

# **PROFILE**

# TRANSPORTATION & TRAFFIC ENGINEERING DIVISION GULF ENGINEERING HOUSE



# **Transportation & Traffic Eng. Division**

Gulf Engineering House (GEH) is a consulting office specialized in the field of highway and traffic engineering in the Kingdom of Saudi Arabia and the Gulf, which aims to provide engineering services (studies, designs, and supervision) for all public and private sectors, and has a leading role in scientific research and engineering studies and technology transfer. The Office also develops the specifications and quality control manuals and provides technical support to researchers and engineers in the fields of roads, airports, traffic and engineering tests of materials. The transportation & traffic engineering division provides services related to planning, design and operation in the following areas:

- 1- Traffic Engineering
- 2- Traffic Control Devices Studies
- 3- Traffic Management Studies
- 4- Traffic Safety Studies
- 5- Transportation Planning
- 6- Parking Studies
- 7- Public Transport Studies
- 8- Intelligent Transportation Systems

# قسم هندسة النقل والمرور

دار الخليج للهندسة أحد المكاتب الاستشارية المتخصصة في مجال هندسة الطرق والمرور على مستوى المملكة العربية السعودية ودول الخليج العربي، وهو يهدف إلى تقديم الخدمات الهندسية (دراسات، تصاميم، واشراف) لكافة القطاعات الحكومية والخاصة، كما أن له دور ريادي في مجال البحث العلمي والدراسات الهندسية ونقل التقانة. يقرم المكتب كذلك بتطوير المواصفات وأدلة مراقبة الجودة وتوفير الدعم والمطارات والمرور وهندسة إختبارات المواد. يختص قسم هندسة النقل والمرور بتقديم خدمات تتعلق بالنواحي التخطيطية، التصميمية والتشغيلية في المجالات التالية:

- 1. هندسة المرور
- 2. در اسات وسائل التحكم المروري
  - 3. دراسات إدارة المرور
  - 4. در اسات السلامة المرورية
    - 5. تخطيط النقل
    - 6. دراسات المواقف
    - 7. در إسات النقل العام
      - 8. نظم النقل الذكية





## **Traffic Engineering**

- Traffic Data Collection (ATC, TMC, MCC, O-D, Parking, Speed, Pedestrian & Transit Surveys)
- Basic Traffic Studies (Volume, Speed, Travel Time & Delay, & Pedestrian)
- Traffic Analysis and Design of Roadways, Intersections, and Interchanges.
- Traffic Operations Analysis
- Traffic Simulations

# هندسة المرور

- جمع البيانات المرورية (التعدادات، مقابلات المنبع المقصد، المواقف، السرعات، المشاة، النقل العام)
  - دراسة المرور الاساسية (الاحجام، السرعات، أزمان الرحلات، التأخير، والمشاة).
  - التحليل والتصميم المروري للطرق والتقاطعات السطحية والجسور/الانفاق.
    - التحليل التشغيلي للمرور
      - المحاكاة المرورية



Traffic Simulation for Falak Interchange – Jeddah Municipality



Study & Design of 4th Ring Road - Makkah Municipality









Field Surveys for ATC, TMC, OD & Speed Studies



Study & Design of Airport Rd / Prince Abdulmajid Rd Interchange – Madina Municipality

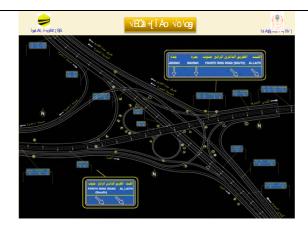


#### **Traffic Control Devices Studies**

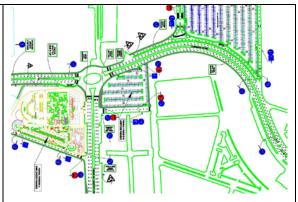
- Traffic Signs and Markings Design
- Sign Inventory and Management Systems
- Signal System Design and Operations
- Work Zone Traffic Control Plans
- Studying Traffic Control Devices Warrants

# دراسات وسائل التحكم المرورية

- تصميم لوحات وعلامات الطرق المرورية
- مسوحات لوحات المرور وأنظمة ادارتها
- تصميم وتشغيل أنظمة الإشارات الضوئية
- دراسة التحكم المروري في مناطق العمل
- دراسة مبررات وسائل التحكم المروري



