GULF ENGINEERING HOUSE

Company Profile

2025 - 1447

Gulf Engineering House

دار الخليج للإستشارات الهندسية

Gulf Engineering House Consulting

COMPANY PROFILE

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Contents

Gulf Engineering House

1. INTRODUCTION

Gulf Engineering House (GEH) is a Saudi firm, which conducts studies/ consultation in the areas of highway, structural design, pavement, GIS, traffic, transportation, , airport engineering and other engineering disciplines. GEH is managed by a group of highly educated professionals. GEH consulting engineering staff consists of highly experienced and specialized engineers who are expert in all the above mentioned fields of Engineering. GEH's commitment to quality, support and product integration will continue to play an essential part in the Group's strategy. GEH is structured into following divisions:

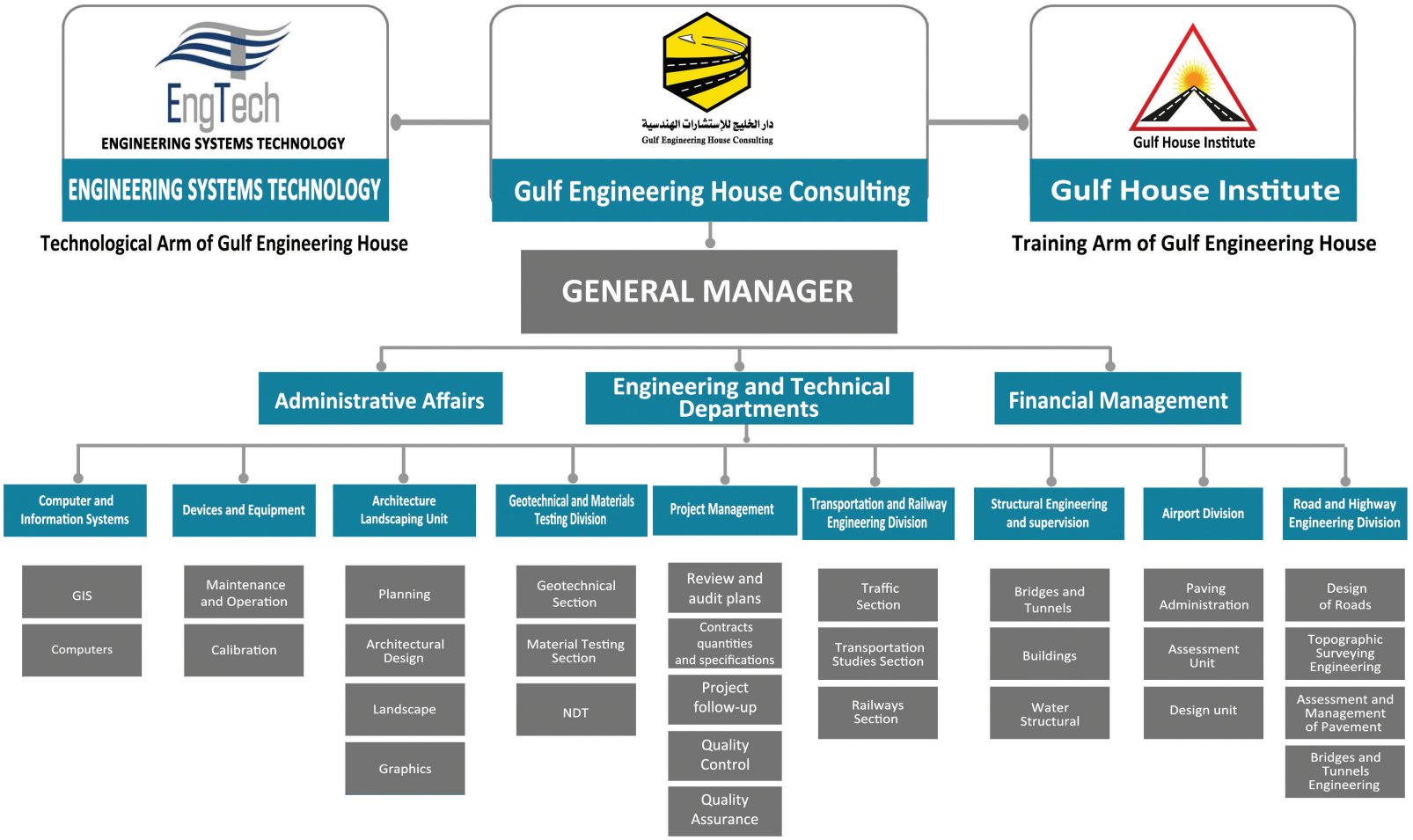
- Road and Highway Engineering Division
- Structural Design Unit
- Airport Division
- Transportation and Railway Engineering Division
- Geotechnical and Materials Testing Division
- Geographical Information System (GIS) and Survey Division
- Equipment Division
- NDT Division

GEH has maintained a continuous presence in the Middle East for over several years and the Company is justifiably proud of its long-term association with the development of the region's industrial, commercial and civic infrastructure. This document will include the prequalification requirements.

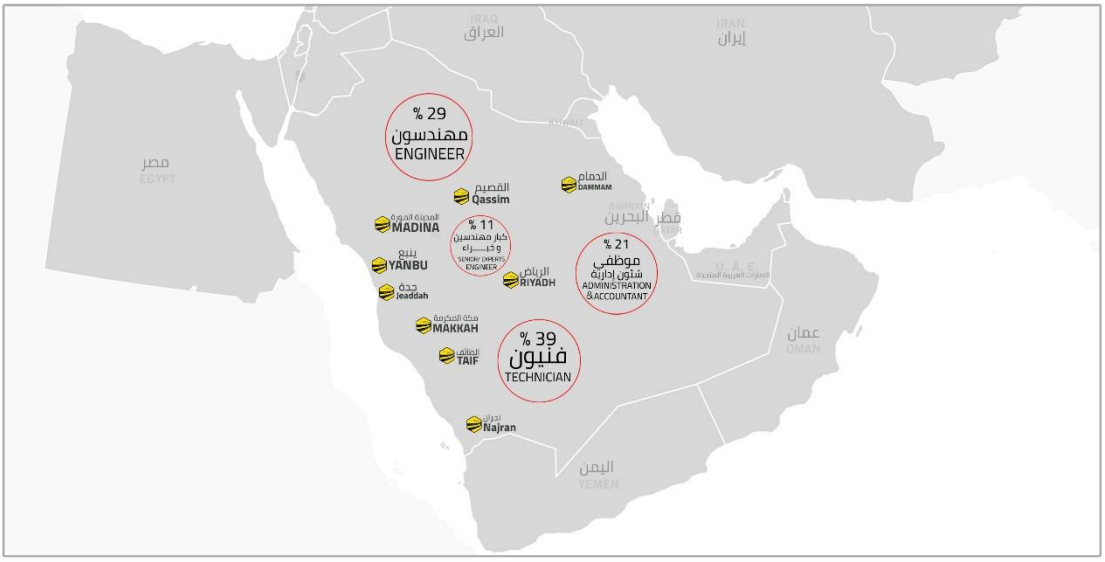
GEH is having head office in Riyadh and other branch offices in different cities of Saudi Arabia. A view of GEH Head Office in Riyadh is shown below.

Head Office of Gulf Engineering House in Riyadh, KSA

Gulf Engineering House Consulting Organization Chart



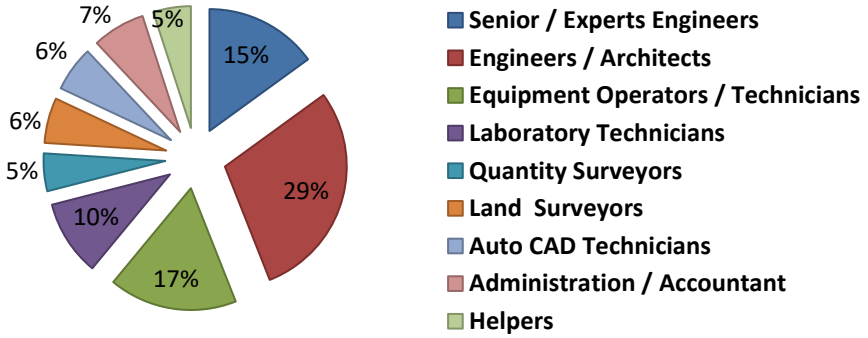
The Riyadh office in Saudi Arabia is the center of GEH's operations in the Middle East and has branches in Jeddah, Mecca, Medina, Qassim, Hail, Jazan, Hofuf, Taif and Dammam.



The main office employs over **100** expatriate and local staff comprising:

S.No	Staff
1	Senior Engineers and Experts
2	Engineers
3	Equipment Operators / Technicians
4	Administration, Librarian and Printing Support Service Personnel

GEH currently employs over **386** employees in the Middle East. The current break-up of GEH employees by discipline is shown below:



GEH Employee Structure

GEH staff have published over 60 papers on pavement management / traffic / railways / transportation planning / materials and given numerous presentations on the topic throughout the world. The team's international exposure and involvement with railway, highway, traffic & airport engineering will benefit any project greatly.

GEH is responsive to the changing needs of our clients caused by rapid growth, new technologies, new operating procedures and essential security requirements. In order to meet these client needs, our services cover the whole spectrum of development and include strategic planning, design, studies, infra-structure development and project management.

The GEH services are factored to meet the specific needs of the road and airport industry and provide clients with integrated consultancy services covering all areas of pavement evaluation, pavement management, highway and railway design, bridge design, traffic, transportation planning, topographic survey, GIS application, geotechnical investigations, material testing, highway and railway construction supervision, project management and value engineering.

Over a period of last seven years span GEH has spread its activities with projects worth more 300 million Saudi Riyals in diversified area of its expertise. Areas of expertise include the following:

- **Study and Design of Highway Projects**
- **Quality Control, Geotechnical Investigation and Material Testing Projects**
- **Construction Supervision Projects.**
- **Airport Projects**
- **Pavement Management System (PMS) Projects**
- **Transportation and Railway Projects**
- **GIS Application Projects**

2. Highway & Airport Engineering

Gulf Engineering House has excels in the field road & airport design and pavement engineering including evaluation, design and supervision of both rural and urban highways and airport. The main services provided by this division are as follows:

- Pavement Engineering and Evaluation and Road Network Management.
- Roads Geometric Design.
- Construction Supervision.
- Airport Engineering

2.1 Pavement Evaluation and Roads Network Management

Gulf Engineering House in a unique firm own the pavement evaluation high-tech equipment to assess the pavement layers and the high technical ability of maintenance and calibration and the existence of specialized engineering expertise in this area, the Office has high expertise to do the following:

- Functional and structural Evaluation of the asphalt pavement for roads and airports.
- Development of pavement maintenance management systems of roads and airport.
- Superpave asphalt mix design and improve the mix specifications.

The road networks and airports pavement evaluation unit at GEH is considered the first and the only one in the Gulf and the Middle East that has the most advanced systems for computerized evaluation and it is the only establishment that executed specialized projects in this field in the Kingdom and the Gulf. GEH performs evaluation for road pavement layers by using highly advanced technological systems in the field of evaluating constructional and functional performance of pavement layers and safety. Those systems are as follows:

- Road Roughness Evaluation System, (IRI, BBI).
- Skid & Friction Resistance System (FN, SN).
- Structural Evaluation using Falling Weight Deflectometer (HWD & FWD).
- Thickness layer measuring using Ground Penetration Radar (GPR).
- Three Dimension Photogrammetry Road Assets (3D).

GEH achieved a lot of different projects related to quality assurance and quality control of pavement construction in roads and airport with different governmental authorities and private sections.

The pavement unit in GEH have developed the superpave asphalt mix design specifications with the Ministry of Transport and identify the quality procedures of asphalt mixes for many projects in the Kingdom.

GEH has wide experiences to evaluate the airside area and calculate the Pavement Classification Number of the pavement (PCN), and verification of pavement thickness and maintenance & rehabilitation layers required for maintenance and rehabilitation or reconstruction.

Gulf Engineering House has developed many software's called a (Pavement Maintenance management systems (PMMS), and most recently the pavement management system for the Kingdom's airports with the Civil Aviation Authority and called as (APMS).

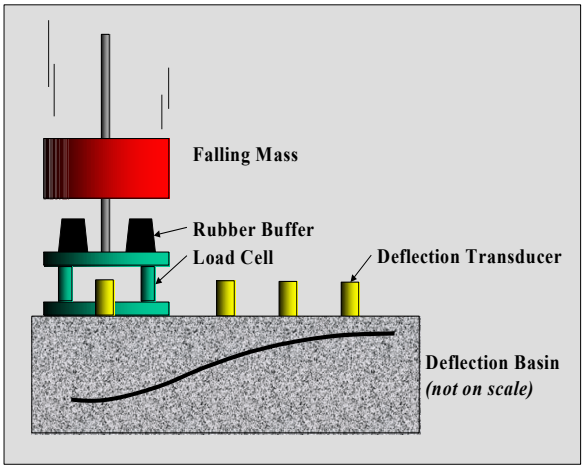
Friction Tester Mu-Meter6

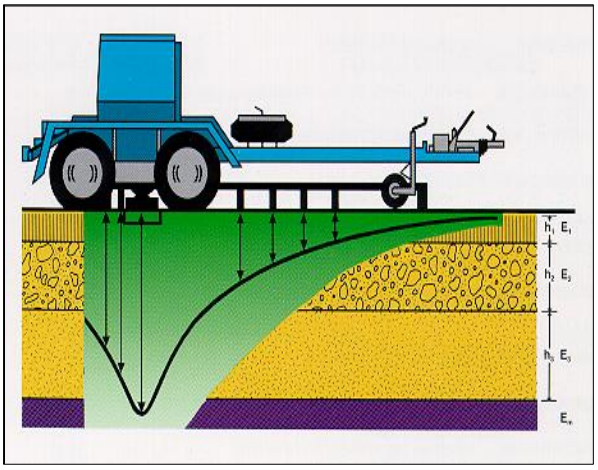
Surface Roughness Evaluation Profiler (RSP)

Groun Penetration Radar Equipment (GPR)

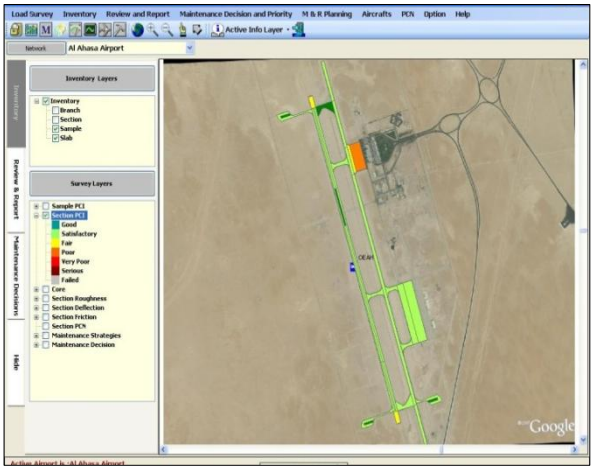
Heavy Wight Deflectometer Equipment (HWD)

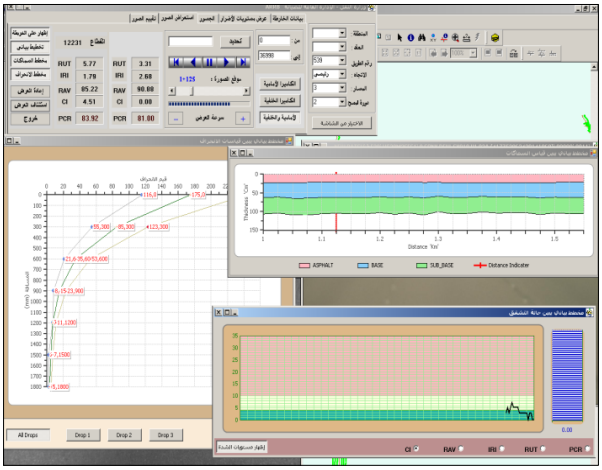
Three Dimension Photogrammetry Equipment





Elmod Software to analyze the pavement data and calculating the Remaining Life and PCN





Windows software of APMS and PMMS as an Example developed by GEH

2.2 Roads Geometric Design

GEH carries out highway design in accordance with the wide experience available with its technical teams in various fields of roads designing in rural and urban areas. Also, since GEH is specialized in roads engineering, this gives it a clear superiority in this field. GEH in its studies depends on local and international manuals and standards in the field of roads designing such as the manuals of the Ministry Of Transport in the kingdom, AASHTO and FHWA in the United States. Many integrated engineering programs are used which are capable of producing a comprehensive design that includes all the engineering elements of roads, intersection and related structures. Those programs are capable of utilizing field survey results and the results of traffic, hydrological and soil studies which form a basis for the design.

