



S G R C
COMPANY PROFILE

STRUCTURAL & GEOTECHNICAL
RESEARCH CENTER

I N T R O D U C T I O N

Structural and Geotechnical Research Centre (SGRC) is a Consultant Office established in 1983 by Prof. Ezzat Abdel Fattah. Since its establishment, SGRC had executed hundreds of major construction projects in Egypt as well as Arab countries.

SGRC structure is divided into the following departments: Structural & Architectural design department, Electromechanical design department, Geotechnical department, Project management and field supervision department, financial department and Quality Control department supported by a laboratory equipped for all quality assurance tests.

SGRC has a permanent staff consists of 4 Doctors & Managers (heading the departments), 10 Engineers, 15 Technicians, 3 accountants and 2 secretary, and various number of temporary engineers are hired according to the number and sizes of the projects performed each year.

During the past 22 years, SGRC had successfully performed over 2000 Geotechnical report, over 100 major design projects and over 500 structural revisions for the insurance pole. As a result, SGRC became the consultant for many Egyptian ministries as well as major clients such as, the Ministry of Energy and Electricity, the Ministry of Housing and Urban Development, The ARAB CONTRACTORS, EGEMAC, ALSTOM, ABB, ENERGYA, ABDELLAH SONS, ELEGECT, KAHROMICA, HYDELECO, MISR SOAP AND OIL COMPANY AND AEG.

LABORATORY FACILITIES

CONCRETE

- SOUNDNESS FOR AGGREGATES.
- GRAIN SIZE ANALYSIS.
- CRUSING VALUE.
- CHEMICAL ANALYSIS (AGGREGATES & WATER).
- DESIGN OF CONCRETE MIXTURE.
- CONSISTENCY.
- COMPRESSIVE STRENGTH (CYLINDER & CUBE)
- SOUNDNESS OF CEMENT
- TESTING OF REINFORCING STEEL (TENSION & COLD BENDING TEST)
- UNIT WEIGHT, SPECIFIC GRAVITY AND WATER CONTENT.

SOIL

PHYSICAL

- UNIT WEIGHT, SPECIFIC GRAVITY AND WATER CONTENT.
- LIQUID LIMIT.
- PLASTIC LIMIT.
- CHEMICAL ANALYSIS FOR SOIL.

MECHANICAL

- CONSOLIDATION TEST.
- SWELLING TEST.
- UNCONFINED STRENGTH.
- TRIAXIAL TEST.
- DIRECT SHEAR TEST.

FIELD FACILITIES

CONCRETE

- CORE TEST FOR HARDENED CONCRETE.
- SCHEMIDT HAMMER.
- LOADING TEST FOR STRUCTURES.

SOIL

- STANDARD COMPACTION TEST (PROCTOR).
- MODIFIED COMPACTION TEST (MODIFIED PROCTOR).
- FIELD DENSITY (SAND CONE & CYLINDER).
- BOREHOLE AND SOIL SAMPLING.
- SOIL RESISTIVITY.

PETROLEUM FIELD

- Cairo Petroleum Company:
 - Rehabilitation of Mustorod Laboratory
 - Increasing the Story number for the Administration Building.
 - Rehabilitation of the Substation.
- El Seham Petroleum Company:
 - Design of Company Workshop in Gamra
 - Design of Company Workshop in Alexandria.
- Misr Petroleum Company:
 - Soil Investigation and construction supervision for the companies Buildings / Tanks in Ramsis



POWER LINE FIELD CONSULTATION PAST EXPERIENCE

Projects	Voltage (KV)	Length (KM)
1- Zafarana - Smalaut	500	280
2- Shark Al Owyinat - Balat	220	400
3-Tiba Interconnection	220	24
4-Etai Al Baroud - Damanhour	220	60
5-Bani Sweif- Zafarana	220	10
6-Sokhna-Zafranaa2	220	15
7-Epoxa - El Shawashna	66	25
8-Gamasa - Balteem	66	55
9-Kotor - Tanta	66	30
10- Kafr Al Shaikh - Kotor	66	21
11- El Bousaily - Rashid	66	28
12- Al Mahmoudia - Halk El Gamal	66	26
13- Intaragro - El Nobaria 200	66	34
14- Abou Al Matameer - Interagro	66	23
15 - Tawleed Kafr Dawar - GanoubDawar	66	15