Study & Design of 4<sup>th</sup> Ring Road – Makkah Municipality



TIS for Jeddah Municipality New Building – Jeddah Municipality









Sample Traffic Software Used by the Consultant



Sakaka Interchange Study & Design - Jouf Municipality

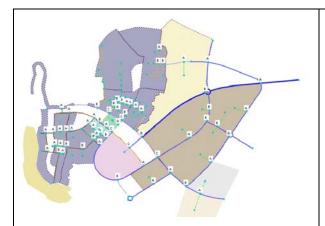


# **Traffic Management Studies**

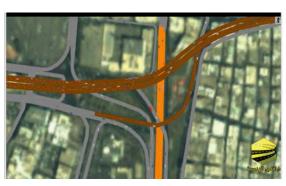
- Network Traffic Management
- Residential Traffic Management
- Travel Demand Management
- Access Management

# دراسات إدارة المرور

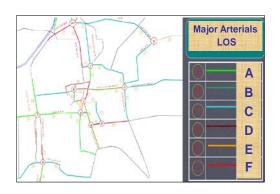
- إدارة حركة المرور على شبكات الشوارع
  - إدارة حركة المرور في المناطق السكنية
    - إدارة الطلب على المرور
      - إدارة الوصول



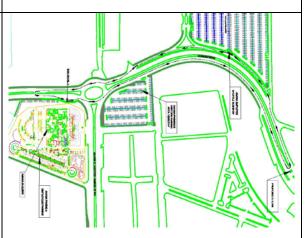
Traffic Study for KAUST Campus (with Vinnell) - Aramco



Comprehensive Traffic Planning Project - Taif Municipality



Al-Ahsa Traffic Study - Al-Ahsa Municipality



TIS for Jeddah Municipality New Building (Shuttle BUS) – Jeddah Municipality



# **Traffic Safety Studies**

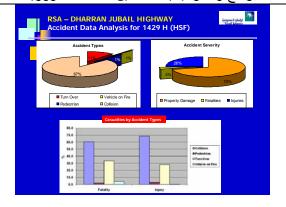
- Hazardous Locations Identification
- Traffic Accident Data Analysis & Treatment Countermeasures and Evaluation
- Road Safety Audits
- Traffic Calming Studies
- Safety Improvement Programs & Strategies

# دراسات السلامة المرورية

- تحديد المواقع الخطرة
- تحليل بيانات الحوادث المرورية واجراءات المعالجة وتقييمها
  - تدقيق السلامة على الطرق
  - دراسات التهدئة المرورية
- برامج واستراتيجيات تحسين السلامة المرورية



Road Safety Audit for Dhahran Jubail Highway - Aramco



Road Safety Audit for Dhahran Jubail Highway - Aramco



Comprehensive Traffic Planning Project (Traffic Safety Study) – Taif Municipality



Traffic Enhancement for Streets & Intersections (Traffic Safety Study) - MOMRA



# **Transportation Planning**

- Traffic Impact Studies
- Travel Demand Forecasting and Model Development
- Major Investment and Corridor Studies
- Transportation System Plans
- Environmental Impact Assessment Studies

# تخطيط النقل

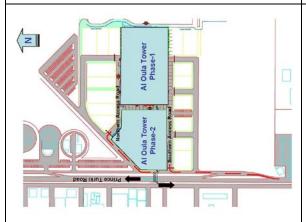
- دراسات التأثير المروري
- تطوير نماذج تقدير الطلب على النقل
- دراسات المحاور وتأثير التطوير العمراني عليها
  - دراسات تخطيط أنظمة النقل
  - دراسة الأثر البيئي لمشاريع النقل



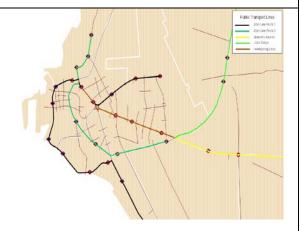
TIS for Jeddah Municipality New Building – Jeddah Municipality



Traffic Assignment for "Study & Design of 4<sup>th</sup> Ring Road " – Makkah Municipality



TIS for Al-Oula Towers in Al-Khobar - ALOULA



VISUM Modeling for Jazan Public Transport Project - MOT



# **Parking Studies**

- Design of Parking Facilities
- Parking Demand Studies
- Parking Operations Studies
- Parking Management Plans
- Parking Feasibility Studies

# دراسة المواقف

- تصميم مرافق المواقف
- دراسات الطلب على المواقف
  - دراسات تشغیل المواقف
  - مخططات إدارة المواقف
  - دراسات الجدوى للمواقف



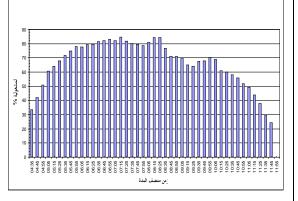
Dakhna Parking Garage Study & Redesign – Riyadh Municipality



Jeddah Municipality Parking Design – Jeddah Municipality



Qasr Al Houkm Area Parking Study (with Dorneir) - ADA



Traffic Enhancement for Streets & Intersections (Parking Occupancy Study) - MOMRA



# **Public Transport Studies**

- Public Transport Data Collection
- Public Transport Preliminary Studies
- Public Transport Feasibility Studies
- Engineering Design of Bus, BRT and Rail Systems.