King Abdullah Road Riyadh

Study and Design of 4th Ring Road in Makkah

2.3 Roads & Highway Construction Supervision

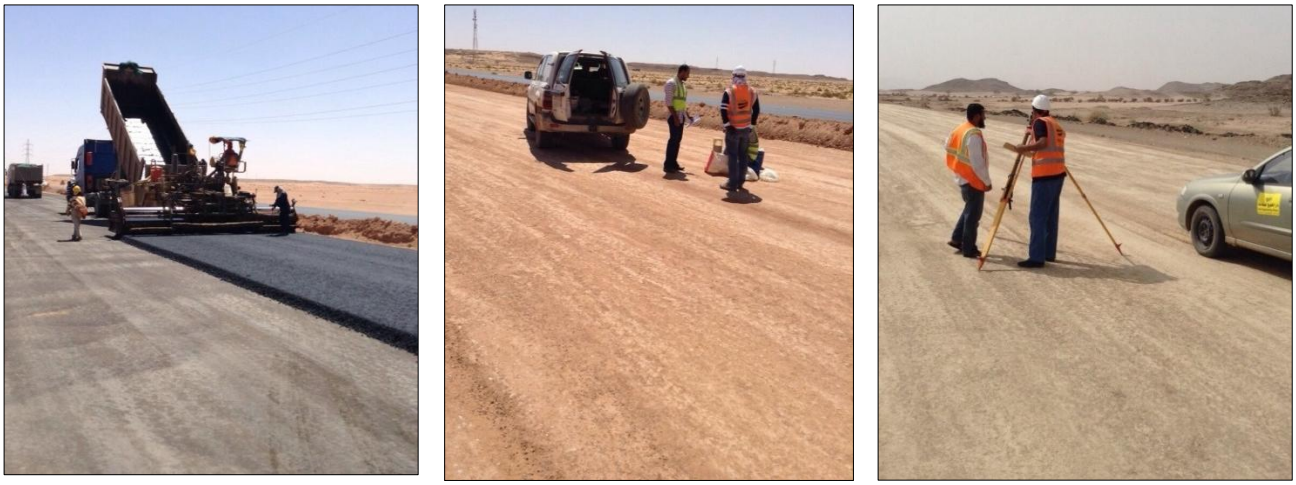
GEH is one of the KSA leading roads and highways consultants, having carried out design, construction supervision and project management of more than 2,000km of roads in Saudi Arabia. These roads range from six lane dual carriageway motorways with grade-separated interchanges, to feeder roads and rural roads.

GEH has significant experience in all aspects of project delivery, including major alliance projects. GEH expertise in roads and highways spans the entire project life cycle, from the feasibility stage through to the construction stage, as well as development of rehabilitation, pavement management and maintenance programs.

Regarding construction supervision, GEH services include management of the tender

Precast Culvert Reinforcement Inspection

Asphalt Pavement Supervision in Arar



Quality control of aggregates layer and asphalt paving inspection in Al Dwadmi

2.4 Airport Engineering:

GEH airport division is one of the leading independent airport consultancy and engineering firms offering integrated, full-service studies, planning and design services. Our 10 years of experience and expertise are instrumental in solving the increasing complexity of developing today's airports. GEH airport division services have been developed to address the unique needs of airport managers all around the world. GEH airport division provides a complete range of services necessary for studies, airfield design, airfield construction supervision airport planning and facility management. GEH has experience in all aspects of airport engineering and provides in-house expertise in supporting disciplines.

GEH airport division is one of the few consulting firms in Middle East that is specialized in every aspect of airport planning and design and is in fact one of the most experienced. The firm has been engaged in several projects both in Saudi Arabia and other part of Gulf Countries. GEH is the only engineering firm in GCC which owns all state of art equipment required for airport pavement evaluation. GEH non-destructive testing (NDT) equipment from various provides the accurate, reliable measurement foundation required for the proprietary “GEH Methodology”, a unique set of advanced engineering principles and practices applicable to pavement structures and embodied in pavement measurement and analysis and services available only through GEH.

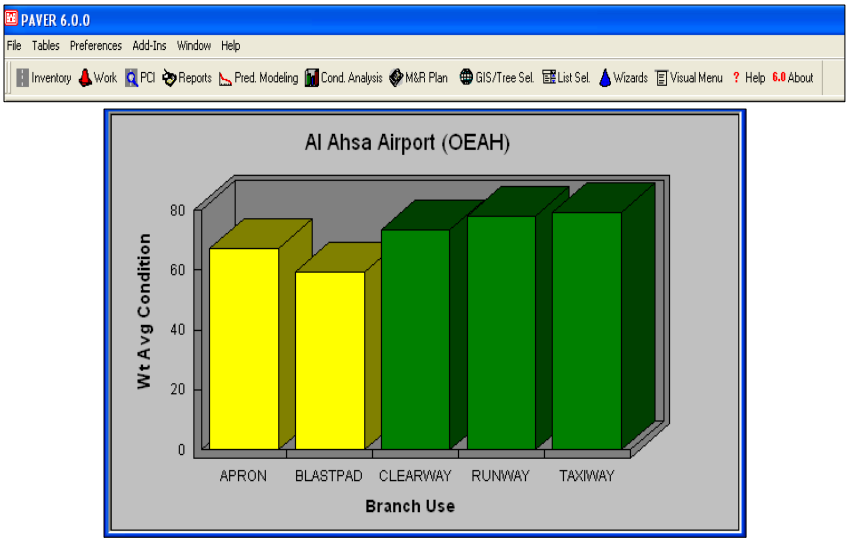
GEH airport division is responsive to the changing needs of our clients caused by rapid growth, new technologies, new operating procedures and essential security requirements. In order to meet these client needs, our services cover the whole spectrum of development and include all services required by airport industry. To complement our internal expertise, our extensive network of contract personnel and industry partnerships allows us to provide consulting services on any type of airport project.

GEH is recognized for its integrated and complete planning and design services, providing added value to its clients through:

a) Testing the structural characteristics of the pavement with geotechnical tests.
b) Testing the bearing capacity of the layer in accordance with the (California Bearing Ration CBR).
c) Measuring the thickness of the airside pavement layers in accordance with the (FAARFIELD AC 15015320-6D "FAA").
d) Test coefficient of friction of the surface according to the (FAA Circular AC 150 / 5320-12C).
e) Tests roughness and all the other tests to assess the condition along with aviation facility.

Provide a detailed report outlining the necessary solutions and are required to be applied including procedures for implementing the tests and the mechanism adopted during the construction phase and after the completion of construction.

- **Visual inspection of pavement runways using Paver method:**
  The visual inspection is one of the methods that will help to determine the condition of surface pavement and damages that appear on the surface where the pavement condition index (PCI) can be calculated depending on the type of distresses and its severity and extend on the surface, according to the specifications ASTM D5340, using the paver program (MicroPaver) to calculate the pavement condition index



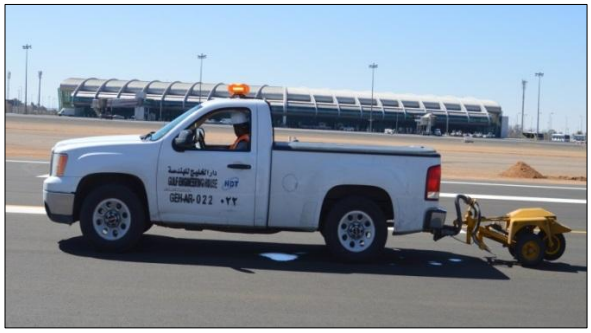
Pavement Condition Index Graph

- **Testing structural characteristics of the pavement layers (Deflection):**
  Since the functional evaluation is not enough to determine the causes of the structural efficiency layers of pavement, especially if the reasons for the falls is not clear by visual evaluation structural evaluation must be used to evaluate the layers using the falling weight Deflectometer equipment, and thus determine the places of weakness in the layers.

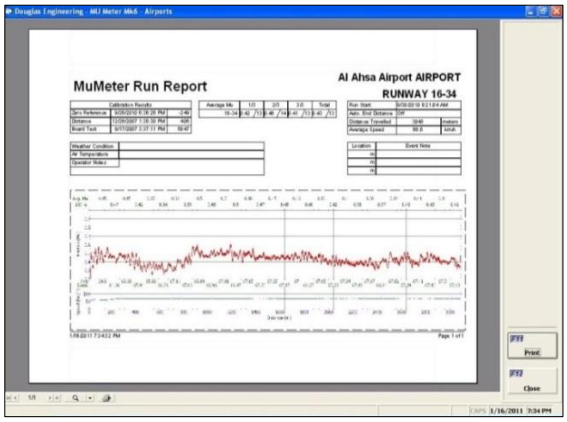
  Deflection data can be used to determine the coefficient of resilience of the pavement and to identify the remaining life and thus determine the efficiency of the current pavement and the required strengthening to carry the loads of aircraft that will be used runways. Using analysis software such as Elmode to analyze pavement can identify the value of remaining life and know the thicknesses of the layers required for the necessary coverage usually rehabilitation or reconstruction.

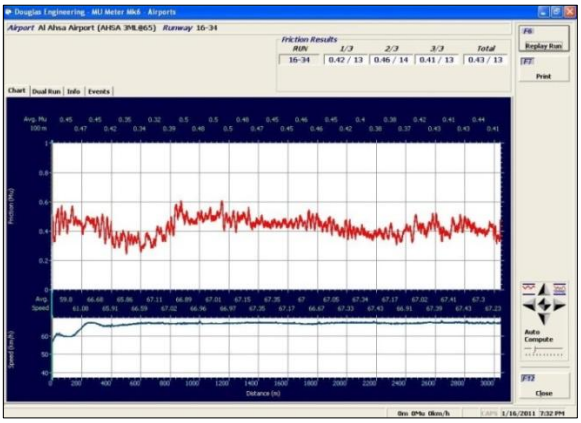
Heavy weight deflecometer used in Airport to identify the layers efficiency

- **Friction Number Test using Mu-Meter6 (FAA Circular AC 150/5320-12C):**
  Friction testing equipment is important to identify the sliding resistance of runways surfaces, and is the only parameter that determines the extent of intervention maintenance in order to remove the accumulated rubber on the ends of the runways landing zones in order to prevent skidding and grounding aircraft during the landing. And the following figures show the equipment that can be used to measure the coefficient of friction of the runways at the airport, as well as the diagram to display the measurement results, both in real time testing or as reports of sections measured.

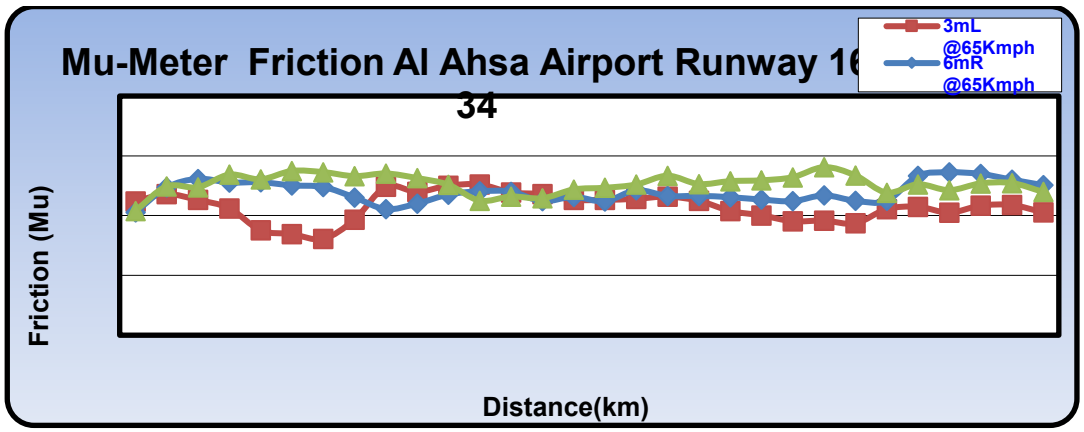


Mu-Meter6 equipment used for skid resistance in Airport





In real time results of Mu-Meter6 equipment used for skid resistance in Airport



Reporting Results of Mu-Meter6 equipment used for skid resistance in Airport

- **Surface roughness and all the other tests to assess the condition along with aviation facility:** Runway surface profiler (RSP) is used to test the surface unevenness and boing bumping index (IRI & BBI) to determine the inadequate construction of the runway for driving comfort. And the following figure shows the roughness equipment in one of the airports.

Roughness equipment measuring in airport

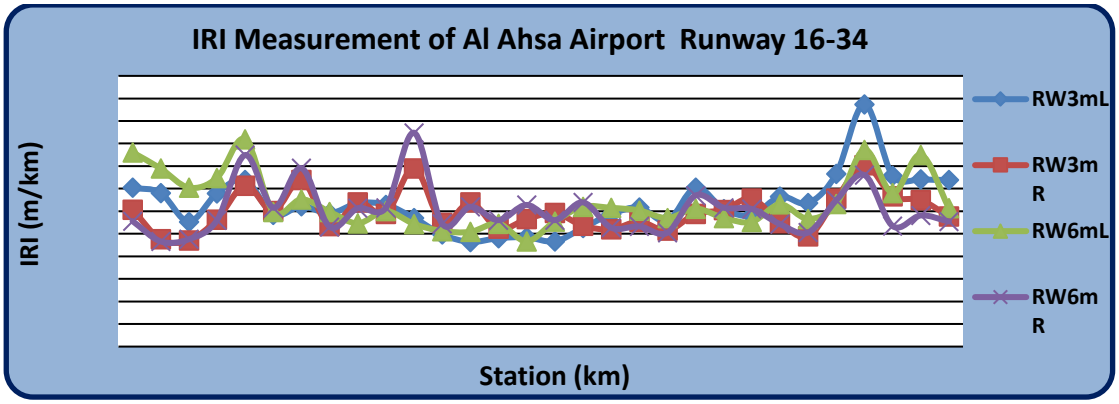


Figure of roughness data

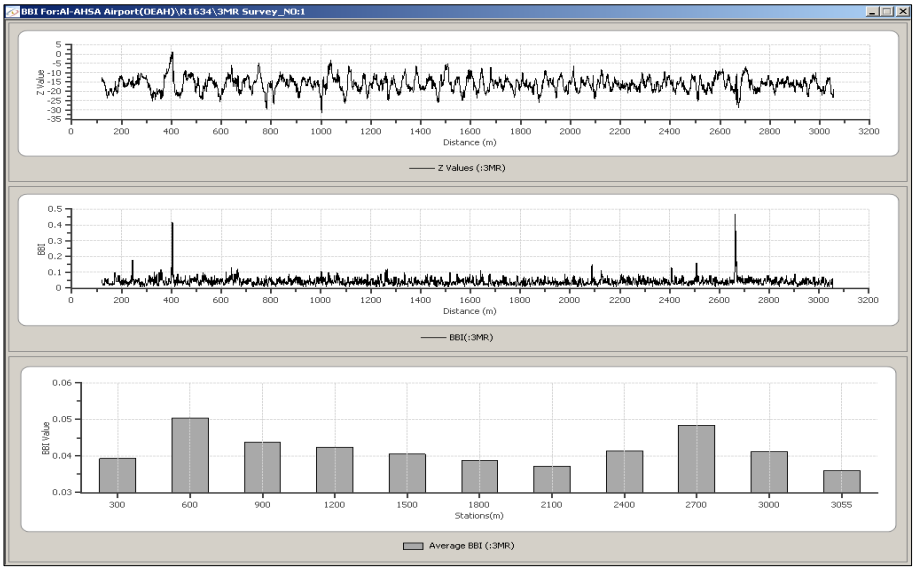
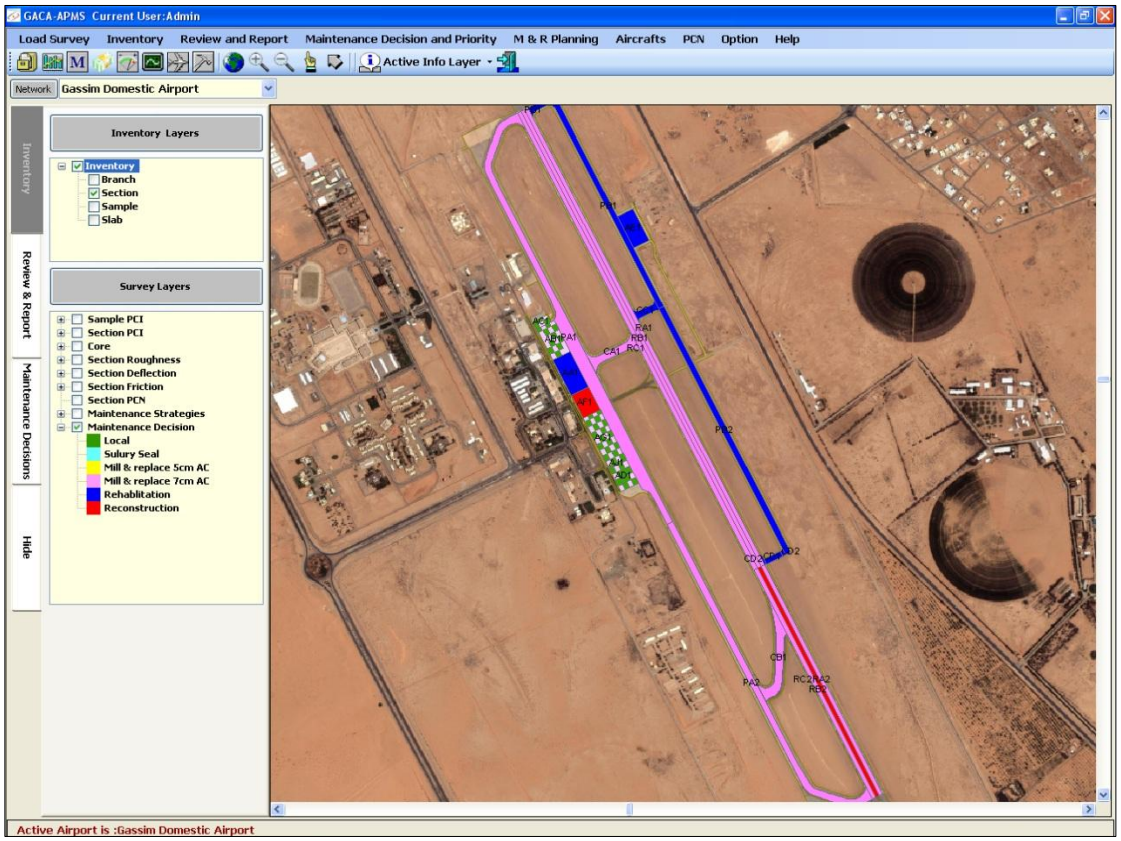


Figure of Boeing Bump index data

- **Maintenance and Repair Alternative Analysis:**

  After collecting and analyzing all the assessment data and calculating the evaluation indices for determining the efficiency of pavement layers runways, determining the types of necessary both maintenance and rehabilitation for each section or element of the runways, cumulative index can be estimated to be used for determine the required maintenance procedure, through which the functional status and the structural of the pavement study, can be used to determine the maintenance and material type and method of implementation and conduct quality tests during the implementation phases. In addition to conducting Testing to make sure that what has been implemented that matches the specifications after the completion of the implementation work.