TRANSFORMER STATIONS PAST EXPERIENCE:

Engineering and Design Services for :

1. El Sokhna 500/ 66 / 11 K.V GIS.
2. KEZ 220/ 66 / 11 K.V.
3. Kom Abou Radi 66/11 K.V.
4. Kom El Ahmar 66 / 11 K.V.
5. Assuit 500, 66 / 11 K.V.
6. Assuit 2, 66 / 11 K.V.
7. Hurgada 66 / 11 K.V.
8. Aswan 66 / 11 K.V.
9. Al Eqtisadia 220 / 66 / 11 K.V.
10. Tahta 66 / 11 K.V.
11. Akhmim 66 / 11 K.V.
12. King Fisal 66 / 11 K.V.
13. Gamra 66 / 11 K.V.
14. Kohafa 66 / 11 K.V.
15. Sidi Salem 66 / 11 K.V.
16. 6th of October 66 / 11 K.V.
17. South Cairo 66 / 11 K.V.
18. North Giza 500/ 66/11 KV.
19. Banha 220/66 KV.
20. Gabal Al Zayt 220/66 KV.
21. Badr 500/220/22 KV.
22. BMIC 66/11 KV.
23. Plazma (Libya) 132/33 KV.



GEOTECHNICAL FIELD

Geotechnical investigation and foundation recommendations for:

1. Lack View compound (300 Villa, New Cairo).
2. New Cairo Club.
3. Aswan–Shalateen Power Line Route.
4. 20 , 66 , 220 , 500 kV power line routs allover Egypt, for Egyptian Electricity Authority.
5. 220 kV power line for El-Salum–Tobrok (LIBYA)
6. Water distribution pipe line routs for greater Cairo.
7. 66 and 220 kV transformer stations all over Egypt .
8. Cairo west power plant and Karmouz substation .
9. Water structure projects, tanks, dykes, intakes, dams, Pump stations, conduits and regulators.
10. Industrial, public and residential buildings .
11. 220 m tower for Suez-Canal crossing .
12. Design of platforms and roads across deep soft soils for Marriott lake.
13. Intercontinental Hotel (New Cairo).
14. Maxiem Compound (50 Villas, New Cairo).
15. More than 300 boreholes for 63 schools all over Egypt.

QUALITY CONTROL FIELD

1. Intercontinental Hotel Soil replacement, Roads and concrete quality control, (New Cairo).
2. Maxiem Compound Soil replacement, Roads and concrete quality control, (50 Villas, New Cairo).
3. Lack View compound (300 Villa, New Cairo).
4. Earth work and building material controls for 4000 acre Marriott fish farm. (Arab Contractors).
5. Roads, concrete and building materials quality control for Gizr El Suez bus industrial plant , SIMSPA Co.
6. Roads and concrete quality control, Cairo West power station, Karmouz, Heliopolis substation, ALSTOM.
7. Rehabilitation of irrigation and water drainage system at Fayoum Euroconsult.
8. Quality control for different Transformer stations such as, EL REHAB, BANI SWIF, EL BADRASHIN, EL ZAKAZIK AND NASER
9. Structural materials for Ayoun Mousa - Taba , and Abu-Zabel - El Suez 500 kV power lines.
10. Soil Replacment for 6 million m³in the west Golf, New Cairo city.
11. Concrete Mix Desgin, Quality Control and Soil Replacement and for Saker Quorish residential buildings.



