, Afghanistan
Kandahar Air Base, Air Traffic Control Tower (ATCT)	2009	Kandahar, Afghanistan
KAIA North Accomodation and Office Buildings	2009	Kabul, Afghanistan
Bagram Air Base, Admin Building	2010	Bagram, Afganistan
Bagram Air Base, Parallel Twy Phase-1, Refueler Ramp, Strategic Twy, Helo Apron and Hangar, C-130 Hangar	2009-2012	Bagram, Afganistan
Southpark Infrastructure	2009	Kandahar, Afghanistan
Kandahar Air Base, B705E Building	2009	Kandahar , Afghanistan
AVMF (Auto Vehicle Maintenance Facility), KABUL	2009	Kabul, Afghanistan
KAIA North PSR-150 Apron	2009	Kabul, Afghanistan



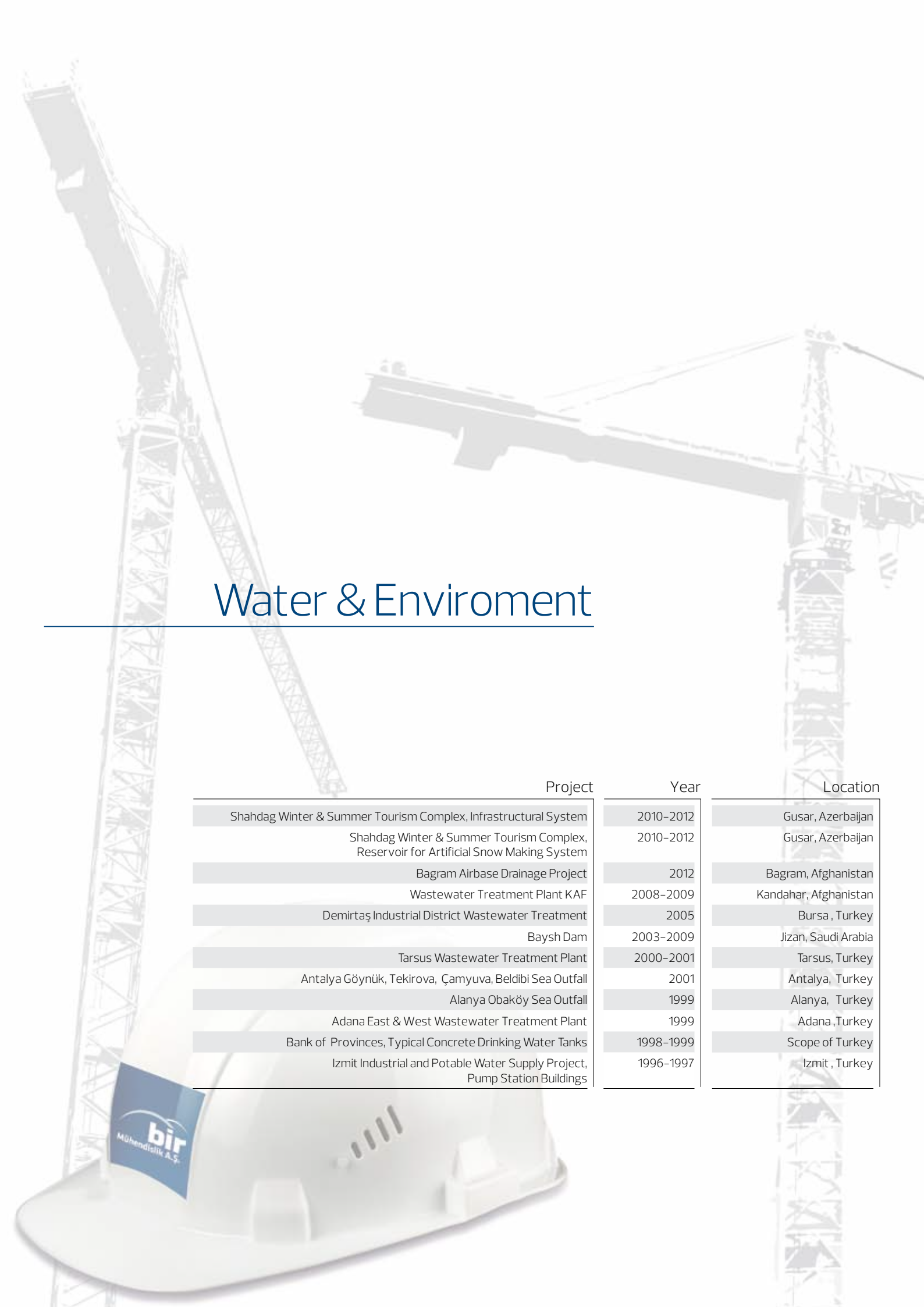
Project	Year	Location
Medical Treatment Facility, Kandahar	2008	Kandahar, Afghanistan
KAF Living Accomodations, Kandahar	2008	Kandahar, Afghanistan
KAIA North Superstructure, HQ Main Building	2008	Kabul, Afghanistan
KAIA North Superstructure and PRC Terminal Building	2008	Kabul, Afghanistan
KAIA North, Accommodation Buildings	2008–2010	Kabul, Afghanistan
Bagram Air Base, Backshops Aprons	2008	Bagram, Afghanistan
CSAR Helicopter Ramp Extension, Runway Overruns Polypanels for Arresting Cables	2007–2008	Balad, Iraq
Medevac Helicopter Compound	2008	Balad, Iraq
Bagram Air Base, Construction of ISAF Air Operating Surfaces	2007–2008	Bagram, Afghanistan
Bagram Air Base, Construction of US CAS Ramp Extension	2007–2008	Bagram, Afghanistan
Balad Air Base, ISR–IED Parking Apron and Taxiway	2007–2008	Balad, Iraq
Balad Air Base, Temporary Cantonment Area Infrastucture	2007–2008	Balad, Iraq
Provision of General Earthworks, Force Protection Measures and Concrete Works ISAF Projects, Kabul Int Airrport	2008	Kabul, Afghanistan
Balad Air Base, Expendititonary Fabric Hangar and Apron Construction	2007–2008	Balad, Iraq
Balad Air Base, Runway Repair	2006	Balad, Iraq
Kabul International Airport, Construction of Roads and Infastructure, KAIA North	2007	Kabul, Afghanistan
Balad Air Base, Strategic Ramp	2007	Balad, Iraq
Tikrit Air Base, Dining Facilities	2007	Tikrit, Iraq
Jalalabad Base Housing Compound Buildings, Roads and Substructure	2006–2007	Jalalabad, Afghanistan
Construct Secure Reception Staging and Onward Integration Facility, RSOI Building	2007	Balad, Iraq
Balad Air Base, SOF C130 Apron	2006–2007	Balad, Iraq
Balad Air Base, Dry Storage Warehouse	2007	Balad, Iraq
Balad Air Base,New Headquarters Buildings and Gym Buildings	2007	Balad, Iraq