  The following example illustrates the types of maintenance of the elements of each site in the runway as an example of the results of both maintenance and rehabilitation required.



Maintenance and Rehabilitation Alternative Graph

Please find below the details about GEH in highways engineering area.

2.5 A LIST OF HIGHWAY & AIRPORT PROJECTS :

S. No	Project Name	Client
1	Supervising the rehabilitation project of 7 domestic Airport	GACA
2	Air side Evaluation of Jazan Airport	GACA
3	Airside Preventive Safety Works and Development of Airport Pavement Management System (APMS) for the following KSA Airports: • Al Ahsa Domestic Airport • Qaisumah Domestic Airport • Al Baha Domestic Airport • Rafha Domestic Airport • Turaif Domestic Airport • Sharurah Domestic Airport • Bisha Domestic Airport	General Authority of Civil Aviation (GACA) Jeddah
4	Comprehensive Pavement Evaluation and Development of Airport Pavement Management System (APMS) for the following KSA Airports: • King Khaled International Airport Riyadh. • Al Qaseem Airport • Abha Airport • Tabouk Airport • Wadi Dawasir Airport • Al Jouf Airport • Yanbu Airport	General Authority of Civil Aviation (GACA) Jeddah
5	Structural Evaluation and Estimation of PCN for King Khaled Military City Airport Using HWD.	GACA
6	Structural Evaluation and Estimation of PCN for National Border Guard Airports (Shebita, Zabaloten, Erdah ans Al Patha) Using HWD.	National Border Guard
7	Comprehensive Evaluation of Pavement for Taxi Tracks of Taif Airport.	Al Arrab Co.
8	Comprehensive Pavement Evaluation and for Naval Base Airport Jubail	Contec
9	Comprehensive Pavement Evaluation and for Ras Al Khaimah International Airport UAE	RAK Intl. Airport
10	Structural Evaluation and Estimation of PCN for Airstrip in Rabigh Using HWD.	PetroRabigh
11	Design and Construction of New Runway at Prince Sultan Military Air Base Al-Kharj.	Al Mabani
12	Structural Evaluation and Estimation of PCN for Bisha Airport Using HWD.	Nesma Al Fadl
13	Structural Evaluation and Estimation of PCN for Abu Dhabi Airport Using HWD.	Halcrow Dubai
14	Structural Evaluation and Estimation of PCN for King Fahad International Airport Dammam Using HWD.	GACA
15	Functional & Safety Evaluation of Pavement at Prince Sultan Air-Base, Al Kharj.	Prince Sultan Air Base
16	Structural Evaluation and Estimation of PCN for King Khaled International Airport Riyadh Using HWD.	Saudi Oger

S. No	Project Name	Client
17	Geotechnical Investigations, Soil Testing, and Selection of Suitable Material for Design and Construction of New Runway at Prince Sultan Military Air Base Al-Kharj.	Al Mabani
18	Design and Construction of New Runway at Prince Sultan Military Air Base Al-Kharj.	Al Mabani
19	Design and Construction of New Parallel Taxiway Extension at Riyadh Military Airbase,	Torok Co.

- ## Um Al Malh Supervision of construction

Airport Layout

3000m length and 60m width of the Runway and the tower

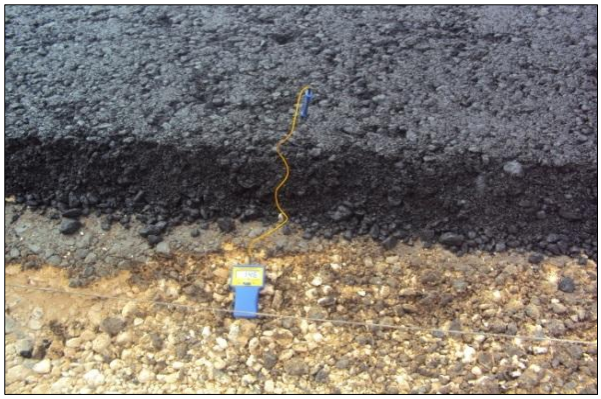
Aprons 1 &2

- ## Roads and Interchange Supervision

Interchange in Buraidah

Roads Work in Buraidah

Roads Work in Buraidah




Roads and Bridges Work in Buraidah

- **3D/GEOMETRIC DESIGN PROJECTS – Last 5 Years**

Al daragah intersection –Jeddah

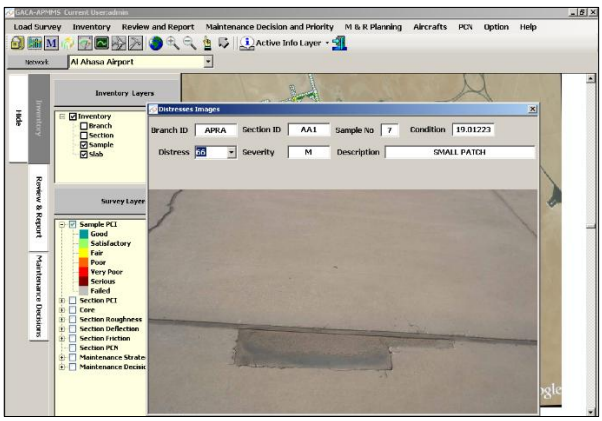
Al mahad intersection –Jeddah

Alfalak intersection –Jeddah

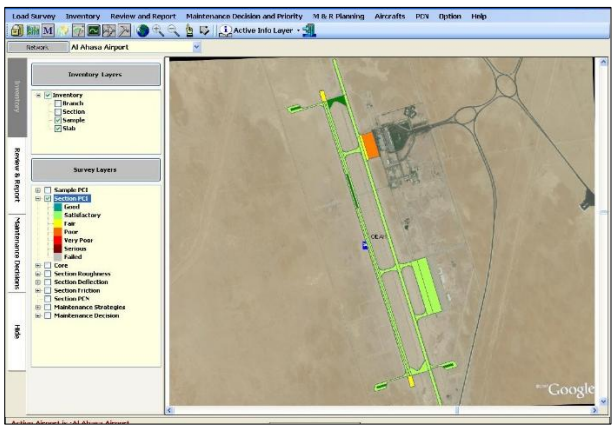
- **Airport Evaluation Projects**

Airport Survey and Evaluation

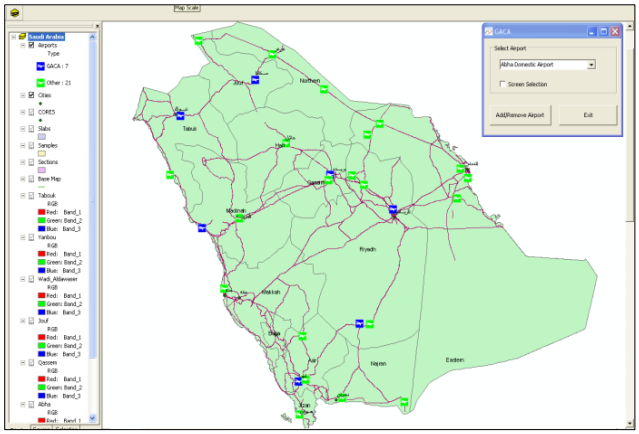
Aprons Survey and Evaluation

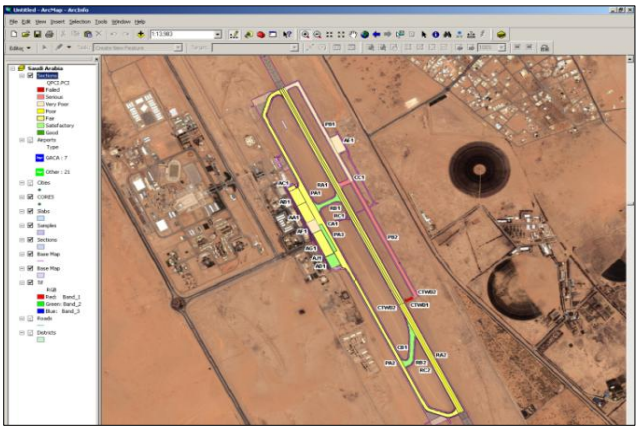


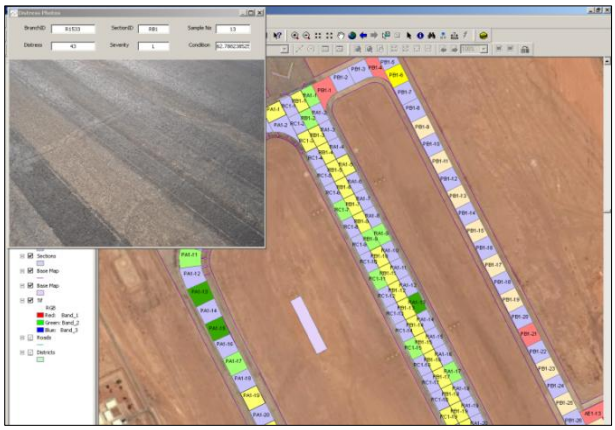
APMS Project



APMS Project







Airport PMS project developing

- **Completion Certificates of some of the projects**

شهادة

تشهد وزارة النقل بالمملكة العربية السعودية بأن شركة دار الخليج للهندسة هو من المكاتب الهندسية المؤهلة لديها وقد قام خلال الخمس سنوات الأخيرة بإنجاز الخدمات الهندسية للمشاريع التالية :-

١ - دراسة وتصميم طريق حائل/جبه بطول (٤٠) كم ، وبلغت قيمة العقد (٧٣٩,٠٠٠) سبعمائة وتسعة وثلاثون الف ريال.
٢ - دراسة وتصميم الطرق الفرعية بمنطقة حائل بطول (٢٧٣) كم ، وبلغت قيمة العقد (٢,١٥٣,٠٠٠) مليونان ومائة وثلاث وخمسون الف ريال.
٣ - الدراسة والتصميم للطرق المؤدية إلى المناطق الاستثمارية الزراعية ، وازدواج طريق صبياء/العبدابي ، وازدواج طريق العارضة/ابو عريش ، وازدواج طريق العارضة/العبدابي بطول (١٨٩) كم ، وبلغت قيمة العقد (٤,٢٠٠,٠٠٠) اربعة ملايين ومائتان الف ريال.
٤ - الدراسة والتصميم لازدواج طريق الربيعية/الأسياح وطريق عنيزه/المطار ، وتقاطع طريق الملك عبد الله مع الضلع الشمالي بطريق بريده الدائري ، وبلغت قيمة العقد (٣,١٥٠,٨٥٠) ثلاثة ملايين ومائة وخمسون الفا وثمانمائة وخمسون ريال.
٥ - الدراسة والتصميم للطريق الدائري الأوسط بمكة المكرمة بطول (١٢) كم ، وبلغت قيمة العقد (٤,٢٠٠,٠٠٠) أربعة ملايين ومائتان الف ريال.
٦ - الإشراف على تنفيذ طريق قبه/سامودة مع وصلات الطرق الزراعية بمنطقة القصيم ، وبلغت قيمة العقد (٢,٩٤٤,٨٠٠) مليونان وتسعمائة واربعة واربعون الفا وثمانمائة ريال.

وكان العمل يشمل الخدمات الهندسية العائدة للدراسة والتصميم والإشراف على تنفيذ الجسور.

وقد أعطيت هذه الشهادة بناءً على طلب الاستشاري لتقديمها لمن يهمه الأمر دون أي مسئولية على الوزارة.

وكيل الوزارة المساعد للشؤون الفنية

المهندس/محمد بن خالد السويكت

Roads Supervision projects

Engineering Dept. — المطارات الداخلية DOMESTIC AIRPORTS — الإدارة الهندسية

شهادة إتمام عمل

تشهد الهيئة العامة للطيران المدني (GACA) بالمملكة العربية السعودية بأن شركة دار الخليج للهندسة هو من المكاتب الهندسية المؤهلة لديها وقد قام خلال الخمس سنوات الأخيرة بإنجاز الخدمات الهندسية للمشاريع التالية:

١-مشروع: أعمال تقييم السلامة – أعمال السلامة للمطارات الداخلية رقم العقد (ط. ١٠. ٠٦٩ . د ف . ٠)، وشمل العقد مطار الإحساء، شرورة، بيشة، رفحاء، الباحة، القيصومة، وطريف بقيمة (٤,٩٩٠,٧٢٠) أربعة ملايين و تسعمائة وتسعون ألفاً وسبعمائة وعشرون ريالاً.

٢-مشروع: أعمال السلامة الوقائية – أعمال السلامة للمطاراترقم العقد (ط. ٠٧. ٠١٩ . د ف . ٠) وشمل العقد مطار الملك خالد الدولي، القصيم، أبها، الجوف، وادي الدواسر، تبوك وينبع بقيمة (٨,١٤٥,٢٥٥.٥٩) ثمانية ملايين ومائة وخمسة وأربعون ألفاً ومائتان وخمسة وخمسون ريالاً وتسعة وخمسون هللة.

وكان العمل يشمل الخدمات الهندسية العائدة لتقييم ساحات الطيران باستخدام أحدث تقنيات ومعدات تقييم الرصف وتطوير نظام لإدارة رصف المطارات (GACA-APMS) بالتكامل مع نظم المعلومات الجغرافية ليتم تزويد المستخدمين له بتقارير حالة الرصف وقرارات وأولويات الصيانة.

وقد أعطيت هذه الشهادة بناءً على طلب الإستشاري لتقديمها إلى من يهمه الأمر دون أي مسئولية على الهيئة.

مدير عام الإدارة الهندسية

المهندس/ هاني رضا بن جمل الليل

Aiport Evaluation projects

المملكة العربية السعودية
وزارة الشؤون البلدية و القروية
أمانة منطقة القصيم

شهادة انجاز

تشهد امانة منطقة القصيم بالمملكة العربيه السعودية بأن شركة دار الخليج للهندسة هو من المكاتب الهندسية المؤهلة لديها وقد قام خلال الخمس سنوات الأخيرة بإنجاز الخدمات الهندسيه للمشاريع التالية:-

م	اسم المشروع	قيمة العقد
١	عقد الخدمات الهندسية الاستشارية لمشروع دراسة واشراف على تنفيذ مشاريع طريق الملك عبدالله ببريده	٥,٥٤٢,٠٠٠
٢	عقد الخدمات الهندسية الاستشارية لمشروع دراسة وتصميم بعض التقاطعات بمدينة بريده	١,٦٨٠,٠٠٠
٣	عقد الخدمات الهندسية الاستشارية لمشروع تصميم تقاطع طريق الملك عبدالله مع طريق الملك فيصل بمدينة بريده	٧٠٠,٠٠٠
٤	عقد الخدمات الهندسية الاستشارية لمشروع الإشراف على مشاريع السفلته ببريده	٥,٥٤٤,٠٠٠
٥	عقد الخدمات الهندسية الاستشارية لمشروع الاشراف على تأهيل الطرق والشوارع الرئيسيه بمدينة بريده	٣,٤٨٠,٠٠٠
٦	عقد الخدمات الهندسية الاستشارية لمشروع حصر وتحديد الشوارع الرايه التي تحتاج الى سفلته بمدينة بريده	٣,٠٠٠,٠٠٠
٧	عقد الخدمات الهندسية الإستشارية لمشروع دراسة تحديد الوعورة وقرارات وميزانية الصيانه للطرق والشوارع الرئيسيه بمدينة بريده	١,٨٩٠,٠٠٠
٨	عقد الخدمات الهندسية الإستشارية لمشروع تشغيل المختبر وبرنامج ضبط الجوده لصيانه الطرق بأمانة منطقة القصيم	١٢,٠٠٠,٠٠٠

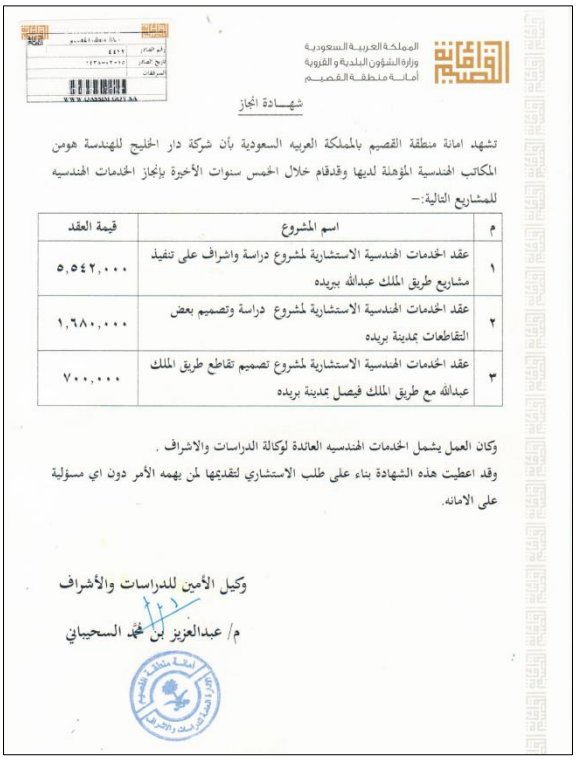
وكان العمل يشمل الخدمات الهندسيه العائدة لوكالة الدراسات والاشراف .