STRUCTURAL FIELD

Design, reviewing and supervision of different reinforced Concrete and steel structures, as:

1. Industrial plants for Misr oil and soap company.
2. Greater Cairo strategic water storage tanks,(foundation).
3. Faculty of girls, Ein Shams University.
4. 66 and 220 kV transformer stations, El Sadat (ELEJECT), Sharm Elsheik (KAHROMIKA) , Cairo South ,(EGEMAC), 10th of Ramadan (HIDELECO), 6th of October (HIDELECO), ElAlamin, Kohafa, Sidi Salem, El-Zagazeg, El-Suez, El-Manaif, El-Roswa (EGEMAC).
5. 20 MW diesel power station at Sharm –Elsheik.
6. Design of steel and foundations for high voltage electric transmission towers
7. Design of drainage net system for industrial plant of Misr Oil and Soap Co. at El-mansoura.
8. Maxim Country Club Compound (400 Villas, Club and Mall)
9. Royal Maxim Compound (50 Villas and 300 Rooms Hotel).Steel tanks (500 to 5000 ton) for oil and soap company.
10. Steel structures for storage areas and production lines for Oil and Soap. at different industrial sites.
11. Steel structures for industrial plants for production of steel towers for ELEJECT.
12. Design of foundation for 220 m height towers ,500 kV double circuit, for Suez Canal crossing.
13. Kampinsiky Hotel (New Cairo).



POWER PLANT & SUBSTATIONS FIELD:

Design, reviewing and supervision, as:

- **Civil Works**
 - Concrete and Steel works
 - Building Design Calculation
 - Take-off Steel Gantry Design Calculation
 - Concrete Cable Trench
 - Foundation, Slab on Grade, Axis & Columns Drawings
 - Foundation Design Calculation
 - Underground Duct Bank
 - Steel Design & Calculation
 - Geotechnical Investigation.
 - Field Surveying.
 - Quality Control.
 - Construction Supervision
- **Architectural Works**
 - Dimension Plan
 - Furniture Plan
 - Sections & Elevations
 - Finishing Schedule
 - Doors & Windows Schedule
 - Toilet & Kitchen Details
 - Staircase Details
- **Infrastructure Works**
 - Underground Network
 - Storm Network – Profiles
 - Water Supply Network
 - Sewage Network – Profiles
 - Irrigation Network
 - Composite Plan and Coordination Network
 - Roads
 - General Layout
 - Setting out and Dimension Plan
 - Marking and Signage Plan
 - Finished Roads Level – Longitudinal Profiles
- **Electrical Works**
 - Primary Section
 - Power Plant - Plot Plan
 - 3D Model for Conceptual Layout
 - Civil Guide Drawings
 - Lightning Protection – Risk Assessment Report.
 - High Voltage Cables Routing
 - High Voltage Substation - Plot Plan
 - Equipment General Layout
 - Lightning Protection & Grounding system
 - Cables Raceway
 - Cables Management System (3D Model)

- Secondary Section
 - Main Single Line Diagram
 - Auxiliary Single Line Diagram
 - Relay & Metering Single Line Diagram
 - AC/DC Electrical Load List
 - CT/VT Calculation
 - AC/DC System Calculation
 - Cable Sizing Calculation
 - Protection Interface Schematic
 - Panel Outline Arrangement
 - Protection Review Package (Substation Automation System, GIS, Switchgear, GIS LCC Schematic, Transformer LCP Schematic, Protection & Control Panels Schematic, etc.)
 - Overhead Conductor Sizing Calculation
- **Building Services Works**
 - Power Systems
 - Indoor and Outdoor Lighting system
 - Lux Calculation Study
 - Small Power Sockets
 - Earthing System
 - Panel Schedule
 - Low Current Systems
 - Telecom Systems (LAN – Telephone - Public Address)
 - Fire Alarm System
 - Security System (Intrusion & IP CCTV)
 - MATV System – Master Clock System
 - Access Control System – Queuing System
- **Mechanical Works**
 - Heating, Ventilation & Air Conditioning System
 - HVAC Design Calculation
 - HVAC Equipment Selection and Schedule
 - HVAC Plan and Elevation
 - Fire Fighting System
 - Fire Pumps Sizing Calculation
 - Hydraulic Calculation – Water Spray System
 - Fire Hydrant System - Pipe network and Hydrants Distribution
 - Firefighting P&ID
 - Plumbing System
 - Cold & Hot Water System
 - Drainage System
 - Rain Drainage System