Transport & Structures

Project	Year	Location
Shahdag Winter & Summer Tourism Complex, Ski Slopes	2010-2012	Gusar, Azerbaijan
Shahdag Winter & Summer Tourism Complex , Bridges & Roads	2010-2012	Gusar, Azerbaijan
İstanbul İkitelli-Olimpic Village Metro Line	2006-2012	Istanbul, Turkey
Dubai International Airport Roads, Phase II, Expansions Beirut Road / Al Nahta Junction / Tunnel & Bridge	2007-2009	Dubai, UAE
R 762/1I & II Section Dubai Bypass Road Expansion Work, Al-Awir Interchange Bridge	2007-2009	Dubai, UAE
Historical Kilezdere Bridge Relocation	2005	Izmit , Turkey
Seismic Evaluation and Retrofit of of Tunnels and Viaducts of Anatolian Motorway Camlıca Gumusova Section and Motorway Connection Roads	2004	Gumusova, Turkey
Unye-Piraziz Highway Supply Construction-Tabakhane Creek Bridge	2003	Unye,Turkey
Trans European Motorway, Adapazarı-Gümüşova Section Bridges	2002	Adapazarı, Turkey
Istanbul Haydarpaşa-Izmit D100 Highway-Rehabilitation of Kucukyalı Interchange Bridge	2000	Istanbul, Turkey
Seismic Evaluation and Retrofit of Viaducts, Overpasses and Underpasses of TEM Motorway, Gumusova – Adapazarı Section after Marmara Earthquake 17/08/1999.	2000-2001	Adapazarı, Turkey
Istanbul-Bursa-Balıkeslr-Izmlr Motorway Connectlon Road Overpass and East Intersection Overpass	1999	Balıkesir, Turkey
Istanbul Kurtkoy Airport Road, Old Ankara Road Overpass,Tem Motorway Overpass and Orhanlı Road Intersection Overpass	1999	Istanbul, Turkey
Erzincan-Kemaliye Road Başpınar Bridge	1994-1995	Erzincan, Turkey
Rize-İspir Road Avalanche Protection Tunnels	1998	Rize,Turkey
Sivas-Kangal Railway Project Highway Underpasses, Railway Overpass and Tecer Bridge	1997	Sivas, Turkey
Izmlr-Urla-Çeşme Motorway Harbour Viaduct and Halkapınar Viaduct	1997	Izmir,Turkey
Izmit City D100 Highway Four Track Railway Relocation Construction, Köseköy Station Underpass	1995	Izmit,Turkey
Izmit City D100 Highway Four Track Railway Relocation Construction, Overpasses, Underpasses, Kavakçılık Institute Bridge	1995	Izmit,Turkey