وقد اعطيت هذه الشهادة بناء على طلب الاستشاري لتقديمها لمن يهمه الأمر دون اي مسؤلية على الامانه.

وكيل الأمين للدراسات والأشراف

م/ عبدالعزيز بن محمد السحيباني

Roads Design projects



المملكة العربية السعودية
وزارة الشؤون البلدية و القروية
أمانة منطقة القصيم

شهادة انجاز

تشهد امانة منطقة القصيم بالمملكة العربيه السعودية بأن شركة دار الخليج للهندسة هومن المكاتب الهندسية المؤهلة لديها وقدقام خلال الخمس سنوات الأخيرة بإنجاز الخدمات الهندسيه للمشاريع التالية:-

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وكان العمل يشمل الخدمات الهندسيه العائدة لوكالة الدراسات والاشراف .

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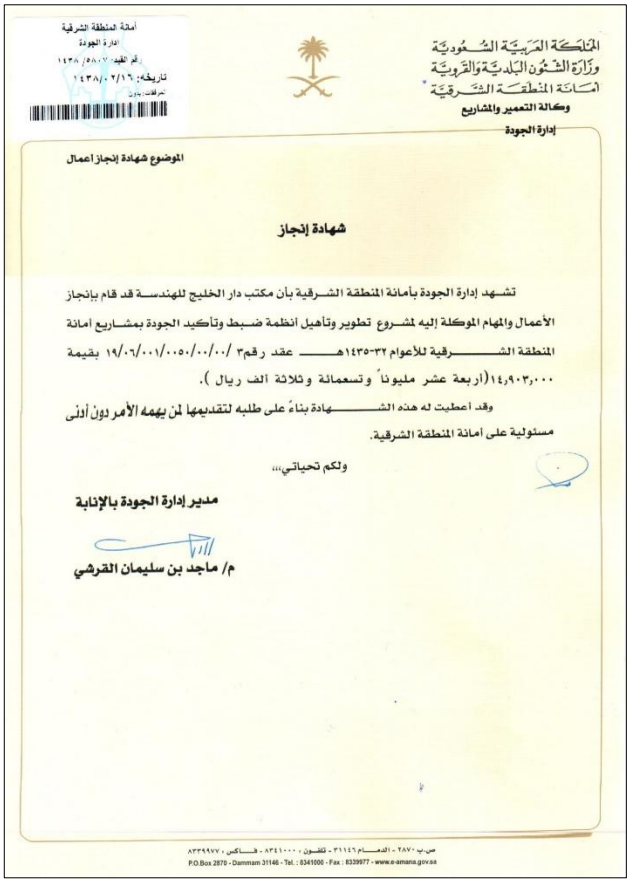
وكيل الأمين للدراسات والأشراف

م/ عبدالعزيز بن محمد السحيباني

Roads Supervision projects



المملكة العربية السعودية
وزارة الشؤون البلدية والقروية
أمانة المنطقة الشرقية
وكالة التعمير والمشاريع
إدارة الجودة

أمانة المنطقة الشرقية
إدارة الجودة
تاريخ: ١٤٣٨/٠٢/١٦

الموضوع شهادة إنجاز أعمال

شهادة إنجاز

تشهد إدارة الجودة بأمانة المنطقة الشرقية بأن مكتب دار الخليج للهندسة قد قام بإنجاز الأعمال والمهام الموكلة إليه لمشروع تطوير وتأهيل أنظمة ضبط وتأكيد الجودة بمشاريع أمانة المنطقة الشرقية للأعوام ٣٢-١٤٣٥هـ عقد رقم ٣ /../../٠٠٥٠/٠٠/٠١/٠٦/١٩ بقيمة ١٤,٩٠٣,٠٠٠(أربعة عشر مليوناً وتسعمائة وثلاثة ألف ريال).

وقد أعطيت له هذه الشهادة بناءً على طلبه لتقديمها لمن يهمه الأمر دون أدنى مسئولية على أمانة المنطقة الشرقية.

ولكم تحياتي،،،

مدير إدارة الجودة بالإنابة

م/ ماجد بن سليمان القرشي

ص.ب ٢٨٧٠ - الدمام ٣١١٤٦ - تلفون ٨٣٤١٠٠٠ - فاكس ٨٣٣٩٩٧٧
P.O.Box 2870 - Dammam 31146 - Tel.: 8341000 - Fax : 8339977 - www.e-amana.gov.sa

Qulaity Control Completion Certificat

المملكة العربية السعودية
وزارة الشئون البلدية والقروية
أمانة الأحساء

أمانة الاحساء
ALAHSA MUNICIPALITY

الإدارة العامة للتشغيل والصيانة
إدارة صيانة الطرق

شهادة شكر وتقدير

يسرنا نحن أمانة الأحساء أن نتوجه بالشكر الجزيل
لشركة دار الخليج للهندسة
لمشاركتها المتميزه والفعاله في أنشاء نظام
إدارة صيانة طرق الإحساء (PMMS)
متمنين لكم هذا العطاء والجهد المبذول والتعاون البناء
سائلين المولى عز وجل أن يجعله في ميزان حسناتكم

المختم الرسمي

وكيل الأمين للتعمير والمشاريع
م/فؤاد بن خالد الملحم

١٤٣٧هـ-١٤٣٨هـ

حسن بوخضر

Appreciatoon Certificat

- **Brochure for Airport Division**

دار الخليج للهندسة
GULF ENGINEERING HOUSE
قسم هندسة المطارات

التقييم الإنشائي لطبقات رصف المطارات
Pavement Structural Evaluation

- تتعرض طبقات رصف المطارات لحمولات أشد وقوى كبح أكبر بكثير من تلك التي تتعرض لها الطرق .

Airfield Pavement are subjected to heavier loads different gear configuration .

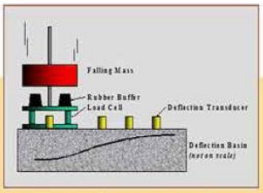
- تعمل التجهيزات على مبدأ سقوط صفيحة من ارتفاع محدد ليحاكي الحمولات من السيارات الثقيلة وحتى الطائرات الثقيلة مثل حمولات عجلة واحدة من بوينغ 747 .

The Equipment Works on Applying a Falling Weight from A known Height is Simulation for loads Ranging from Heavy Trucks to Heavy aircraft such as Boeing – 747 one Wheel

- يتم تسجيل التشوهات الناجمة عن الحمولة من خلال مجسمات خاصة،موزعة بحيث تقيس التشوهات تحت الحمولة ولمسافة عنها.

The load / Deflection Measurements are recorded through Geophones , spaced radially outward from the load

Test System FWD/ HWD	أنظمة الاختبارات FWD/ HWD
A non-destructive test device	جهاز اختبار غير متلف
Accurate and fast (up to 26 points / hour)	الدقة والسرعة (حتى ٦٠ نقطة / ساعة)
Wide loading range	مجال تحميل واسع
FDW (70 - 120 KN)	FDW ١٢٠ - ٧٠ KN
HWD (30 - 240 KN)	HWD ٢٤٠ - ٣٠ KN
Designed for multipurpose pavement applications ranging from road to airfield	مصممة لتطبيقات متعددة الأهداف من الطرق حتى المطارات
Ideal For Mechanistic / Analytical Design Approach	مثالية لتطبيقات التصميم بالطريقة الميكانيكية - التحليلية



مبدأ التحليل الإنشائي لطبقات الرصف

تقييم مدرج مهابط الطائرات - مطار الملك خالد الدولي

تقييم إنشائي لساحات وممرات المطار
مطار الملك خالد الدولي

للتواصل
المملكة العربية السعودية / الرياض
دار الخليج للهندسة – إدارة هندسة المطارات
تلفون : (+966) 011-4537171
بريد إلكتروني : admin@daralkhalij.com

دار الخليج للهندسة
GULF ENGINEERING HOUSE
قسم هندسة المطارات

تقييم وعورة المطارات – جهاز RSP لقياس استواء سطح المطارات
Pavement Roughness Evaluation - Runway Surface Profiler (RSP)

- يعرض جهاز آر اس بي قياسات الوعورة وعمق التخدد باستخدام ثلاث وحدات من الحساسات الليزرية مع إحداثياتها منسوبة لشبكة الموقع الجغرافي GPS .

The RSP Data shows the IRI Measurementes and Rut Depth using three Laser , along with thier GPS location

- تستوعب وحدة نقل المعلومات حتى 21 عدسة ليزر والمقطع الطولي والعرضي وعمق التخدد يتطلب 3 وحدات حساس ليزري على الأقل،يمكن إضافة حساس آخر لقياس الميول العرضية والطولية والانحنايات.

The transducer unit can accommodate up to 21 laser sensors longitudinal profile , transverse profile and rut depth require a minimum os 3 laser . an optional movement Sensor (LMS) can be added for measuring cross full , gradient and curvature

جهاز (RSP) لقياسات استواء سطح المدارج

تم تصميم جهاز آر اس بي لعمل قياسات تتعلق باستواء سطح المدارج ليؤمن لمهندس الرصف قياسات آلية دقيقة لوعورة السطح وكذلك لعمل الحلول الأخرى ذات الصلة . ويستطيع جهاز RSP إجراء القياسات التالية بشكل مستمر وبسرعة السير العادية.

- مؤشر الوعورة العاملي IRI .
- رقم الراحة أثناء القيادة RN .
- عمق التخدد.
- الميول العرضية والانحناء.
- الميول الطولية.
- النسيج الخشن للسطح.
- نظام تحديد الموقع على سطح الكرة الأرضية.
- الربط مع نظام المعلومات الجغرافية.
- يوفر دقة عالية مطابقة للمواصفات ASTM E - 950
- يمكن إجراء القياسات مع كافة السرعات.
- سهولة المعايرة.

Dynatest Runway Surface Profiler (RSP)

Is carefully Designed to provide an advanced automated , high quality pavement Roughness and related measurements solution for pavement engineers RSP is capable of real time continuous measurement of the following

- International Roughness Index IRI
- Ride Number RN
- Rut Depth
- Cross fall & Curvature
- Gradient
- Macro Texture
- Global positioning System (GPS) location
- Inxegrated to GTS
- Guaranteed high accuracy as specified by ASTM E-950
- Stop & go feature for urban measurement
- Easy calibration


سهولة معايرة الوعورة


إمكانية قراءة المعلومات والمخرجات بالموقع


معدة قياس وعورة المدارج

للتواصل
المملكة العربية السعودية / الرياض
دار الخليج للهندسة – إدارة هندسة المطارات
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بريد إلكتروني : admin@daralkhalij.com

دار الخليج للهندسة
GULF ENGINEERING HOUSE
قسم هندسة المطارات

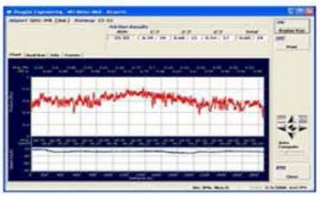
تقييم مقاومة الإنزلاق لطبقات رصف المطارات
جهاز اختبار الاحتكاك في الميوميتر
Pavement Skid Resistance Evaluation - Mu -Meter

- جهاز اختبار معامل الانزلاق لمدارج المطارات والذي صمم لاختبار الاحتكاك مستمر وذلك لتقييم تدهور الاحتكاك نتيجة التعرية والتقادم الانتاج عن كثرة الاستخدام أو الملوثات مثل المطاط المتراكم في مناطق الهبوط بالمدرج.

- Runway Friction Tester is designed for continuous Slip Fraction Testing to evaluate friction deterioration to weathering high usage aging or contaminants such as rubber build up in touch down zones of runway .

- يمكن إجراء تجربة قياس الاحتكاك باستخدام معدة Mu- meter6 في كافة ظروف المناخ وحتى أثناء المطر الغزير والثلج.

- Real time friction testing can be performed by Mu-Meter6 Runway Friction Tester during such adverse weather As heavy rain,ice or snow.



- يمكن تحليل وتمثيل البيانات والحصول على قيمة (FN) معامل الاحتكاك لكل قدم/ متر،أو بأية مسافة يمكن تحديدها. ويمكن إجراء القياس لمسافة 6705 متر باستخدام خزان مياه واحد وبدون إعادة ملئه.

- The model consist of user friendly operation soft ware ,friction number (FN)can be obtained at every foot meter or desired interval . It can test up to 6705 m of runway without refilling.

القياسات تتطابق مع كافة المعايير مثل :

- الجمعية الأمريكية للاختبارات والمواد ASTM 1551-E.
- إدارة الطيران الفيدرالية (FFA)
- منظمة الطيران المدني العالمية (ICAO)

Conforms to international standard

- American Society of Of Testing material "ASTM"E-1551
- 12C-Federal Aviation Administration "FAA" AC5320
- International Civil Aviation Organization - ICAO

Mu-Meter MK-6

للتواصل
المملكة العربية السعودية / الرياض
دار الخليج للهندسة – إدارة هندسة المطارات
تلفون : 011-4537171 (966+)
بريد إلكتروني : admin@daralkhalij.com

3. STRUCTURAL DESIGN AND SUPERVISION

The Structural Design Unit (SDU) is one of the main departments in Gulf Engineering House (GEH), which provides engineering consultancy services in the form of structural design of projects that are awarded to the company from both the public and private sectors, which includes design of highway bridges, tunnels, and culverts. In addition, auditing and supervision of all projects of construction of bridges and tunnels that are awarded to the company as site supervision. Also the Structural Design Unit leads the design of commercial and residential buildings, as well as, inspection and safety assessment of existing facilities including proposing programs for rehabilitation and proper maintenance of these facilities. The Unit implements its tasks through highly qualified technical staff with long experience; wide scientific knowledge and professional distinctive competence in the company's headquarter office in Riyadh/Saudi Arabia and its regional office in Amman/Jordan. SDU has achieved excellence and leadership in the performance of advisory services through number and level of projects carried out and fulfilled within the specified period of the contract.

Consultancy Services Provided by Structural Design Unit:

- Complete design services, which includes:
  - Highway Bridges, Tunnels and Culverts
  - Commercial and Residential Buildings
- Construction Site Supervision
- Structural Assessment and Rehabilitation of Buildings and Bridges
- Construction management
- Feasibility studies
- Site surveys and investigations
- Technical training

Al-Jamaat Al-Salam Bridge – Madina Municipality

3.1 Design of Bridges and Tunnels

Design of bridges and tunnels go through various stages starting with proposing the structural concept in compliance with the traffic solution and the geometric concept, and ends with the final structural analysis and design according to standards satisfying safety and economical cost requirements. Final design review is carried out along with preparation of final design drawings and documents. Such tasks may be listed in the following main items:

1. Approved design codes and standards to be used.
2. Description of bridges and tunnels design works
3. Software used in the analysis and design of bridges and tunnels.

Intersection of 4th ring road with Madina Road - Mecca Municipality

3.2 Design Codes and Standards

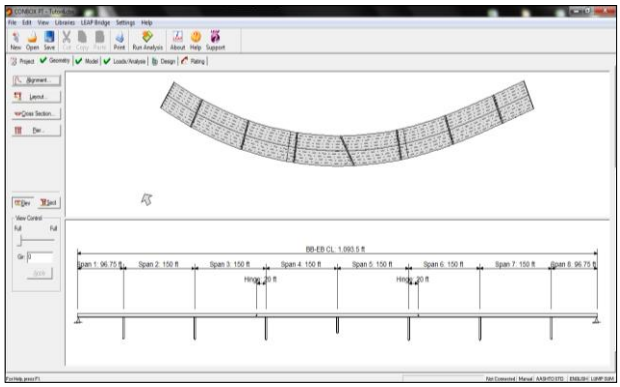
1. The American Association of State Highway and Transportation Official (AASHTO), “AASHTO LRFD Bridge Design Specifications,” 4th Edition, 2007.
2. The American Association of State Highway and Transportation Official (AASHTO)- "Standard Specifications for Highway Bridges– Division (I) 17th Edition 2002.
3. Momra Bridge , Tunnels ,Culverts and pedestrian Bridges Specifications In Urban Areas.
4. Ministry of Transport (M.O.T), “MOT Highway Design Manual) – Volume (3) – Structural Design Specifications 1993.