# دراسات النقل العام

- جمع بيانات النقل العام
- الدر اسات التمهيدية للنقل العام
  - دراسات الجدوى للنقل العام
- التصميم الهندسي للقطارات الخفيفة والحافلات السريعة والحافلات



Proposed BRT Lines for Jazan Territory - MOT



Proposed LRT Line for Buraidah City - MOT





Jeddah LRT Feasibility Study & Preliminary Design - MOT



Proposed LRT/BRT Lines for Dammam Area - MOT



# **Intelligent Transportation Systems**

- Advanced Traffic Management Systems
- Advanced Traveler Information Systems
- Commercial Vehicle Operations Systems
- Advance Public Transport Systems
- Advance Parking Systems
- Safety Enhancement Systems
- GIS & GPS Applications

# نظم النقل الذكية

- أنظمة متقدمة لإدارة المرور
- انظمة متقدمة لمعلومات الراكب
- أنظمة تشغيل المركبات التجارية
  - انظمة متقدمة للنقل العام
    - انظمة متقدمة للمواقف
- أنظمة تحسين السلامة المرورية
- تطبيقات نظم المعلومات الجغرافية وتحديد الموقع











# **List of Traffic Engineering & Transportation Planning Software**

Software Details	Software is Used in
HCS + 2010 Ver. 6.1 HCS 2000 Ver. 5.2	Traffic Engineering Analyses
Sidra Intersections 5.1	Traffic Engineering Analyses
Synchro Studio 8	Traffic Engineering Analyses
Transyt 7F	Traffic Engineering Analyses
CORSIM Ver. 5.0 & 5.1	Micro-simulation
VISSIM Ver. 4.1	Micro-simulation
VISUM Ver. 9.25	Transportation Planning
TransCAD Ver. 5.0	Transportation Planning
Traffic Noise Model Ver. 2.5	Noise level Measurements
AutoTurn Professional 3D Ver. 8.0	Checking of Vehicle Swept Paths



# **List of Traffic Data Collection Equipment**

Equipment	Quantity	Used in
Automatic Traffic Counters (Peek ADR 2000)	5	Automatic traffic counting / vehicle classification and speed measurements
Automatic Traffic Counters (Peek ADR 1000)	35	Automatic traffic counting / vehicle classification and speed measurements
JAMAR Counters	3	Intersections Turning Movement Counts
Speed Measuring Radar	1	Spot Speed Measurements
Noise Measuring Meter (CEL 240)	1	Measurement of Noise levels



# **Key Projects**

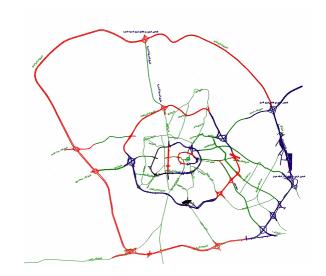
#### Study and Detailed Design of Fourth Makkah Ring Road Project

**Client:** Makkah Municipality

#### **Project Description:**

The Municipality of Holy City of Makkah has an uphill task of facilitating the Hajj and Umrah traffic. This traffic gets uncontrolled during Ramadan and Hajj periods and considerable time / fuel is wasted due to long traffic jams. In order to overcome this chaotic situation, the Municipality has planned an outer ring road around Makkah City which is the fourth Makkah Ring Road.

Gulf Engineering House (GEH) was awarded this study by the Municipality to study and design of proposed fourth ring road project. The Consultants started this work in July 2005.



**Project Duration:** July 2005 to Sept 2008 (3 years)

#### **The Services:**

For the study and design of Fourth Makkah Ring Road project, the following scope of consulting services was set forth:

- Engineering Studies
- Topographic Surveys
- Geometric Design of road links and interchanges
- Design of Hydrology and Storm water drainage
- Design of bridges and tunnels
- Road lighting design
- Landscaping and irrigation design
- Design of pavement markings and traffic signage
- Preparation of tender documents



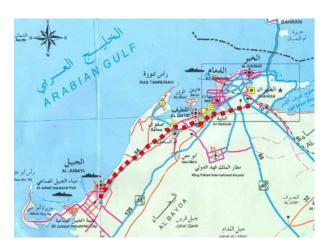
#### Road Safety Audit for Dhahran Jubail Highway

**Client:** Saudi Aramco

#### **Project Description:**

Dhahran Jubail Highway is located in the Eastern province of the Kingdom. The total length of the road section under study was 104 km. This road provides a high speed road link to the cities including Al Khobar, Dhahran, Dammam, Qatif, Ras Tanurah and Jubail area. This road is highly characterized for high travel speeds by the users and growing number of severe accidents. It has three traffic lanes and inner and outer shoulders on both sides. There are 20 traffic interchanges along this section of the road and most of them are diamond interchanges.