PROF. EZZAT ABDEL FATTAH
FOUNDER OF SGRC (May God Bless His Soul)

Prof. of Geotechnical Eng., Structural Dept.,
Ain Shams University, Egypt

PERSONAL DATA

Name: Ezzat Abdel Fattah
Birth: 11/09/1944
Nationality: Canadian
Religion: Muslim
Military: Done
status: Married
Address: 5 Mohamed Ebid st, El-Marghany st. Cairo, Egypt
Tel: (202) 4146747-4146749- 0122153342
Email: sgrc_2002@yahoo.com

EDUCATION

Graduation: B.SC. In Civil Engineering - Ain Shams University , 1965
Post-Graduation: Ph.D. Sheffield University, 1978
Languages: English (Spoken - Written)

ASSOCIATIONS

- Egypt order of engineers
- Quebec order of engineers
- American society of civil engineers
- American society of testing materials
- International society of terrain vehicle systems

EGYPTIAN EXPERIENCE

Since 1984: Prof. of Geotechnical Engineering, Structural Engineering Dept., Ain Ahams University, Cairo, Egypt.
Since 1984: Consultant for Egyptian Electricity Authority in the field of power lines, transformer and power, generating station.
Since 1984: Consultant for Electric Power Engineering Systems Co. (EPS) in the different fields of civil engineering for power lines and transformer stations.
Since 1990: Consultant for Oil and Soap Co. for tanks, steel structures, concrete structures, water and drainage systems, roads.
Member of the Egyptian Decennial Pool.

S G R C

PERMANENT STAFF

ENG. SHERIF EZZAT ABDEL FATTAH SGRC (GENERAL MANAGER)

Personal Information:

Nationality Canadian
Date of Birth 15/9/1981
Address 632 Gharb El Golf, Katomya, Egypt
Mobile Phone +202-0100-104-1050
Status Married

Language	Speaking	Reading	Writing	Understanding
English	Fluent	Fluent	Fluent	Fluent
Arabic	Fluent	Fluent	Fluent	Fluent

Education:

School

Integrated Thebes Language School, Cairo, Egypt

University

Bachelor :- Construction Engineering, The American University in Cairo. (2004)

Skills:

Computer Skills:

- Operating systems: Windows 95/98/2000/XP/NT
- Microsoft offices: Word, Excel and Power point
- Autocad 2007
- Sap 2000
- Etabs
- Safe
- CSI Column
- PLC-CAD
- Primavera P6
- Internet: Browsing and research

Experience:

- **Structure & Geotechnical Research Center** Jan 2010 - Current
- Design & Surveying Manager
Construction Supervision Manager
Field Surveying
- **Housing and Development Contractors** Feb 2005 – December 2010
- Site Engineer
Project Manager

Previous projects:

Construction Supervision:

- Maxim Country Club (350 Villa and Club House).
- Royal Maxim (50 Villa).
- Maxim Mall (Area 12000 m² five floors).
- Kampinsky Hotel Ballroom (Span 40 m. Pre-stressed Concrete).
- Residential Buildings (Fifth Settlement, 6th of October and Heliopolis).
- Islamic Center (Hospital & Educational Center 2000 m² fifteen Floors).

Concrete Design:

- 500, 220, 66 KV Substations (Al Soukhna, Gabal Al Zayt, Moot, Assuit 500, Assuit 2, Kom Al Ahmar, Kom Abou Radi, Tahta, Akhmeen & Hurgada).
- Design of High Raise buildings (Islamic Center 15 Floors, Baron 11 Floors etc.)
- Villas (Design of more than 15 types of villas different owners).
- Foundation design for 500, 220, 66 KV Over head transmission Lines.