5. Precast/Prestressed Concrete Institute (PCI), “PCI Bridge Design Manual,” Third Edition, 2011.
6. The American Association of State Highway and Transportation Official (AASHTO)-" LRFD Guide Specifications for Design of Pedestrian Bridges,” 2nd Edition, 2009.
7. Federal Highway Administration, US Department of Transport, “Technical Manual for Design and Construction of Road Tunnels – Civil Elements,” March 2009.

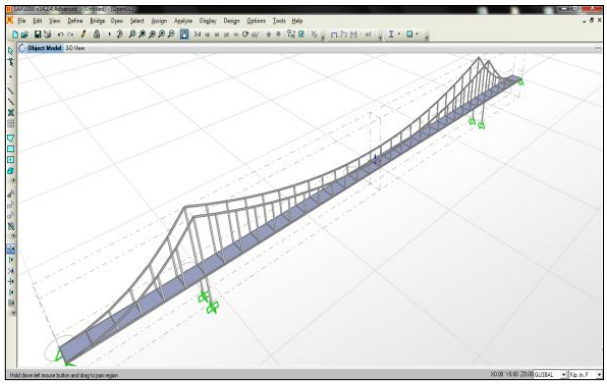
Intersection of 4th ring road with Al-Layeth Road - Mecca Municipality

3.3 Software and Programs for Structural Analysis and Design

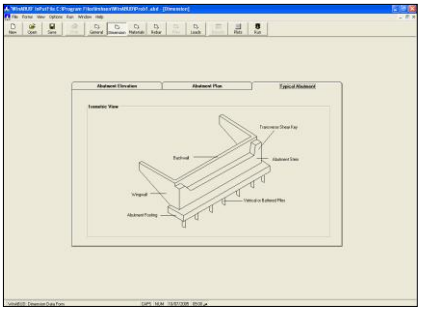
- SAP2000 Advanced 14.2.4, Structural analysis program used for structural modeling.
- Staad Pro, Structural analysis program used for structural modeling.
- ConSPAN, version 7.0.0, this program is used for structural analysis and design of precast/prestressed superstructures of the form: box-girder, T- & I- & U- shaped girders.
- ConBox, version 7.0.1, used for structural analysis and design of RC and prestressed bridge superstructure of the following forms: Box-girder, solid slab and voided slab.
- RC-Pier, version 7.0.0, this program is used to design bridges bents/piers in various forms such as: Multi-column, Hammerhead, and Integral .
- WinABUD, this software is used for analysis and design of closed abutments.
- QuickRC, this software is used for the analysis and design of reinforced concrete retaining walls.
- CSI-Column and PCA-Column, these software programs are used for the analysis and design of columns.
- In-house SPREADSHEET, which were developed by the SDU engineers to design various problems such as: bridge decks, open abutments, Prestressed Bulb Tee girders …etc.



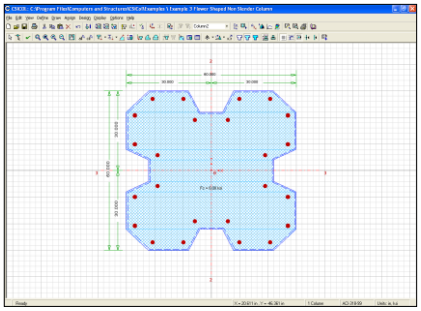
ConBox Software Snapshot



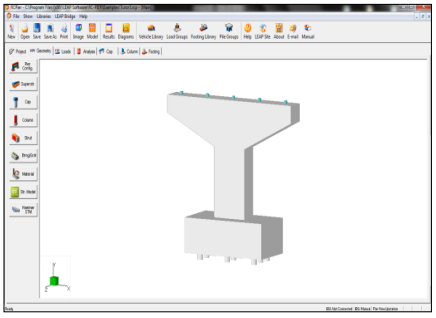
SAP2000N Snapshot



WinABUD Software Snapshot



CSI-Column Software Snapshot



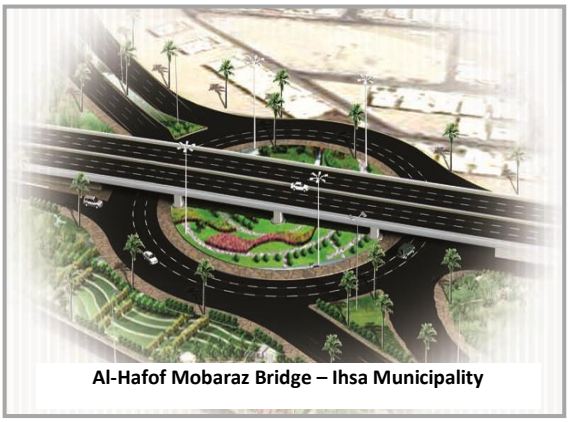
RCPier Software Snapshot

3.4 LIST OF OTHER STRUCTURAL DESIGN PROJECTS

1. Design Projects

1. Design of the 4th Ring Road (RR) Interchanges in Mecca
   - 4th RR and Jeddah Express Road
   - 4th RR and Old Jeddah Road
   - 4th RR and Al-Layeth Road
   - 4th RR and Akashieh Road
   - 4th RR and Jabal Thour Road
   - 4th RR and Al-Madina Road
   - 4th RR and Al-Sail Road
2. Design of Al-Jamaat Road and Al-Salam Road Interchange Bridges for Al-Madina Al-Monawara Municipality.
3. Design of Prince Abdulmajeed Road and the Airport Road Interchange Bridges for Al-Madina Al-Monawara Municipality.

4. Design of King Fahd Road and Al-Arab Road Interchange Bridge for Skaka Municipality.
5. Design of King Fahd Road and King Abdul-Aziz Road Interchange Bridge for Skaka Municipality.
6. Design of King Fahd Road with King Khalid Road Interchange Bridge for Skaka Municipality.
7. Design of Prince Abdulla Road and Souq Al-Ghanam Road Interchange Bridge for Skaka Municipality.



Al-Hafof Mobaraz Bridge – Ihsa Municipality

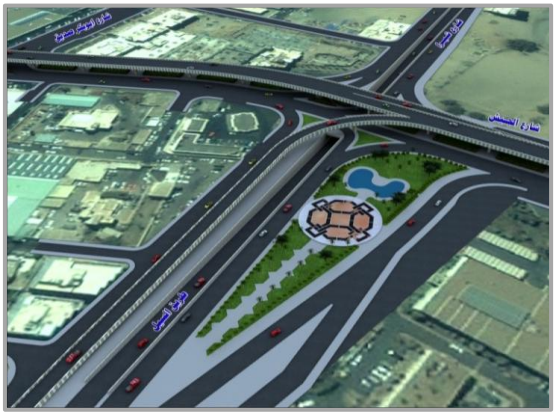
8. Design of King Abdulla Road and King Fahd Road Interchange Bridge for Ihsa Municipality.
9. Design of King Saud Road and Al-Diwan Road Interchange Bridge for Ihsa Municipality.
10. Design of Entrance of King Abdul-Aziz Marine Base and King Abdul-Aziz Road Intersection Bridge for Jubeil Municipality.
11. Design of Prince Naeif Road and Prince Faisal Road Intersection for Ihsa Municipality.
12. Design of Abdullah Orafe Road, Old Jeddah Road and Hajoun Street Interchange for Makah Municipality (4 bridges and tunnel).
13. Design of Taef-Hada Road and Ibrahim Jafali Street Intersection for Makah Municipality.

14. Design of Masjid Haram Road and Sidqy Street interchange for Makah Municipality.
15. Design of Masjid Haram Road and Jameah Street interchange for Makah Municipality.
16. Design of King Fahd road and Rawdah Steet (Darajah) Interchange for Jeddah Municipality (Precast/Prestressed Bridge).
17. Design of King Fahd Road and Sary Street (Falak) Interchange for Jeddah Municipality (Tunnel).
18. Design of King Fahd Road with Herra Steet (White Horse) Interchange for Jeddah Municipality (Precast/Prestressed Bridge).
19. Design of Wadi Rmah and Shuweiah Road Interchange for Riyadh Municipality.
20. Design of UR4 Bridge at km 139+637 at North-South Railway for Saudi Railway Company (SAR).
21. Design of UR2 Bridge at km 12+332 at North-South Railway for Saudi Railway Company (SAR).
22. Design of UR4 Bridge at km 88+626 at North-South Railway for Saudi Railway Company (SAR)..
23. Design of Shubra Street and Al-Jaish Street Interchange for Taef Municipality.
24. Design of Al-Jaish Street and Al-Salama Street Interchanges for Taef Municipality.
25. Design of North-South Axis for Taef Municipality.

White Horse Bridge – Jeddah Municipality

Al-Diwan Bridge – Ihsa Municipality

Al-Jaish and Al-Salama Tunnel – Taef Municipality



2. Inspection, Evaluation, and Rehabilitation Projects

GEH provides consultancies for inspection and safety assessment of existing facilities including proposing programs for rehabilitation and proper maintenance of these facilities. This is achieved through the development and implementation of proper methodologies based upon international standards and using state-of-the-art equipment. The assessment includes detailed information about types of damage and its causes, and development of a detailed plan of options for necessary maintenance procedures for these facilities. Herein some of the evaluation and rehabilitation completed projects:

2-1 Detailed visual survey of all highway bridges in the Kingdom of Saudi Arabia under the authority of Ministry of Transport (MOT)

It includes a comprehensive assessment of bridges in the Kingdom of Saudi Arabia under the authority of Ministry of Transport to prioritize maintenance and propose the necessary procedures for the periodic maintenance of these bridges. A comprehensive evaluation and rating of all bridges in the Kingdom of Saudi Arabia was achieved, leading to suggested rehabilitation procedures and periodical maintenance programs of all bridges.






2-2 Evaluation of Wadi Waj Culvert project (Taef Municipality).

The culvert follows the path of Wadi Waj (Waj valley) in Taef of a total length of 7.7 Km. The evaluation process started with visual inspection of the facility, which revealed some problems in the structure such as:

- Structural cracks in the wall and top slab of the culvert
- There is abrasion in the culvert floor due to water flow
- Bad construction of the upper inlets
- Spalling in the top slab concrete cover due to reinforcement corrosion.
- Leakage in the expansion joints which exists every 12m along the culvert.

2-3 Evaluation of Al-eskan District & Othman bin Affan Culverts (Buraidah).

The culvert follows the path of **Othman bin Affan** in **Buraidah** of a total length of 1930 m & **Al-eskan District** of a total length of 428 m The evaluation process started with visual inspection of the facility, which revealed some problems in the structure

Based upon visual inspection and preliminary analysis, several standard tests were decided to quantify the existing damage. The table below shows some of the nondestructive tests that GEH is capable of executing.

Materials	Test Name	Purpose of Test	Equipment	Standard
concrete	Pullout Strength of Hardened Concrete	covers determination of the pullout strength of hardened concrete by measuring the force required to pull an embedded metal insert and the attached concrete fragment from a concrete test specimen or structure	CAPO	ASTM C900-99 BS 1881 Part 207
	Determining Strength Development of Adhesive Bonds	This practice covers the determination of the strength development of adhesive bonds when tested on a standard specimen under specified conditions of preparation and testing	BOND	ASTM D 1144 BS 1881: Part 207
	Chemical Analysis of Hydraulic Cement	These test methods cover the chemical analyses of hydraulic cements. Specific chemical test methods are grouped as reference test methods and alternative test methods.	RCT	ASTM C 114 AASHTO T 260
	HUM-meter Indicating Moisture in Concrete	This test method is used to indicate the presence of capillary moisture in concrete.	HUM-METER	ASTM D 4263
	Rebound Number of Hardened Concrete	This test method is applicable to assess the in-place uniformity of concrete, to delineate regions in a structure of poorer quality or deteriorated concrete, and to estimate in-place strength.	Rebound hammer	ASTM C 805
	Crack width	Determine crack width and length	Template Gauge	---
	Pulse velocity through concrete	Uniformity and relative quality of concrete	Pundits Ultrasonic Tester	ASTM C 597 BS 1881-203

Materials	Test Name	Purpose of Test	Equipment	Standard
concrete	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration	Laboratory evaluation of the electrical conductance of concrete samples to provide a rapid indication of their resistance to chloride ion penetration	Rainbow Indicator	ASTM C 1202-97
	Sampling and Analysis of Existing Built-Up Roof Systems	This practice is a guide for removing test specimens from existing built-up roofing systems in the field and for determining the approximate quantities of the components of that specimen	Coring-Machine	ASTM D 2829
	Rebar Locator	Finding the location, depth, and size of steel reinforcement bar, post tension cables, copper and conduit in concrete brick, masonry or other non-metallic construction materials.	R-Meter M-K III	ACI 318 ، BS 51881 Part 204

Rebar Locator

Reinforcement Corrosion

3.5 (Structural Supervision unit):

The Construction Project Supervision Unit is a specialized unit that carries out all tasks related to supervision projects, especially projects that have construction aspects, which include the tasks of auditing and supervising all bridge implementation projects that are assigned to the company, and overseeing the implementation of other new construction projects such as building projects, inspecting and evaluating the safety of existing construction projects, and proposing appropriate rehabilitation and maintenance programs for these facilities. The unit carries out its tasks through a highly-qualified technical cadre with long experience, scientific knowledge and distinguished professional competence in each of the company's main office in Riyadh / Saudi Arabia, and through supervisory project managers and distinguished work staff who reside in the various project sites scattered in all regions of the Kingdom. The unit has achieved distinction and leadership in performing its advisory services through the number and level of projects it has completed and the employer's satisfaction with the level of service that has been provided.

King Abdullah Road with the Inner Ring Road Intersection in Al-Hasa 28/7/6/2016

3.6 Samples of the supervision projects

Bridge of King Fahd Road with King Abdullah Road (eastern side) in Al-Ahsa-2016

King Abdullah Road with the Inner Ring Road Intersection in Al-Ahsa - 2016

Supervising of the Concrete insulation works for for the Prince Mansour Hospital tunnel in Taif 2015

Bridge of King Fahd Road with King Abdullah Road (eastern side) in Al-Ahsa-2016

Supervising the work for the Prince Mansour Hospital tunnel in Taif 2015

Supervising rock cut works, reinforcing works, Underpass, for the Prince Mansour Hospital tunnel in Taif 2015

Bridge project duplication of the Railway line between Riyadh Dammam – Saudi Railways Organization

Douadmi Road Duplication Project, Arja Nefi Alrass - MOT-2016

3.7 LIST OF STRUCTURAL DESIGN PROJECTS – Last 5 Years:

NO	PROJECTS	CLIENT	Contact Person
Design projects			
1	Design of (5) bridges at Wadi aladayra in hail : - Design of bridge at Wadi aladayra with prince megren road - Design of bridge at Wadi aladayra with al haraj road - Design of bridge at Wadi aladayra with marefa road - Design of bridge at Wadi aladayra with alsuivelh - Design of bridge at Wadi aladayra with almonfak roundabout road	Hail Municipality	Eng. Mohsen Al Qahtani
2	Design extension of bridge at Wadi aladayra in hail		
3	Design of King Khalid Road, King Faisal road and Prince Sultan Road Interchange for Khamis Mushait Municipality.	Khamis Mushayt Municipality	Eng. Mohammed saad
4	Design of King Fahd Road and Bahes Street Interchange for Khamis Mushait Municipality		
5	Design intersection of king Abdullah road with alragy		
6	Design intersection of king Saud road with althamanyen street		
7	Design intersection of king Khalid road with link of king Abdulla road		
8	Design of intersections in jazan (6road bridge&6 pedestrain bridge)	JAJAN Municipality	Eng. Ibrahim Al-Tebaigi
9	Studies necessary for the implementation of the scheme proposed by the secretariat of the capital, fever within the holy sites and the free intersection at the intersection with the Taif through Muzdalifah	Ministry of Municipal and Rural Affairs	Eng. Jubran
10	Design intersection of Al Dahi road with King Abdullah road	Qassim Municipality	Eng. Mohammad Al khouaiter
11	Design intersection of king Abdullah road with Amir Omar bin Abdul Aziz road		
12	Design intersection of king Abdullah road with king Khalid road		
13	Design intersection of king Abdullah road with haikley road		
14	Design intersection of king Abdullah road with king faisal road		
15	Design intersection of Shahar Street with Al Sadad street	Taif Municipality	Eng. Ibrahim Younis
16	Design intersection of king Khalid road with Khalid ibn-walid road		
17	Design intersection of bab al hazm		
18	Design intersection of Hassan bin thabet road with al maared road		
19	Design intersection of Hassan bin thabet road with 25		
20	Design intersection of algamaria		
21	Design intersection of Khalid ibn-alwalid road with wadi wej road		
22	Design intersection of king Abdullah road with al salama street		
23	Design intersection of airport road with wej valley road (aldalal)		
24	Design intersection of king Fahad road with Alkhurmah road		
25	Design of Bridge at Alkhurmah valley		