Saudi Aramco awarded the project to undertake the road sfaety audit study for Dhahran Jubail Highway to a groupof consultants comprising of Al Rabiah & Partners and Gulf Engineering House. The responsibilities of GEH included the evaluation of all data and reports, analysis of traffic / accident data, evlauation of roadway geometry and the preparation of road safety audit report.



**Project Duration:** January 2009 to May 2009 (5 months)

#### **The Services:**

- Evaluation of existing plans, data and reports related to Dhahran Jubail Highway.
- Collection of traffic and accident data.
- Evaluation of existing road geometry for links and interchanges.
- Evaluation of traffic operations during various times of the day and for various road users.
- Analysis of data and determination of problem areas.
- Development of recommendations for the problem area.
- Preparation of road safety audit report.

#### **Results:**

The road safety audit study was successfully completed on time and following major safety concerns were noted:

- Improper location of Gantry Signs & Insufficient signage
- High embankment fills (main road / ramps) without guard rails / barriers
- Absence of road lights in some sections
- Improper entry / exit designs to and from the service road / fuel stations
- Presence of uncontrolled median opening at many locations
- High travel speeds
- Excessive use of inner shoulder as overtaking lane
- Ongoing construction activities without proper construction area signage



## **Dakhna Parking Study in Riyadh**

**Client:** Riyadh Municipality

#### **Project Description:**

Dakhna parking structure is located in located in Dirah district of Riyadh which is an old and congested part of Riyadh. The Municipality (AMANA) and Governor's (AMARA) offices and many major shopping centers and mosques are located in the study area. This project consists of the study the existing old parking structure which has very limited usage:

- To review the existing condition To prepare rehabilitation strategies
- To enhance the architectural design
- To prepare viable operation strategies



**Project Duration:** February 2009 to Dec 2009 (9 months)

#### **The Services:**

The project scope of work included the following:

- Topographic surveys
- Traffic studies
- Structural design review
- Electrical and Mechanical design review
- Uplifting the architecture of the existing structure
- Preparation of Tender Documents



#### Traffic Study for Dhahran Health Center at ARAMCO Dhahran

**Client:** Saudi Aramco

#### **Project Description:**

Saudi Aramco Dhahran Health Centre is located on the northeast of the Saudi Aramco Core Area of Dhahran. Dhahran Health Center consists of one main building housing the hospital facilities, main clinics, medical maintenance support and the administration offices.

It is surrounded by several buildings housing other outpatient's clinics and miscellaneous medical support units. The buildings are fully occupied during normal working hours by medical staff, medical support staff, inpatients, outpatients and visitors. Several parking areas are provided around these buildings to accommodate the parking requirements of the users including staff, patients, visitors, suppliers etc. The available parking areas are not sufficient to accommodate all the vehicles during peak hours.

Saudi Aramco awarded the traffic study to a group of consultants including Al Rabiah & Partners and Gulf Engineering House to study the existing conditions and estimate the future parking requirements and prepare recommendations to manage this parking problem effectively and efficiently.



**Project Duration:** June 2009 to Sept 2009 (4 months)

#### **The Services:**

A detailed Traffic study is to be conducted to determine the traffic volume flowing along of the streets and parking areas around the existing buildings. The study aims at showing the status of the traffic volume of the roads, crossroads and the occupancy of the parking areas around DHC during the daily peak hours. The study shall identify available options to improve the parking space availability. The proposed scope of services could include, but not limited to, the following amin tasks:

- Information collection and site investigation
- Existing Traffic / Transportation Data Collection
- Traffic Study Analysis
- Preparation of Traffic Study Report & Recommendations



#### Traffic Study for King Abdullah University for Science & Technology, Thuwal

Client: M/s Vinnell Arabia

#### **Project Description:**

The proposed King Abdullah University for Science and Technology (KAUST) is planned to be a highly reputed and state of the art university offering opportunities for higher studies and research to the students of the region and other parts of the world. The KAUST complex shall be situated on 973 hectare of land and is located approximately 80 km north of Jeddah near Rabigh.

The KAUST complex shall consist of approximately 125 facilities including but not limited to a town center, University Campus including administration buildings and research parks, Convention center, Mosques, Community Services, Recreational services (golf course, marina, theatre and sports fields etc.) and Residential facilities. It is planned that KAUST will accommodate 2000 postgraduate students and 600 faculty members and other administration staff and families. The master plan population of the KAUST complex is estimated as 26,500.