Steel Design:

- Design of Pharmaceutical Factory at 10th of Ramadan.
- Design of Steel structure for Karrar Concrete Mix Station
- Design of Gentries & Equipments (Gabal Al Zayt, Meet Khamr, Obour, Tora, Giza North, Port Saeed, Banha, etc.)

Over Head Transmission Lines:

- Rehabilitation and increase efficiency of existing power lines (Eati Al Baroud- Abou Ear, Tanta-Damietta, Kafr Al Shaik-Kottor). This Includes: Stress analysis for Towers, Sag- Tension Calculation, Field Survey and Field inspection.
- Site Surveying, Tower spotting & Sag- Tension Calculations for 500, 220 & 66 KV Overhead Transmission Line .
- Field Surveying for Abou Keir - Kafr Al Zayat 500 KV OHTL.
- Field Surveying for Kafr Al Zayat - Basous 500 KV OHTL.
- Field Surveying for Sokhna 500 KV OHTL.
- Field Surveying for Tiba 220 KV OHTL.
- Field Surveying for Sokhna - Suez for Sewedy cement Factory 220 KV OHTL.

PROF. MONA EID

Quality control manager

Prof. of Geotechnical Eng., Structural Dept.,
Ain Shams University, Egypt

PERSONAL DATA

Name	Mona Mohamed Eid
Birth	5/5/1944
Nationality	Egyptian
Religion	Muslim
status	Married
Address	5 Mohamed Ebid st., El-Marghany st., Heliopolise, Cairo, Egypt
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Email	sgrc_2002@yahoo.com

EDUCATION

Graduation:	B.SC. In Civil Engineering - Ain Shams University, 1965
Post-Graduation:	Ph.D. Sheffield University, 1978
Languages:	English (Spoken - Written)

ASSOCIATIONS

- Professor of geotechnical engineer.
- Consultant of Engineer Member of Egyptian Syndicate.

SPECIALISED FIELD(GEOTECHNICAL, LABORATORY AND INSITU TESTING)

POSITION ON CONSTRUCTION(GEOTECHNICAL CONSULTANT)

YEARS OF EXPERIENCE(35 YEARS)

EMPLOYER

- Ain Shams Universtiy, Egypt.(8 Years)
- Sheffield University, U.K. (5 Years)
- Alexandria University, Egypt.(1 Year)
- Ain Shams Universtiy, Egypt.(21 Years)
- Laboratory Manager Of Ain Shams University Geotechnical Lab (15 Years)

CONSTRUCTION EXPERIENCE

Name of project

- Rehabilitation Of El Nasr Pumping Stataions, Ministry Of Water Resources And Irrigation.
- El-Farma Water Pump Station , Ministry Of Water Resources And Irrigation.
- El-Haddos Bridge, Ministry Of Water Resources And Irrigation.
- Fish Farm, Marriot, Miinistry Of Agriculture.
- Leather Processing Units, Robiky, Ministry Of Industry.
- Development Project For Mansheet Naser, Ministry Of Urbain Communities And Housing.

Features of projects

Site Investigation Including Field Testing, Laboratory Testing, Soil Injection, Preparation Of Tender Documents And Structural Repair.