Public Building Service

Project	Year	Location
Shahdag Winter & Summer Tourism Complex	2010-2012	Gusar , Azerbaijan
Baku Funicular System	2010-2011	Baku, Azerbaijan
Incirlik Airbase Consolidated Community Center	2010-2012	Adana, Turkey
Suleymaniyah International Airport Cargo Village	2010-2012	Suleymaniyah , Iraq
Al Fateh University, Agriculture, Veterinary and Science Faculty Buildings Project	2008-2010	Tripoli, Libya
Al Fateh University, Economy and Law Buildings Project	2008-2010	Tripoli, Libya
Akşehir Feed and Food Industry Grain Silos and Buildings	2001	Aksehir, Turkey
Temporary Prefabricated Housing Project, Köseköy Camp after 17/ August/1999 Marmara Earthquake	1999	Izmit, Turkey
Zapaduralnerud Administration Building	1994	Perm, Russia
Dr.Siyami Ersek Hospital Additional Building Construction, Angio Section Steel Construction	1994	Istanbul , Turkey



Water & Enviroment

Project	Year	Location
Shahdag Winter & Summer Tourism Complex, Infrastructural System	2010-2012	Gusar, Azerbaijan
Shahdag Winter & Summer Tourism Complex, Reservoir for Artificial Snow Making System	2010-2012	Gusar, Azerbaijan
Bagram Airbase Drainage Project	2012	Bagram, Afghanistan
Wastewater Treatment Plant KAF	2008-2009	Kandahar, Afghanistan
Demirtaş Industrial District Wastewater Treatment	2005	Bursa , Turkey
Baysh Dam	2003-2009	Jizan, Saudi Arabia
Tarsus Wastewater Treatment Plant	2000-2001	Tarsus, Turkey
Antalya Göynük, Tekirova, Çamyuva, Beldibi Sea Outfall	2001	Antalya, Turkey
Alanya Obaköy Sea Outfall	1999	Alanya, Turkey
Adana East & West Wastewater Treatment Plant	1999	Adana ,Turkey
Bank of Provinces, Typical Concrete Drinking Water Tanks	1998-1999	Scope of Turkey
Izmit Industrial and Potable Water Supply Project, Pump Station Buildings	1996-1997	Izmit , Turkey

Industrial Projects

Project	Year	Location
Trans Anatolia Natural Gas Pipeline (TANAP) Project	2015	Turkey
Bozshakol Copper Mine Project	2012	Pavlodar, Kazakhistan
Aktogay Copper Mine Project	2012	Aktogay, Kazakhistan
Design and construction of 8 wheat silo plants in Turkmenistan (Tejen, Babadayhan, Boldumsaz, S. Turkmenbasy, Garagum, Altyn Sahra, Garashsyzlyk, B. Turkmenbasy)	2012	Turkmenistan
Rigips Kırıkkale Gypsum Plant	2007-2008	Kırıkkale, Turkey
Kırıkkale Tüpraş Refinery, Construction of New Reformer and Diesel Desulphurization Unit	2005-2007	Kırıkkale, Turkey
Kemalpaşa Natural Gas Combined Cycle Power Plant	2004-2005	Izmir, Turkey
Preheater for Rotary Kiln	2003	Eskişehir, Turkey
Buxton Lime Industries Ltd., Replacement Cement Plant	2002	Buxton-Manchester, England
Ankara Natural Gas Combined Cycle Power Plant	2001-2003	Ankara, Turkey
Kırıkkale Çimentaş-Gazbeton Factory	1995	Kırıkkale, Turkey
Çine-Akmaden Quartz Production Plant	1997	Aydın, Turkey
Özkul Precast Concrete Elements Factory	1995	Ankara, Turkey
Eskişehir Magnesit A.S.Crushing Plant	1996	Eskişehir, Turkey
Turkish Monopoly, Tobacco Storage Buildings	1995	Various Provinces at Eastern Anotalia
Çamsan Wood Factory Revision	1994	Ankara, Turkey
TMO Hopa Port Grain Silos	1994	Hopa, Turkey
Başer Gıda Grain Silos	1994	Akyazı, Turkey
Erdemir Steel Plant, BlastFurnace Stoves Modernization	1994	Ereğli, Turkey
TMO, Derince Port Silos	1993	Derince, Turkey

bir Engineering INC.

Headquarters

Angora Evleri, Sarmaşdolaş Sk. No:15
06800 Çayyolu / Ankara / TURKEY
Phone : +90 312 225 4041 (Pbx)
Fax : +90 312 225 4044

İstanbul Office

Ağaoğlu My Office İş Merkezi
Barbaros Mh. Çiğdem Sk. No:1 D: 43
34746 Ataşehir / İstanbul / TURKEY
Phone : +90 216 688 7200 (Pbx)
Fax : +90 216 688 7202

www.bir-muh.com


bir
Engineering INC.