M/s VINNELL Arabia has entrusted Gulf Engineering House (Traffic Consultants) to undertake a traffic study of the entire KAUST complex on the basis of the plans and data provided by the client in June 2008. Accordingly, a Draft report was prepared and submitted by Gulf Engineering House (GEH) on 14 June 2008.



**Project Duration:** June 2008 to Aug 2008 (2.5 months)

#### **The Services:**

KAUST wishes the Traffic Consultants to undertake the study and analysis of transportation system for the entire road network within the complex including outside roads parameters. In general the following analyses shall be performed for the traffic study:

- Network layout
- Traffic forecasting
- Road network assessment
- Parking assessment
- Speed limit on the entire roads



# Qasr Al Hokum Area Parking Study in Riyadh

**Client:** M/s Dornier Consulting GmbH. Germany

#### **Project Description:**

Qasr Al Hokum area is located in Dirah district of Riyadh which is an old and congested part of Riyadh. The Municipality (AMANA) and Governor's (AMARA) offices and many major shopping centers and mosques are located in the study area. The project study area consists of the block enclosed between the following major roads of the study area:

- King Fahad Road
- Al Imam Turki Road
- King Faisal Road, and
- Tariq Bin Ziyad Road

Arriyadh Development Authority (ADA) awarded the project for undertaking the comprehensive parking study of Qasr al Hokum area in Riyadh to M/s Dornier Consulting GmBH Germany. This parking study requires the collection of extensive existing traffic data related to parking of vehicles and the traffic circulation in the study area. M/s Dornier sublet the parking and traffic data collection task to Gulf Engineering House, Riyadh with the approval of ADA.



**Project Duration:** February 2009 to April 2009 (3 months)

#### **The Services:**

The project scope of work for Gulf Engineering House was limited to data collection, data processing and the compilation of processed survey data. The main traffic surveys included in the scope of work were:

- Parking supply surveys
- Parking counts surveys
- Parking behavior surveys
- Turning movement counts at major intersections
- Entry / Exit counts at minor intersections



#### Development of Public Transport inside Buraydah City - Preliminary Study

Client: Department of Public Transport, Ministry of Transport, Saudi Arabia

#### **Project Description:**

The City of Buraydah is located in the Qassim region, which is famous for its agriculture resources. Buraydah is one most important cites of the region. The importance of Buraydah is due to its being the base of Qassim area and its commercial center. According to the official statistics for year 1425, the population of the city has reached around 407,718 persons. It is expected that with a growth rate of 3.5% per annum the population shall reach around 996,000 persons by the year 1450 H. The estimated area of the city is approximately 48,747 hectares.

Like other cities of Saudi Arabia, Buraydah is also characterized with high growth of urban development associated with various issues of which transport represents a major concern. At present, only couples of public transport routes are operating in Buraydah and the existing public transport facilities do not match with the increase in transport requirements and this has encouraged the expansion in private car trips. The Department of Public Transport in the Ministry of Transport awarded Gulf Engineering House in association with SEMALY France to prepare a preliminary study for the development of an attractive public transport system inside Buraydah which could solve the growing demand of transport.



**Project Duration:** November 2006 to May 2007 (18 months)

#### **The Services:**

- Evaluation of existing transport services inside the city of Buraydah.
- Estimation of present and future demand for public transport services in the city of Buraydah.
- Developing a strategic plan for public transport in the city of Buraydah.
- Evaluate alternative public transport systems for Buraydah
- Proposing short term and long range plans for dealing with public transport to serve the population and other categories such as tourists for the whole year.
- Developing operational plans of the proposed system.
- To study various financing options for the operations of efficient public transport system.
- Develop the Terms of Reference for Feasibility Study and Preliminary Engineering Design of the selected public transport corridors.



#### Development of Public Transport for Jazan Territory - Preliminary Study

#### Client: Department of Public Transport, Ministry of Transport, Saudi Arabia

#### **Project Description:**

Jazan region is composed of 13 counties and includes 25 cities and 970 villages. The region area is about 13,500 km2 whereas it extends 250 km2 long, average depths of 100 km2 and total population has reached about 1,186,139 persons. Jazan city is considered a centre of the regional development in the area whereas population has reached 100,694 persons according to the census in 1425H and this represents 8.5% of total population of Jazan region. Regional services of the region are concentrated in it such as government agencies and commercial/ service centres. It has the only port in the south western region of the kingdom in addition to the airport that links the region with the rest of the kingdom main areas. The city region include the main cities in Jazan area namely Jazan city (100,694 persons), Abuareesh (123,823 persons), and Sabya (141,867 persons). The total population of the three cities is about 366,000 persons (31% of Jazan region).