DR. AHMED M. EBID
Structural Dept. Manager

PERSONAL DATA

Name Ahmed Mohmed Abd-Elkalek Ebid
Birth 01/01/1975
Nationality Egyptian
Religion Muslim
Military status Done
Address 13 Abd-Elaziz Talat Harb St. 6th Zone - Nasr City
Tel. (202)2715315 - 0101954673
Email ahmed_m_ebid@yahoo.com

EDUCATION

Graduation: B.SC. In Civil Engineering - Ain Shams University - 1996
Grade: Good
Project: Design of Concrete Structures - Excellent
Post-Graduation: M.SC. In Structural Eng. - Ain Shams University -2000
Ph.D. In Structural Eng. - Ain Shams University - 2004

LANGUAGES & COMPUTER SKILLS

Languages English (Spoken - Written) TOEFL grade 550
Computer Skills Windows - Office (Word, Excel, Power point, Access)
Structural Analysis Software (SAP2000 - STAAD III - PLIXES)
Drawing Software (AUTOCAD - TURBOCAD)
Programming (Visual Basic , C++)
Management Software (Microsoft Project)
Internet Software (Explorer - Netscape - Frontpage)

EXPERIENCE

Since 1996 Working in (SGRC) (Structural & Geotechnical Research Center) in the following fields:

- Design and supervision of concrete structures
- *Administration Buildings, Hospitals, Mosques, Villas, Residential Buildings, Tanks, ...etc
- Design of steel structures * Tanks, Stores, Factories
- Design of Geotechnical Systems * Piles, Deep excavation, Dewatering, Diaphragms, ..etc
- Structural Design of O.H.T.L. * Steel towers and its footings from 33 K.V. and up to 500
- Structural Design of transformer stations* transformer stations 11/66/220 K.V.
- Design and supervision of repairing *industrial buildings, schools, ...etc
- Structural Revision of buildings in Insurance companies
- Design of concrete mix and its quality control tests *Slump cone, compressive strength, Crushing, validity of aggregates and cement, ..etc
- Supervision of geotechnical laboratory tests analyzing
- the results, preparing geotechnical reports and foundation recommendations.

ENG. HAYTHAM KHALEEL

Electromechanical Dept. Manager

Personal Information:

Nationality Egyptian
Date of Birth 06/04/1985
Address 15 May City, Cairo, Egypt
Mobile Phone +2010-9178-6160
Status Married

Language	Speaking	Reading	Writing	Understanding
English	Good	Good	Good	Good
Arabic	Fluent	Fluent	Fluent	Fluent

Education

School

Saad Zaghlool High School, Cairo, Egypt

University

Bachelor: - Electrical Power Engineering, Helwan University in Cairo. (2007)

Skills:

Computer Skills:

- CAD Tools: AUTOCAD.
- Engineering tools: CYMGRD - Grounding grid design
- PANELDES 3D Modelling (Cables Management Model)
- AVEVA E3D
- Microsoft Office (Word, Power Point, Excel)

Experience:

- **Structure & Geotechnical Research Center** Oct 2017 - Current
Electromechanical Dept. Manager
- **El-Sewedy Power System Projects** Nov 2012 – Aug 2017
Lead Design Engineer
- **Jawda Engineering Consulting** Jun 2011 – Nov 2012
Senior Design Engineer
- **Saudi Ben Laden Group** Apr 2010 – Jun 2011
Electrical Design Engineer
- **Helwan Company for Castings** Nov 2008 – Apr 2010
Electrical Engineer
- **IDA Company Engineering office** Dec 2007 – Nov 2008
Electrical Design Engineer

Previous projects:

EPC Contract – Power Projects:

- 4800MW Beni Suef Combined Cycle Power Plant, 4 Modules (2x2x1), Siemens Turbine units Bani Suef, Egypt.
- 650MW Attaqa Simple Cycle Power Plant, Siemens Gas Turbine units, Egypt
- Al-Diwaniya 4x125MW Simple Cycle Power Plant, GE Gas Turbine units Frame 9, Iraq
- 500kV 3000MW HVDC Interconnection between Egypt and KSA (Tender Stage - Basic Design)
- 500/220/66kV Suez Gulf GIS S/S, EPC Project, Egypt.
- 400/132kV GIS S/S, EPC project with Toyota Company, Iraq.
- Jeddah Seaport 110/13.8KV, KSA.