NO	PROJECTS	CLIENT
Supervision projects		
1	King Saud Road intersection with Diwan	Al-Ahsa Municipality
2	King Fahd Road with King Abdulaziz Road	
3	The bridge between the cities of Hofuf and Al-Mbaris	
4	King Fahd Road Bridge with King Abdullah (Eastern Side)	
5	King Abdullah Road Bridge with Inner Ring	
6	Supervising projects for the construction and development of rainwater drainage plants and networks in Al-Hasa	
7	Supervising projects for the construction and development of rainwater drainage plants and networks in Hofuf and Al-Mbaris	
8	Project to complete the double-line between Riyadh and Dammam	Saudi Railways Organization
9	Double rail bridge project at the station 426 km between riyadh and Dammam line	
10	Technical study of the high reservoir in the residential neighborhood of Dammam for Saudi Railways Organization	
11	King Abdullah Road Intersection with Al-Tagra	Qassim Municipality
12	King Abdullah Road intersection with Elnahda	
13	King Abdullah Road intersection with Omar bin AbdulAziz	
14	King Abdullah Road Intersection with Al-Haikli	
15	King Abdullah Road intersection with King Khalid	
16	King Abdullah Road intersection with North Side Road	Ministry of Transport
17	Double-road Albdaea - Alkhobraa	
18	Double-road Alrabeaya - Alasyah	
19	King Fahd Road intersection with King Khalid and King Abdullah Road	
20	King Fahd Road intersection with King Abdulaziz Road	
21	Almadina Road Intersection - Riyadh with Aniza Road - Airport	
22	Almazraa intersection Bridge	
23	Wadi Al-Rama Bridge	
24	Double-road Alareda - Elidabi	
25	Double-road Alareda - Abu Arish	
26	Al-Twaal Road Intersection – Jazan – Aldarb – Alshaqiq (Alkarbos)	
27	Al-Twaal Road Intersection – Jazan – Aldarb – Alshaqiq (Mahlia)	
28	Double Hail Road - Jaba	
29	Al-Sunbula Bridge Project	Hail Municipality
30	King Fahd Road intersection and Almaared with urban center	Asir Municipality
31	Supervising Um al-Malh Airport	Border Guards
32	Algadida Bridge Project	Northern Border Municipality
33	Supervising the implementation of the West Gate	
34	Supervising the implementation of an pedestrian bridge	
35	Arar Airport Road intersection with Alshoaba Hospital	Ministry of Transport
36	Supervising the Bridge of Arar Airport	Ministry of Transport
37	The intersection of The Sail Road with Omar Qadi	Holy Makkah Municipality
38	The intersection of the 4th Ring Road with Jeddah Highway	
39	The intersection of the Fourth Ring Road with Laith	
40	Intersection of the 4th Ring Road with Al-Awali	
41	Supervising the implementation of a waterway from the sewage treatment plant	National Water Company

NO	PROJECTS	CLIENT
Supervision projects		
42	King Khalid Road Tunnel with Airport Road	Taif Municipality
43	King Saud Road intersection with Hamza bin AbdulMutallab	Najran Municipality
44	The project of supervising the improvement and renovation of the runways of some internal airports (Rafah, Abha, Tabuk, Sharoura, Al-Baha, Tarif and Al-Qassuma)	General Authority of Civil Aviation
45	Supervising of the Al-Kharj Municipal Building	Al-Kharj Municipal
46	Supervising the second phase of dual-duadmi - Arga - Nafi - Al-Ras	Ministry of Transport
47	Fix the path (Shaqraa – duadmi)	Ministry of Transport
48	Dual-duadmi - Arga - Nafi	Ministry of Transport

4. TRANSPORTATION AND TRAFFIC ENGINEERING

GEH play a leading role in the field of transportation & traffic engineering. Its services spread among different areas concern with planning, design and operation.

The list includes but not limit to:

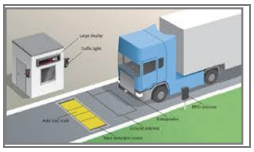
- Traffic Engineering
- Transportation Planning
- Public Transport studies
- Parking Studies
- Intelligent Transportation System
- Accident Studies
- Traffic Management Studies
- Traffic Signal, Signs and Pavement Markings
- Traffic Simulations
- Traffic Impact Studies

Traffic Studies done by GEH

Traffic Engineering

Traffic Engineering division provides consultation on all aspects of road projects dealing with movement of vehicles and pedestrians. We undertake projects at pre-feasibility stage until construction, supervision, and operations. We have state of art software for operational analysis, traffic prediction and geometric design. Traffic Engineering Services Include:

- Data Collection
- Traffic Studies
- Operational Analysis
- Design of Interchanges, Intersection and Highways and Freeways
- Logistics and Goods Movement Studies
- Economic Analysis and BoT Studies

Autoscope	RTMS	Weigh In Motion	Permanent Automatic Counters	Portable Traffic Counters
				
				

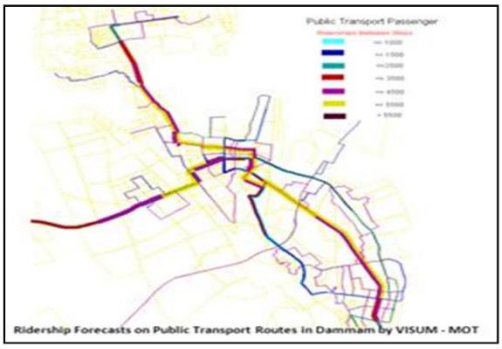
Traffic Equipment's owned by GEH

Traffic Software's used for Traffic Studies by GEH

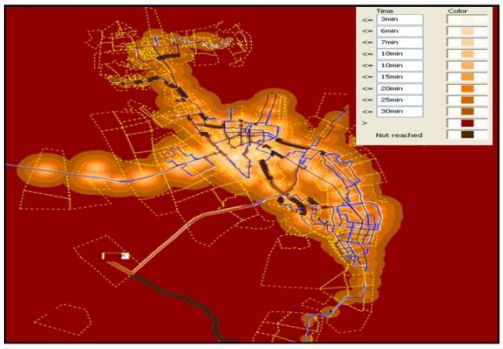
Transportation Planning

GEH's Planning Division excels in multi-modal transportation planning, with a focus on creating supportive environments for transit, and pedestrians. The firm's planning expertise encompasses assessment and feasibility planning for new highways/freeways and comprehensive planning to support transportation corridors, and community land use alternatives. Traffic modelling group of this division is capable to model the entire road network of a city. GEH offers the following services:

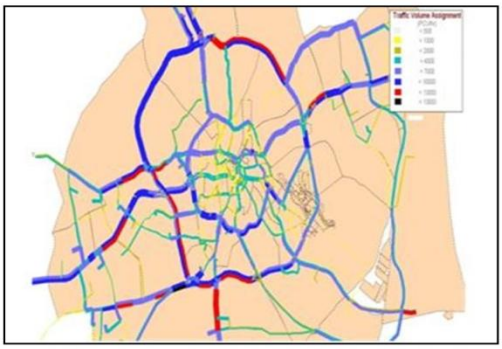
- National Transport Planning
- Travel Demand Forecasting and Model Development
- Modelling, Calibration and Software Interface
- Major Investment and Corridor Studies
- Environmental Impact Assessment Studies
- Logistics and Goods Movement Studies
- Economic Analysis and BOT Studies



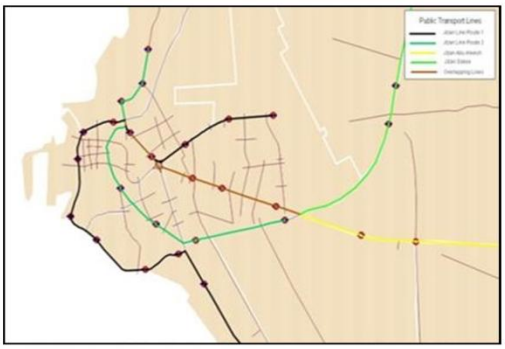
Ridership Forecasts on Public Transport Routes
In Dammam by VISUM - MOT



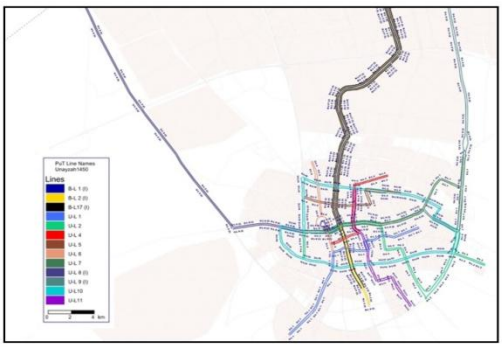
Accessibility of Public Transport Routes
In Dammam by VISUM - MOT



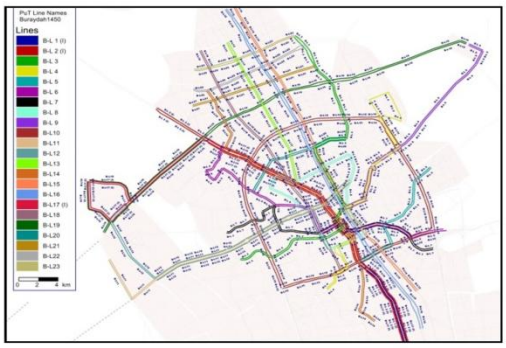
Traffic Assignment for "Study & Design of 4th Ring Road"
Makkah Municipality



VISUM Modeling for Jazan Public Transport Project - MOT



Public Transport Lines Unayzah Year 1450 by VISUM - MOT



Public Transport Lines Buraidah Year 1450 by VISUM - MOT

Public Transport studies

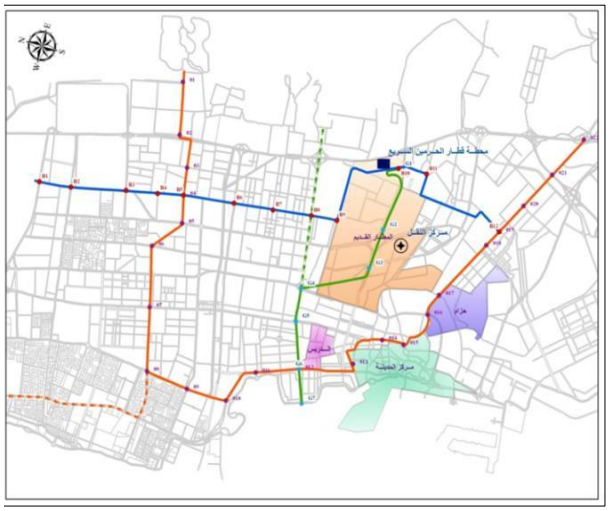
GEH gained high experience in this field by performing a quantifiable list of public transport studies for the major cities in KSA, these projects are undertaken for several phases including:

- Conceptual studies.
- Feasibility studies.
- Preliminary studies.
- Tender Documents.

Jeddah, Jazan, Dammam, Buraidah, Hail and Taif are on the list of the major cities that under taken by conducting these studies for the benefit of MOT and Municipalities.

Jazan Public transport network

Jazan Main station



Jeddah LRT network

Jeddah LRT- Sari & Madinah Intersection

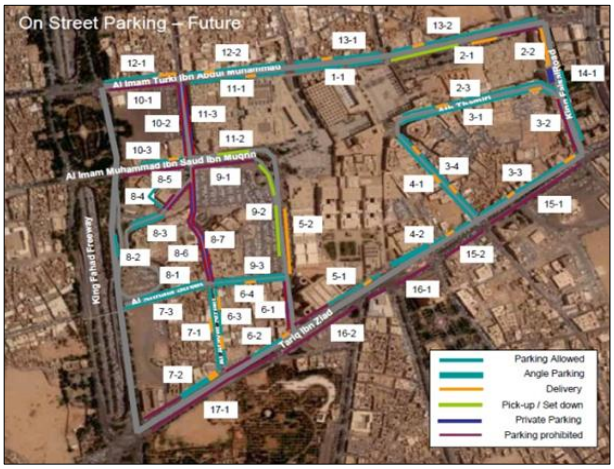
Parking Studies

GEH has experience in planning, detailed design and implementation of parking solutions. We work closely with the client to understand needs and tailor cost effective and creative solutions to meet their demand. GEH Offers these services associated with parking and servicing:

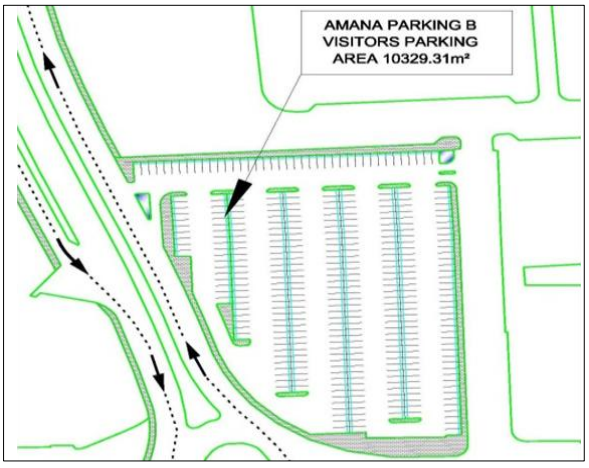
- Supply / Demand & Parking Adequacy Studies
- Design of Parking Facilities
- Parking Management Plans
- Financial Feasibility Studies
- Parking Alternatives Analysis
- Functional Improvement Studies
- Parking Revenue & Operations Studies

Dakhna Parking Garage Study, Redesign
Riyadh Municipality

Study and redesign of car parking
Riyadh Municipality



Qasr Alhoukm Area parking Study
(with Dorneir consulting) - ADA

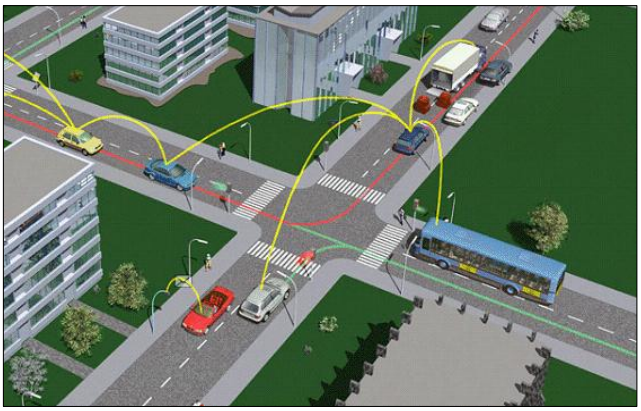


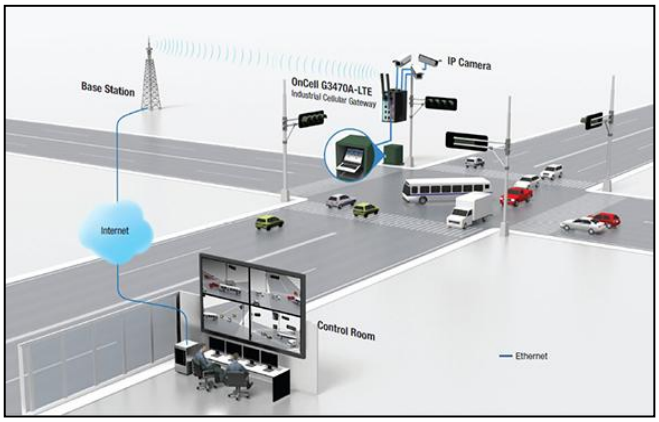
Jeddah Municipality Parking Design
Jeddah Municipality

Intelligent Transportation Systems

ITS helps to guarantee the proper functionality, increase the reliability and improve the performance and safety of the transport. We deliver comprehensive solutions over a full range of services from conceptual planning through design and implementation for all ITS projects. GEH Offers these services associated with ITS

- Design of Intelligent Transportation Systems (ITS)—Advanced Traffic Management Systems (ATMS) and Surveillance Sub-Systems
- Safety Enhancement Systems
- Advanced Traffic Control System
- Advanced Parking Management Systems
- Advanced Public Transportation Systems
- GIS and GPS Applications



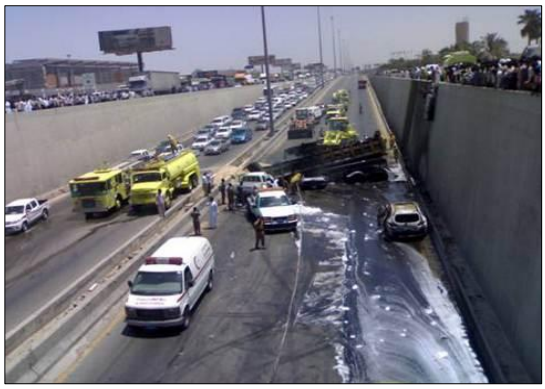


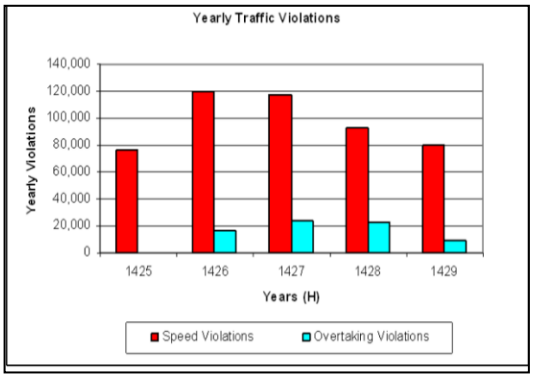
ITS Design Development Assessment, Data Collection & Stakeholders Participation
(Client: Ministry of Transport & UNDP)