Like other cities of Saudi Arabia, Jazan is also characterized with high growth of urban development associated with various issues of which transport represents a major concern. The Department of Public Transport in the Ministry of Transport awarded Gulf Engineering House in association with egis rail (SEMALY) France to prepare a preliminary study for the development of an attractive public transport system for Jazan territory which could solve the growing demand of transport.



**Project Duration:** July 2008 to September 2007 (15 months)

#### The Services:

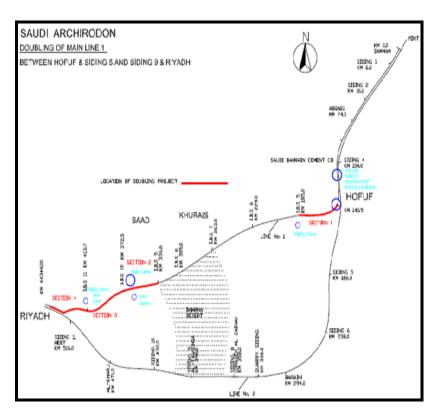
- Evaluation of existing transport services inside the Jazan territory (Jazan, Abu Areesh, and Sabya).
- Estimation of present and future demand for public transport services in Jazan Territory.
- Developing a strategic plan for public transport in the study area.
- Evaluate alternative public transport systems for the study area.
- Propose short term and long range plans for dealing with public transport to serve the population and other categories such as tourists for the whole year.
- Developing operational plans of the proposed public transport system.
- Study various financing options for the operations of an efficient public transport system.
- Develop the Terms of Reference for Feasibility Study and Preliminary Engineering Design of the selected public transport corridors.



#### Doubling of Main Line Hafuf to Riyadh - Project Construction Supervision

Client: SRO

**Consultants:** Gulf Engineering House **Contractor:** Saudi Archirodon Ltd.



#### Scope of work:

- Provide project management to ensure the project completion as in the defined schedule and budget plan with quality as required.
- Inspect the progress of the projects according to the AGREEMENT WITH SRO and request the contractors for acceleration measure if necessary.
- Inspect the drawings and documents to be prepared by the contractor.
- Review sub-contracts.
- Provide reports mentioned below;
- Inspect and approve detail of construction drawings, material selection, design, manufacture or supply, assembly, system testing and construction of the Contractors in accordance with the purpose of the project.
- Supervise the entire project implementation as identified in the contract between the Contractor and the SRO.
- Monitor and check all documents to be produced by the contractors regarding the Contact program, project Definition, project communication, etc.
- Review the contractors request for variation orders or other similar matters.
- Review the Contractors request for Extension of Time and other relevant issues according to the Contract and provide documents as required as well as the Consultant's recommendation to SRO.



Checking Flash Butt Welded Rails at Fabrication Shop



Visual Inspection of Sleepers

Dynamic Load Test on Sleepers (conducted at University of Munich, Germany)



**Laying Out Tracks** 



Reinforcement Inspection of Pre Cast Railway Culvert



#### Feasibility Study & Preliminary Design Of Jeddah Rail Transit Project

**Client:** Department of Public Transport, Ministry of Transport, KSA **Consultants:** Gulf Engineering House, KSA & Egis Rail, France

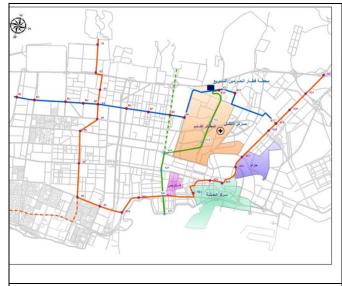
#### Scope of work:

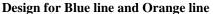
#### • Part-1: Feasibility Study of Preferred Alternative

The feasibility study shall include the required details for the public transport system as proposed in earlier phase of the project. This shall include the optimization of proposed Light Rail Transit (LRT) alignments, LRT operations, the rolling stocks, stations, depots etc. for LRT service. In addition, it will also include the details about proposed LRT routes. Similarly, the patronage, number of routes, location of routes and its operating characteristics shall also be finalized.

#### • Part-2: Preliminary Engineering Design of Project

The purpose of the Preliminary Engineering Design phase of the study is to bring the selected system alternative to the 30% design level. Prior to the commencement of the Work, the Consultant shall define the set of Design Standards and Criteria to be used. These must be internationally recognized and they shall be approved by MOT. The standards shall include prototype facility descriptions covering (as a minimum) critical dimensions, minimum vertical clearances, finishes, fire resistances, equipment, furnishings and any special design features.