Electromechanical Design Projects:

- Prince Sultan University, Riyadh, KSA.
- Haram Mosque Extension, Makkah, KSA.
- National Bank of Egypt Branches
- Aero Sport Club – Playgrounds, Football Lighting system (design and lux study).

Major Present Responsibilities

- Responsible of coordinating and managing the resources to meet the project technical requirements and approach the optimum design.
- Study the nature of the project and client requirements.
- Attend Factory Acceptance Test (FAT) for electrical equipment.
- Responsible of coordinating with other engineering disciplines, project partners and owners.
- Prepare the project technical specifications, bid evaluation and award recommendations.
- Conduct technical and coordination meetings with contractors.
- Prepare and Review design calculation and drawings (Basic & Detail Design Stage) for Power Plant and High Voltage substations.
- Share and exchange more experience in field of power generation plants during workshop and working period for 4 months with Siemens Germany, Offenbach.
- We prepared the Plant & Basic design for Bani Suef Power Plant CCGT with Siemens Engineering Team during this period and held many workshops in Egypt and Germany.
- Responsible of Project Cables Management System in Power Plant Projects, Latest mega project we managed around 40,000 circuits and by length around 2,000 km approximate total length.
- Responsible for reviewing and assuring that the design is meeting the project standards.
- Coordinates engineering efforts in assigned areas between different disciplines.
- Prepare and Review the Secondary works for power Plant and Substation (Basic & Detail Design Stage).
- Performing High Voltage Substation Primary systems basic design and detail design
- Reviewing the vendors drawings
- Planning the projects deliverables and scheduling the design deadlines.
- Preparing shop drawings of Low Voltage distribution networks.
- Low voltage system (indoor & outdoor lighting – Socket – HVAC system power supply – Single line diagram – Panel schedule calculation – Grounding system).

S G R C

PHOTO GALLERY FOR THE LABORATORY EQUIPMENTS

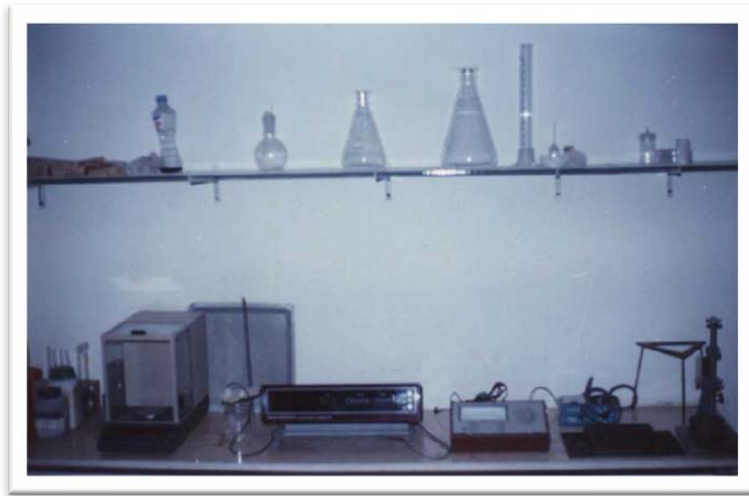


PLATE BEARING EQUIP.



TRIAXIAL



C.B.R



PLATE BEARING EQUIP.



COMPRESSIVE STRENGTH



COMPRESSIVE STRENGTH



DRILLING MACHINE



SOIL SAMPLES



CHEMICAL ANALYSIS



LIQUID LIMIT



CHEMICAL ANALYSIS



RESISTIVITY METER



SIEVE ANALYSIS



SHMIDITT HAMMER



SAND CONE



PROCTOR

PHOTO GALLERY FOR SURVEYING EQUIPMENTS

**Leica Total Station
(accuracy 5")**



**Leica RTK-GPS
(accuracy <0.1m)**



**Leica Disto D8
(accuracy <0.01m)**



**Leica RTK-GPS
(accuracy <0.03m)**



"CONTACT US"



Structure & Geotechnical Research Center

S G R C

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