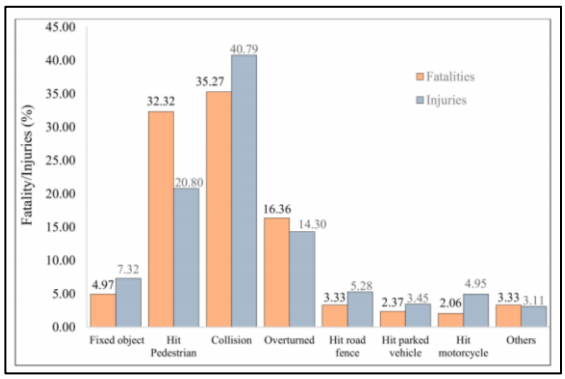
Accident Studies

GEH provides traffic safety and accident prevention services which include investigations and recommendations concerning signals, signs, and markings; channelization and treatment of complex intersections; loading and unloading areas; roadway lighting; pedestrian systems; curb and off-street parking; public transit operations and service; one-way streets; speed control; physical improvements in roadways; and traffic regulations and ordinances. GEH offers these services associated with Safety and Accident Studies:

- Hazardous Location Identification & Treatment
- Countermeasures, Provision and Analysis
- Road Safety Audits
- Safety Improvement Programs
- Accident Evaluation







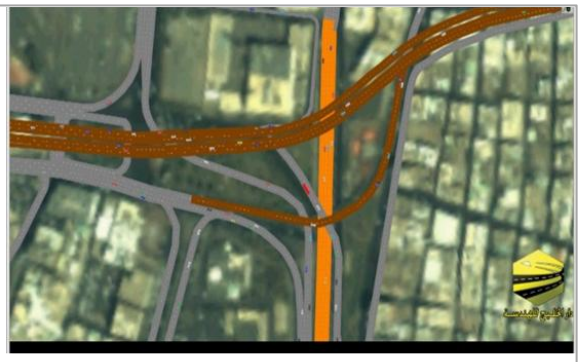
Road Safety Audit – Dhahran Jubail Highway
(Client: TSSP Saudi Aramco)

Traffic Management

Most of the urban cities suffer from improper management of traffic and streets. GEH uses demand management technique to efficiently regulate traffic during peak hours. We make traffic environment for pedestrians, parkers and shopkeepers much more pleasant and comfortable. GEH offers the following services in traffic management area:

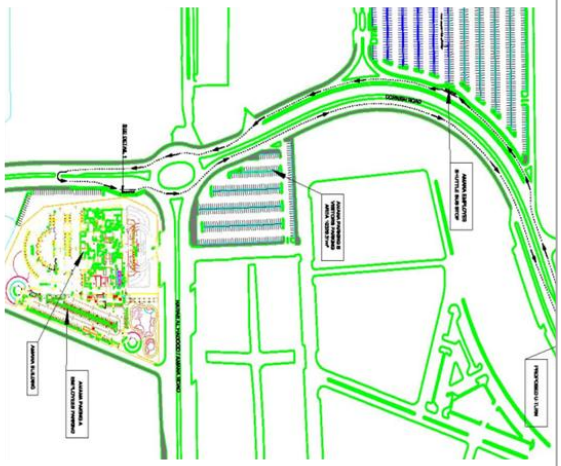
- Residential Traffic Management / Traffic Calming
- Travel Demand Management
- Access Management
- Financial Feasibility Study

Traffic Study for KAUST Campus
(with Vinnell Arabia) - 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 Signal, Signs and Pavement Markings

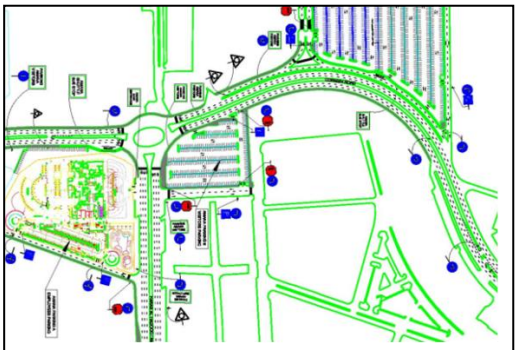
Traffic signal design and signal timings are key factors in efficient intersection operation. Our services include design of isolated intersections (Fixed time, Semi actuated and fully actuated) and interconnection of isolated signals into a coordinated system.

- Coordinated Fixed Time
- Coordinated Actuated – Street Master
- Coordinated Actuated – Closed Loop
- Centralized Systems

At un-signalized intersections and mid-blocks we also undertake design of appropriate warning, prohibition and informatory signs to ensure safe and correct use of the road by all road users. GEH offers the following services in design of traffic signals, signs and markings:

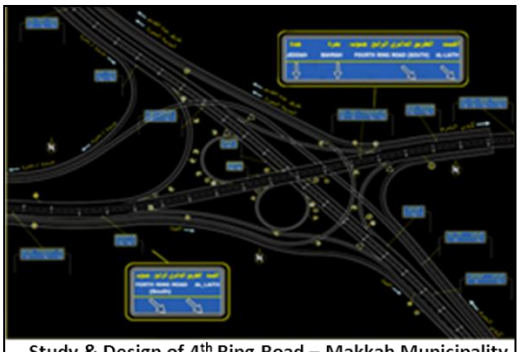
- Design of vehicle signal heads, pedestrian signal heads, signal poles etc.
- Planning and Designing traffic signal operations, timings and phasing
- Sign and Marking Design
- Sign Inventory and Management Systems

Sakaka Interchange Study & Design - Jouf Municipality



TIS for Jeddah Municipality New Building
Jeddah Municipality

Sample Traffic Software Used by the Consultant



Study & Design of 4th Ring Road – Makkah Municipality

Traffic Simulation

Experiment performed on an artificial model of a real system is Simulation. Simulation is an excellent tool because transport governing and regulating bodies can test the system and visualize the roadway performance during Peak Hour , Off peak hours, After 5 Year ,during Ramadan , Hajj ,5 years back as well as Effect of improvement proposed by the consultant.

GEH uses traffic simulation for:

- **Traffic Operations Analysis (**Level of Service, Total Delay, Travel Time and Queue Length).
- **for Traffic Planning** (Traffic Assignment)

Traffic Simulation for Abdullah Areef / Old Makkah Road using VISSIM
(Client: Makkah Municipality)

Snapshot of Sim 3D View in Synchro

Traffic Impact Studies

Gulf Engineering House has developed an expertise in carrying out the Traffic Impact Studies for various major commercial centers, offices and mixed use buildings in the Kingdom. In Jeddah, GEH has completed various traffic impact studies and of which three have already been approved by Jeddah Municipality and other are in progress. The images below represent examples of these studies.

Al Anud Residential Complex TIS in Riyadh

Refad Business park TIS

Kings Medical College Hospital TIS in Jeddah

Al Hada Hotel Compound TIS in Riyadh

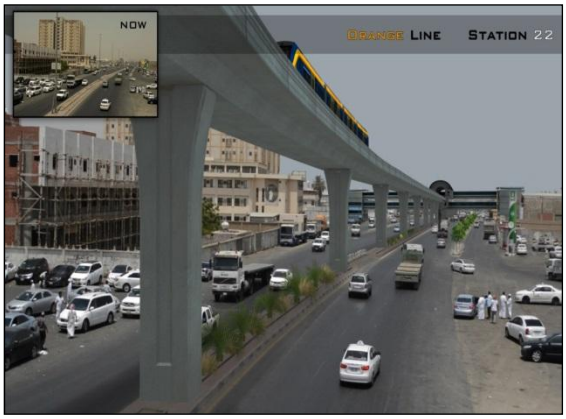
Sabic Museum TIS in Riyadh

Hotel Marriott courtyard inn TIS in Jeddah

Railway Engineering

GEH Railway engineering unit is responsible for conducting railway design studies and supervision of railway construction projects. Many projects have been conducted by the section that includes preparing preliminary designs for public transport systems in addition to supervising the construction in many parts of the Kingdom.

Proposed LRT Reservations in Fourth Makkah Ring Road Cross Section



Orange line-Jeddah LRT-Preliminary design-MOT

Hofuf Railway track doubling- Construction Supervision-SRO

Railway track Bridge-Construction Supervision-SRO

Transport and Traffic Engineering Projects

List of Traffic/Transportation Projects		
S.NO	**DESCRIPTION OF PROJECTS**	**CLIENT**
1	Traffic Study for Second Ring Road (Southern Section).	Riyadh Municipality
2	Updating of Structural plan for the Northern and Eastern Suburbs in Riyadh City. Riyadh, KSA	Arriyadh Development Authority
3	Preparing the studies to update, activate and calibrate the transport and traffic model of the Eastern Region Secretariat Kingdom of Saudi Arabia/Dammam Dammam, KSA	Eastern Province Municipality
4	Traffic Counts for Dammam, Khobar & Dhahran Region	Eastern Province Municipality
5	Preparation of Studies, Designs & Engineering Manuals for the Application of Universal Standards in the Eastern Region Cities to Become Friendly For People with Disabilities	Eastern Province Municipality
6	Study and Design of Alternatives for King Faisal Bridge for Fourth Makkah Ring Road (Faj El Herman)	Makkah Municipality
7	Study and Design of 13 Intersections in Makkah (Contract # 29)	Makkah Municipality
8	Study and Design of 12 Intersections in Makkah (Contract # 3)	Makkah Municipality
9	Study and Design of 8 Intersections in Makkah (Contract # 191)	Makkah Municipality
10	Jeddah Intersections (Contract Pack # 2 - K Fahad Rd. Corridor)	Jeddah Municipality
11	Jeddah Intersections (Contract Pack # 3 - Hira St. Corridor)	Jeddah Municipality
12	Jeddah Intersections (Contract Pack # 4 - K A Aziz Rd. Corridor)	Jeddah Municipality
13	King Abdul Aziz Road Improvement / Widening Study in Hail	Hail Municipality
14	Intersections Study and Design - Taif	Taif Municipality
15	North South Corridor study and design – Taif	Taif Municipality
16	Study & Design of 3 Arterials in Taif	Taif Municipality
17	Traffic Master plan for KAUST & Thuwal Area	Saudi Aramco
18	Traffic Study for Hasbah Bulk Plant, Ras Tanura Refinery	Jacobs Zate
19	Traffic Study for Clean Fuel & Aromatics Project, Ras Tanura Refinery	Jacobs Zate
20	Traffic Impact Study for Hotel & Mall in Dammam	Al Hokair Group
21	Traffic Impact Study for Remal Housing Project, Riyadh	Dar Al Riyadh
22	Traffic Impact Study for Housing & Commercial Project, Riyadh	Al Roukn Consultants
23	Traffic Management Plan for Hermain High Speed Rail Station, Makkah	Saudi Diyar Consutants
24	Traffic Impact Study for Maarif School, Riyadh	Maarif Education & Training
25	Road Safety Audit for Dhahran Jubail Highway	Al Rabia& Partners / Saudi Aramco
26	Parking Study for Dhahran Health Center	Al Rabia& Partners / Saudi Aramco
27	Road Safety Audit for Dhahran Al Khobar Highway	Radicon Gulf Consult / Saudi Aramco
28	Traffic Study for Doha/Danah Area in Dhahran	Radicon Gulf Consult / Saudi Aramco
29	Transportation Study for Dammam Industrial Area 2	MODON
30	Traffic Impact Study for ADA GAB Head Quarter Building, Riyadh	Dar Al Riyadh
31	Traffic Impact Study for Al Masarah Complex in Jeddah,	Dar Al Riyadh
32	Traffic Congestion Relief - Taif	Taif Municipality
33	Comprehensive Traffic Planning – Taif	Taif Municipality
34	Traffic Congestion Relief - Taif	Taif Municipality
35	Comprehensive Traffic Planning – Taif	Taif Municipality

List of Completed Traffic Impact Studies				
S.No	**Traffic / TIS Projects**	**Project location**	**Client**	**Status**
1	TIS of PRIME BUSINESS Parking study of PRIME BUSINESS	Riyadh	Dewan Architects + Engineers	Completed
2	Security Training Center-Al Khobar TIS	Al Khobar TIS	Al Arrab Contracting Co.	Completed
3	TIS of Irqah Site Development-Riyadh	Riyadh	DAR	Completed
4	Traffic Impact Study Project for the Second Phase of the Sidra Neighborhood Project (Zone 2A & B) in Riyadh	Riyadh	ECG	Completed
5	MOC Detail Design Traffic Consultancy	Riyadh	SSH	In Progress
6	TIS of Al Malga Urban village Project in Riyadh	Riyadh	OMRANIA	In Progress
7	Master Gas system expansion Phase III Accommodation TIA		khatib & Alami	Completed
8	Traffic Study of Wadi Qortuba Compound in Riyadh	Riyadh	Solidere Qortuba	Completed
9	TRAFFIC STUDY for the Project “214416C001 - BI-10-01309 - REFINED PRODUCTS PIPELINE - QASSIM ALJOUF	QASSIM ALJOUF	TIDAREC	Completed
10	Udhailiyah Main Gate Enhancement Traffic Study	Eastern region	Jacobs Zate	Completed
11	Prepare Drill Sites Qatif Traffic Study	Qatif	National Basics Company (NBC)	Completed
12	Traffic impact study for the Manahil Al-Tarbiya Company Schools Complex Project - Buraidah	Buraidah	Manahil Private Education Company	Completed
13	Traffic impact study for Al Saif Company's administrative tower project	Riyadh	Al Saif Company	In Progress
14	King Fahd Cultural Center in Riyadh TIS	Riyadh	Black DWC-LLC	Completed
15	Traffic Impact study for Al-Othaim Mall in Al-Khobar	Al-Khobar	ECG	Completed
16	Traffic study project for departure and arrival routes along Terminals 1, 2, 3, 4 and 5	Riyadh	Riyadh Airports Company	Completed
17	Traffic impact study for the General Authority for Military Industries headquarters project	Riyadh	General Authority for Military Industries	Completed
18	Residue Upgrade-Ras Tanura Refinery Traffic Impact Assessment	Ras Tanura	WorleyParsons Engineering	Completed
19	Transportation & Parking Management services for KAFD P 1.01	Riyadh	SSH	In Progress

List of Completed Traffic Impact Studies				
S.No	**Traffic / TIS Projects**	**Project location**	**Client**	**Status**
20	KAFD 1.05 Hotel Project	Riyadh	SSH	In Progress
21	Traffic Consulting Services for the Qiddiya Amusement Park Project	Riyadh	MEINHARDT	In Progress
22	Consulting Services Project for Parking and Traffic Design	Riyadh	Dewan Architects + Engineers	In Progress
23	Traffic Impact Study for the Nexus Project in Riyadh	Riyadh	Zeoof	Completed
24	AT TAAWUN District Park Project			Completed
25	Traffic Impact Study (TIS) of the Expropriated Lands on the Road and Street Network at the Site of Imam Abdulrahman Al-Faisal Hospital in Riyadh	Riyadh	of Imam Abdulrahman Al-Faisal Hospital	Completed
26	Traffic Consultancy services for MICD in DG	Riyadh	Diriyah Gate Company Limited (DGCL)	In Progress
27	Traffic Consultancy services for Pendry Hotel in DG			
28	Traffic Consultancy services for 1 Hotel in DG			
29	Traffic Consultancy services for MBC Plots in DG			
30	Traffic Impact Study for Residential buildings in Riyadh	Riyadh	Al Majidiyah/ Riyadh Municipality	In Progress
31	Traffic Impact Study for Rabia Hospital in Riyadh	Riyadh	Rabia Hospital/ Riyadh Municipality	In Progress
32	Traffic Impact Study for Ibn Sina Boys & Girls Schools in Riyadh	Riyadh	Riyadh Municipality	In Progress
33	Traffic Impact Assessment for Kings Medical College Hospital in Jeddah	Jeddah	Dar Engineering/Jeddah Municipality	In Progress
34	Traffic Impact Assessment for Abdullah Al-Rashid Rehab Hospital in Hasa	Al Hasa	Dar Engineering/Al Hasa Municipality	In Progress
35	Traffic Impact Study for Al Anud Residential Compound	Riyadh	HAK/Riyadh Municipality	In Progress
36	Traffic Impact Study for Al Hada Hotel Compound	Riyadh	HAK/Riyadh Municipality	In Progress
37	Traffic Impact Study for Parking Areas (Khobar Gate, Parking Area- A & B) in Dhahran	Dhahran	ACEC/Saudi Aramco	Approved by Saudi Aramco
38	Traffic Impact Study for Abha Regional Airport	Abha	ECG/GACA	In Progress
39	Traffic Impact Assessment for Integrated Municipal Solid Waste Management Facility	Dammam	Khatib & Alami/SA	In Progress