Orange line in Sari Street with Madinah Road

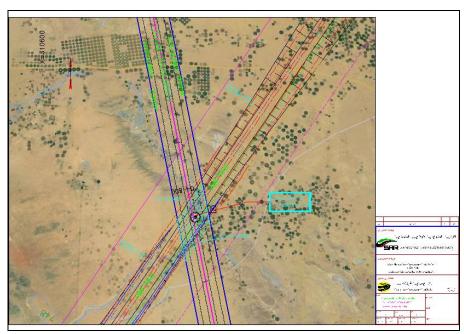


# Design of Structural Projects for Saudi Railway Co. (Sar)

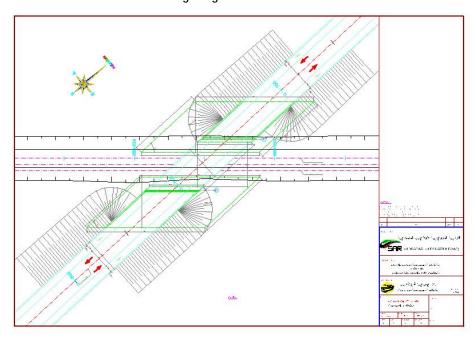
**Client:** SAR

Consultants: Gulf Engineering House, KSA

- Design for Bridge Segment 4.1 km 139+635.
- Design for Bridge Segment 2 km 12+350.
- Design for Bridge Segment 2 km 88+390.



Bridge Segment-2: km 12+350



Bridge Segment-2: km 88+390



## **Short CVs of Key Staff**



#### Dr. Saleh Al Swailmi (General Manager)

PhD in Highway Engineering from Oregon State University, USA. Author for "Highways & Airports Pavement Maintenance Management" & "Asphalt Mix Design for Highways Using Superpave". Inventor for Environment Conditioning Systems (ECS) as part the new method for Mix Design Using Superpave. Have over 30 published research papers in scientific journals, and international conferences. Was the head of Gulf Roads Society and non-Destructive Engineering Tests section and associate member in several international scientific agencies.



#### Dr. Mohammad T. Aboulela (Transportation Expert)

PhD in Civil Engineering from University of New Brunswick, Canada in 1981. Worked as Associate Prof. of Civil Engineering at Minia University in Egypt and Yarmouk & JUST Universities in Jordan. He has the certificates as lead assessor for ISO 9001, ISO 14001 and OHSAS 18001 by UKAS. Have many published papers in scientific journals, and international conferences. He has supervised many graduation projects and M.Sc. and Ph.D. Thesis. He is supervising numerous highway/urban interchange designs, traffic engineering, railway engineering and public transport projects.



## Dr. Bashar Al-Omari (Traffic/Transportation Engineering Expert)

Ph.D in Civil Engineering from University of Illinois at Urbana-Champaign in USA in 1996, Associate Professor of Civil Engineering & Vice Dean of Research at JUST in Jordan, Traffic Engineer at CUUATS in Urbana-USA, has many published papers at scientific journals and international conferences, supervised several graduation projects and MS/PhD thesis, participated in engineering consultations and training courses for public and private agencies in KSA, Jordan and USA.



#### Dr. Mohamed Hafez Fahmy (Transportation Planning Specialist)

Ph.D in Civil engineering from Hanover University-Germany in 1989. Professor of Civil Engineering at Alexandria University in Egypt, & other universities in Libya, Germany, and Lebanon. Published many research papers in journals and conferences in transportation and railway engineering. He was the director of different graduate programs in transportation in Egypt, Lebanon and Germany. Expert in transportation planning and highway and railway engineering.



#### **Eng. Naveed Hassan (Manager Projects)**

MSc in Transportation Engineering from Asian Institute of Technology, Thailand in 1990. He is familiar with the Quality Management Systems (ISO 9001) and worked as Quality Coordinator for Engineering Consultants International in Pakistan. He is currently working as the Manager Projects for Traffic and Transportation Engineering Department on transportation planning, highway design, traffic engineering and urban public transportation projects. He has long working experience in Consultancy in Pakistan, UAE and KSA.





#### Eng. Gamal Taha Mustafa (Manager Railway Projects)

Graduated (BSc in Civil Engineering) from Alexandria University in 1984 (Very Good). He is now working in GEH since last three years and is responsible for all Railway Projects. He is also responsible for the design of Jeddah LRT project and follow-up for doubling of Railway line between Hafouf and Riyadh for SRO. He has very long and rich experience for renewal and assembly / modifications of railway lines in Egypt and other countries. He has supervised the manufacturing of turnouts in main railway workshop in Cairo and also he is responsible for all maintenance of whole railway network in lower Egypt.



#### Eng. Motaz Mustafa (Business Development Manager)

Eng. Mutaz holds MSc. in Civil Engineering from Bradley University, Illinois, USA in 2006 with emphasis in Construction Management. Eng. Mutaz worked as quality control/ quality assurance manager in various public and private projects in the states of Arizona and Nevada, USA where he prepared and managed the quality programs and project quality manuals for general contractors/ projects owners during execution phase. Eng. Mutaz has hands-on experience in quality management systems such as ISO 9001 and Six Sigma. Eng. Mutaz presently works as a business development manager.



#### Eng. Mohammad Al-Jabri (Senior Transportation Engineer)

MS. in Civil Engineering from the University of Technology in Iraq. Worked as vice general manager of research, labs, and specifications at the Ministry of Public Works in Yemen. He is currently working in project management, traffic studies, design of intersections & interchanges, in addition to managing GEH Taif Branch.



#### Eng. Abubakr Mustafa Ahmed (Project Engineer)

BSC in Civil Engineering, from University of Khartoum, Sudan in 1999. Presently working at the Traffic & Transportation Engineering Department on public transport studies & preliminary design projects in Jazan and Hail. He has long working experience in the field of roads, bridges and building construction in various capacities. He is familiar with Primavera planning software.



#### **Eng. Mohammad Fouad (Project Engineer)**

BS in Civil Engineering from the University of Zagazig - Arab Republic of Egypt in 2005. Working at the Traffic & Transportation Engineering Department in projects design section. He has good experience in the preparation of projects tender documents for roads / intersections design projects. He also works as geometric design engineer in the preparation of geometric design of interchanges.





#### **Eng. Ahmed Eltayeb Omer (Project Engineer)**

Engr. Ahmed holds MSc in Civil Engineering (Project Management) from Sudan University for Science and Technology, Sudan in 2011. Presently working at the Traffic & Transportation Engineering Department in projects design section for Makkah projects. He has good experience in the preparation of intersections design projects. He is certified projects management profession (PMP). He has also served engineering department of the United Nations Mission in SUDAN (2008-2010). He is proficient in using Primavera and MS Project software.



#### Eng. Abrar Akram (Transportation Planner / Traffic Engineer)

BS in Transportation Engineering from UET Lahore. Working at the Traffic & Transportation Engineering Department in traffic modeling, traffic simulation, traffic impact studies, and traffic analysis of intersections & interchanges. He is an Expert in traffic and transport modeling software including VISUM, VISSIM and TransCAD.



#### **Eng. Ammar Siddeg (Transportation Planner / Traffic Engineer)**

BSC in Civil Engineering, Traffic &Transportation Section from Sudan University for Science and Technology (Sudan- Khartoum). Presently working at the Traffic & Transportation Engineering Department in transport planning, traffic simulation, traffic impact studies, and traffic analysis of intersections & interchanges. He is familiar with transport planning software VISUM and is an important member of transportation planning team.



#### **Eng. Yusuf Al Shafie (Traffic Engineer)**

BSc in Civil Engineering from (Highway & Transportation) from Sudan University of Science & Technology in 2007. Working at the Traffic & Transportation Engineering Department in traffic impact studies, traffic analysis of intersections & interchanges and traffic simulations. He is proficient in the use of various leading traffic engineering software including HCS, Synchro, Sidra, VISSIM etc.



#### Eng. Majed Abdullah (Geometric Design Engineer)

BSc in Civil Engineering from Jordan University of Science & Technology in 2009. Working at the Traffic & Transportation Engineering Department in transport planning, traffic engineering and geometric design of interchanges. He is proficient in the use of Autodesk Land Desk Top, AutoCAD, HCS and VISUM software.



#### Eng. Islam Hanafi (Geometric Design Engineer):

BSc in Civil Engineering from Al Minia University - Arab Republic of Egypt in 2002. Working at the Traffic & Transportation Engineering Department in geometric design of railway projects and interchanges. He has good experience in AutoCAD Civil 3D, Autodesk Land Desk Top, AutoTURN etc.



# **List of Clients:**

S.No	List of Clients
1	Jeddah Municipality
2	Makkah Municipality
3	Riyadh Municipality
4	Ar Riyadh Development Authority (ADA)
5	Ministry of Transport
6	Saudi Aramco
7	Jacobs Zate
8	Dar Al Riyadh
9	Modern Investment & Trading Corporation
10	Saudi Diyar Consultants
11	Dornier Consulting GmbH. Germany
12	Radicon Gulf Consult
13	Al Hokair Group
14	Vinnell Arabia
15	Saudi Railway Co.
16	Olayan Real Estate Company (ORECO)
17	Dar Al Riyadh