List of Completed Traffic Impact Studies				
S.No	**Traffic / TIS Projects**	**Project location**	**Client**	**Status**
40	Traffic Assessment study for Bus Depots in Riyadh	Riyadh	Public Transportation Co./RM	In Progress
41	Mart Zone Traffic Study	Dammam	ERM	Approved by ERM
42	Jeddah Marriot Courtyard Traffic Impact Study	Jeddah	Jadur/JM	Approved by JM
43	Hotel, Residential & Commercial project TIS	Jubail	FEDN consulting Engineers/ERM	Approved by ERM
44	NCB Bank Regional Building TIS	Al Khobar	Zuhair Fayez partners/ERM	Approved by ERM
45	Hotel and Commercial project TIS	Dammam	Gulf Real Estate Co./ERM	Approved by ERM
46	Educational & Residential Compounds TIS	Al Khobar	Al Muhaidib/ERM	Approved by ERM
47	National Heritage Center TIS	Riyadh	SaudConsult	Approved by the client
48	Royal Rose hotel TIS	Riyadh	RM	Approved by RM
49	Design of Sabic Museum TIS	Riyadh	Zuhair Fayez partners/RM	Approved by RM
50	Al Narjes Hospital Project in Riyadh TIS	Riyadh	MTEV/RM	Approved by RM
51	Master Plan for STC HQ in Riyadh	Riyadh	Zuhair Fayez partners/RDA	In Progress
53	Traffic Impact Assessment for East Dammam II Public School	Dammam	KBR-AMCE/ Saudi Aramco	Approved by Saudi Aramco
54	Wahat Qiddiya Project TIS	Riyadh	MTEV/ADA	In Progress
55	Elite mixed use development TIS	Riyadh	Buruoj Engineering Consultant/RM	Approved by RM
56	JADA Square Project Jeddah TIS	Jeddah	AMSAD/JM	In Progress
57	Traffic Impact Study for Saihat boys intermediate School	Dammam	Arabian Gulf Construction/Saudi Aramco	Approved by Saudi Aramco
58	Traffic Impact Study for Safwa girls intermediate school	Safwa	Arabian Gulf Construction/Saudi Aramco	Approved by Saudi Aramco
59	Traffic Impact Study for Rahimah girls elementary School	Ras Tanura	Arabian Gulf Construction/Saudi Aramco	Approved by Saudi Aramco
60	Fakeeh Hospital Project in Madinah-Traffic Impact Assessment	Madinah	MTEV/MDA	In Progress
61	Traffic Impact Assessment for Al Ihsa Women Driving Center (HWDC)	Al Hasa	KBR-AMCE/ Saudi Aramco	Approved by Saudi Aramco
62	Traffic Study for Tanajib Marine Gate#13 Car Park Modification & Drop off Area	Tanajib	Worleyparsons/ Saudi Aramco	Approved by Saudi Aramco
63	Abu Dawood Head Quarter	Jeddah	Abu Dawood Group	Approved by JM
64	Jeddah Municipality Building	Jeddah	Jeddah Municipality	Approved by JM
65	UTE Office Tower	Jeddah	United Trading Est.	Approved by JM
66	Ministry of Interior HQ Buildings	Rydh. / Jedd.	Saudi Bin Laden Group (SBG)	Approved by SBG
67	Al Tahllia Mall	Jeddah	Abu Dawood Group	Completed
68	Burj Al Oula	Al Khobar	Al Oula Real Estate Dev. Co.	Approved by ERM
69	ADA General Auditing HQ Bldg.	Riyadh	Dar Al Riyadh	Approved by ADA

List of Completed Traffic Impact Studies				
S.No	**Traffic / TIS Projects**	**Project location**	**Client**	**Status**
70	Asas Hotel	Al Khobar	Asas Pan Gulf Real Estate	Completed
71	Hotel Building	Al Khobar	Safwa Real Estate System	Completed
72	Abu Dawood Warehouse	Jeddah	Abu Dawwod Group	Approved by JM
73	Olayan Mall	Dammam	Olayan Real Estate Co.	Completed
74	MITCO Head Office	Jeddah	Abu Dawwod Group	Approved by JM
75	Maarif International School	Riyadh	Maarif Education	Completed
76	Al Hugheit Diamond Tower	Al Khobar	Al Hugheit Contractors	Approved by ERM
77	Al Hermain High Speed Rail Stn.	Makkah	Saudi Diyar Consultant	Completed
78	Al Hokair Mall & Hotel	Dammam	Al Hokair Group	Approved by ERM
79	Al Remal Gated Community	Riyadh	Dar Al Riyadh	Completed
80	Al Bustan II	Riyadh	Al Bustan Company	Approved by RM
81	Ajdan Water Front Project	Al Khobar	Ajdan Real Estate Co.	Completed
82	Addiriyah Gate Project	Riyadh	Kayannat Real Estae	Approved by ADA
83	Al Salam Hospital	Al Khobar	Al Salam Medical Services Co	Approved by ERM
84	Tareq Al Jaffery Tower	Dhahran	Millet International Co.	Approved by ERM
85	Hotel Building, Pr. Sultan Road	Al Khobar	Tharaa Real Estate	Approved by ERM
86	Al Mowasah Hospital	Dammam	Al Rabiah Architecture Engg.	Approved by ERM
87	Al Mowasah Hospital	Al Khobar	Al Rabiah Architecture Engg.	Approved by ERM
88	West Avenue Mall	Dammam	Al Rabiah Architecture Engg.	Approved by ERM
89	Dallah Al Ared Hospital	Riyadh	Engineering Consultant Gr.	Approved by RM
90	Ibis & Adagio Hotel	Al Khobar	Alesayi Hosptality Company	Approved by ERM
91	Hasbah Bulk Plant	Ras Tanurah	Jacobs Zate / Saudi Aramco	Approved by Aramco
92	Clean Fuel & Aromatic Project	Ras Tanurah	Jacobs Zate / Saudi Aramco	Approved by Aramco
93	King Abdullah University (KAUST)	Thuwal	Saudi Aramco	Approved by Aramco
94	Hail Bulk Plant Traffic Study	Hail	Mustang HDP / Saudi Aramco	Approved by Aramco
95	King Fahad & King Saud Road Int.	Al Khobar	Saudi Aramco	Approved by Aramco
96	Abdullah Bin Abbas Road	Doha/Danah	Radicon Gulf Consult / S Aramco	Approved by Aramco
97	Road Safety Audit	Dhahran to Al Khobar Hway	Radicon Gulf Consult / S Aramco	Approved by Aramco
98	Road Safety Audit	Dhahran to Jubail Highway	Al Rabea & Partners / S Aramco	Approved by Aramco
99	Truck Loading Facility Traffic Study at Jazan	Jazan Refin.	Petrofac KSA / Saudi Aramco	Approved by Aramco
100	Wasea Bulk Plant Traffic Study	Wasea BP	SLFE / Saudi Aramco	Approved by Aramco
101	Wudayhi Residential Camp TIS	Haradh	Worley Parsons/Saudi Aramco	Approved by Aramco
102	Initial Home Ownership Lots TIS	Dammam	MHDP/Saudi Aramco	Approved by Aramco
103	Shaieldwadi Traffic Study	Riyadh	Riyadh Municipality	Approved by RM
104	Commercial Centre & Office Building TIS	Jeddah	AlKhatib Engineering Bureau/JM	Approved by JM

List of Completed Traffic Impact Studies				
S.No	**Traffic / TIS Projects**	**Project location**	**Client**	**Status**
105	TAKAMOL Traffic Study	Jubail	ABSG/Sabic	Approved by Sabic
106	Juffali Bolevard Traffic Impact Study	Al Khobar	Juffali & Sons/ERM	Approved by ERM
107	Al Shablan Traffic Impact Study	Al Khobar	ERM	Approved by ERM
108	Refad Business Park Traffic Impact Study	Al Khobar	Refad/ERM	Approved by ERM
109	Refad plaza Park Traffic Impact Study	Al Khobar	Refad/ERM	Approved by ERM
110	Lulu Hyper Market Traffic Impact Study	Dammam	ERM	Approved by ERM
111	Retail Development project in Jeddah TIS	Jeddah	EHAF/JM	Approved by JM
112	Al Nawras Traffic Impact Study	Jeddah	ECG/JM	Approved by JM
113	Final Home Ownership Lots TIS	Dammam	Jacobs Zate / Saudi Aramco	Approved by SA

List of Public Transport/Railway Projects		
S.NO	**DESCRIPTION OF PROJECTS**	**CLIENT**
1	Development of Public Transport for Jazan Territory	MOT
2	Development of Public Transport for Dammam Urban Area	MOT
3	Preliminary Design of Jazan BRT System	MOT
4	Feasibility Study and Preliminary Design of Jeddah LRT Project	MOT
5	Development of Public Transport for Hail City	MOT
6	Supervision of Duplication of Railway line between Riyadh and Dammam	SRO
7	Supervision for Construction of High Speed Railway Bridge at Km 426 Riyadh Dammam Rail Line	SRO
8	Design of 4 Railway Bridges for SAR	SAR

Note:

JM – Jeddah Municipality, ERM – Eastern Region Municipality, RM – Riyadh Municipality, ADA – Arriyadh Development Authority

Projects completed in recent years

S.NO	DESCRIPTION OF PROJECTS	CLIENT
1	Preparing of General Policy for Passenger Transport on the Roads in KSA	Transport General Authority
2	the development of safety performance assessment models to raise the level of road safety	Ministry of Transport and Logistics Services (National Road Safety Center)
3	Traffic Engineering Services Improvement Project for some Neighborhoods of Taif City	Taif Municipality

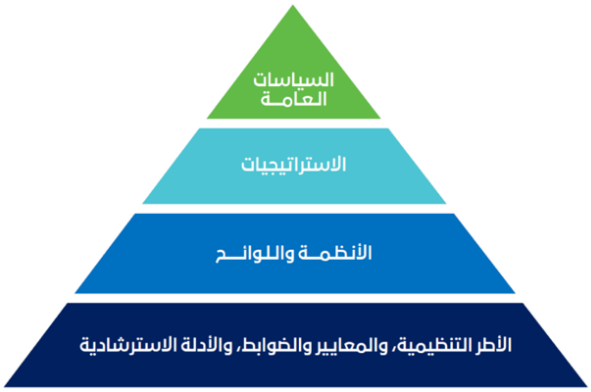
Project for Preparing a General Policy for Road Passenger Transport in the Kingdom of Saudi Arabia

Kingdom of Saudi Arabia

Date	Client
2024 AD	Transport General Authority (TGA)
Project value	**Services**
2,949,750	Preparing the General Policy for Passenger Transport on the Roads

The road transport is a major role in the economic development of any country, and with Saudi Arabia planning to receive many incoming travelers and tourists, the transport sector should pay great attention to and adapt to the requirements of passenger transport. The project aims to prepare a general policy for paid passenger transport on roads, including:

- Ensures the interests of both investors and beneficiaries,
- Complies with current regulations, legislation and strategic directions,
- Achieves economic, social and developmental goals,
- Keeps up with developments in the land passenger transport sector,
- Enhances competitiveness in the sector,
- Contributes to creating an integrated, sustainable, and efficient transportation system.



The Relationship between Public Policies, Strategies, Regulatory Frameworks, Standards and Controls

The Five Stages of Public Policy Development

Development of Safety Performance Prediction Models to Raise the Level of Road Safety in KSA

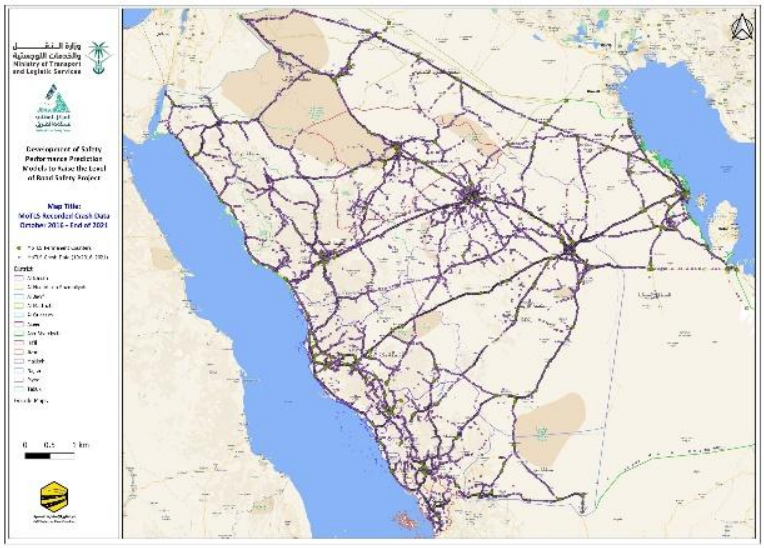
Kingdom of Saudi Arabia / Riyadh

the date	Owner
2021 AD	Ministry of Transport and Logistics
Project value	**Services**
10,100,002	Transfer of knowledge from the American guideHSM to the local environment of the Kingdom of Saudi Arabia and build national safety information and performance indicators

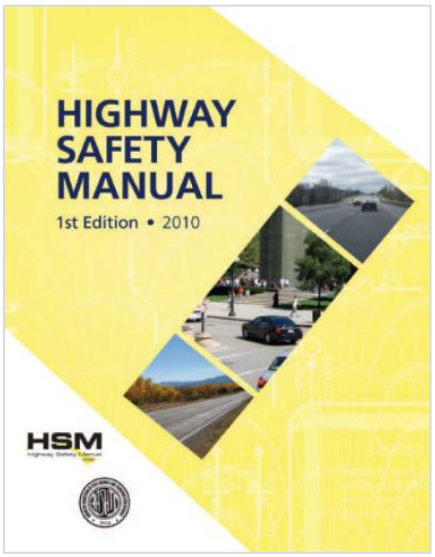
The project Related to working on preparing and developing highway safety prediction models for identifying high-risk sites and addressing them as a proactive measure to raise the level of Road safety. It concludes field inspection of sites.

The project including 4 phases:

- Phase 1: Introduction to the Highway Safety Manual And the importance of its application in the Kingdom of Saudi Arabia, and what are the models and methods of analysis that need to be developed before preparing a similar highway safety manual for the Kingdom.
- Phase 2: Required Data: Collection & Analysis
- Phase 3: Application and Use of Developed Models
- Phase 4: Preparing an Accident Analysis Manual



Road accidents chart in the Kingdom



HSM Road Safety Guide

Traffic Engineering Services Improvement Project for some Neighborhoods of Taif City

Kingdom of Saudi Arabia / Taif

the date	**Owner**
2020 AD	Taif Governorate Secretariat
Project value	**Services**
1,197,000	Traffic study and engineering design for the specified sites within the scope of work

The project aims to develop a comprehensive plan to improve engineering and traffic services for some sections of roads that cause traffic congestion to increase traffic efficiency in the specified locations.

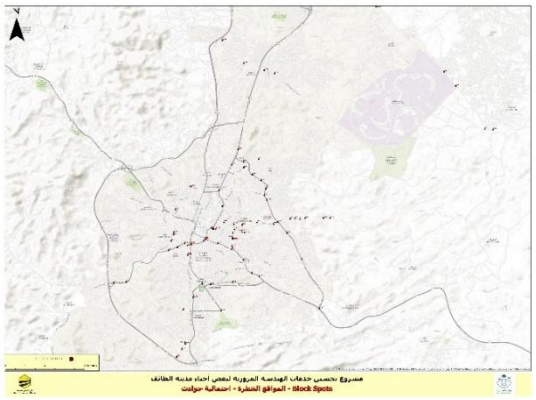
The study stages included:

Phase 1: Reviewing data, studies and all information,

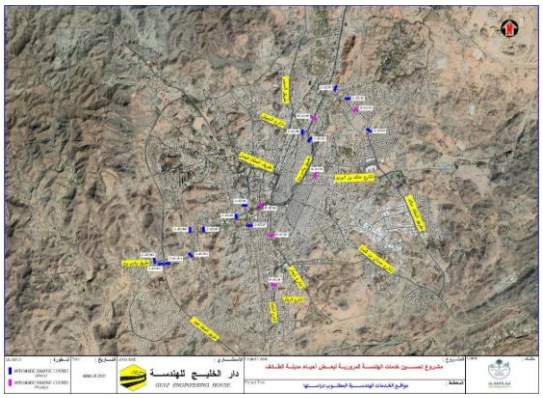
Phase 2: Field work,

Phase 3: Analysis of current situation data and identification of traffic problems,

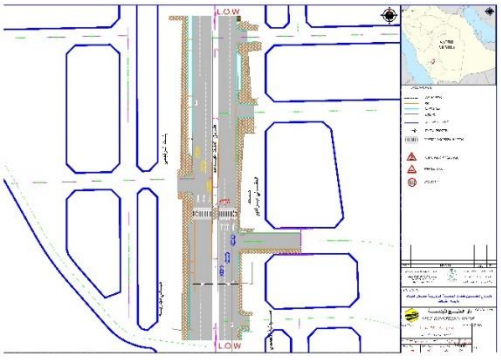
Phase d: Engineering design of specific sites, including surface intersections, entrances to and from the service road, and turning openings; Traffic calming sites on roads; Traffic impact studies of facilities; Ground pedestrian walkways. And improve existing parking lots.



Hazardous Sites Map –Block Spots



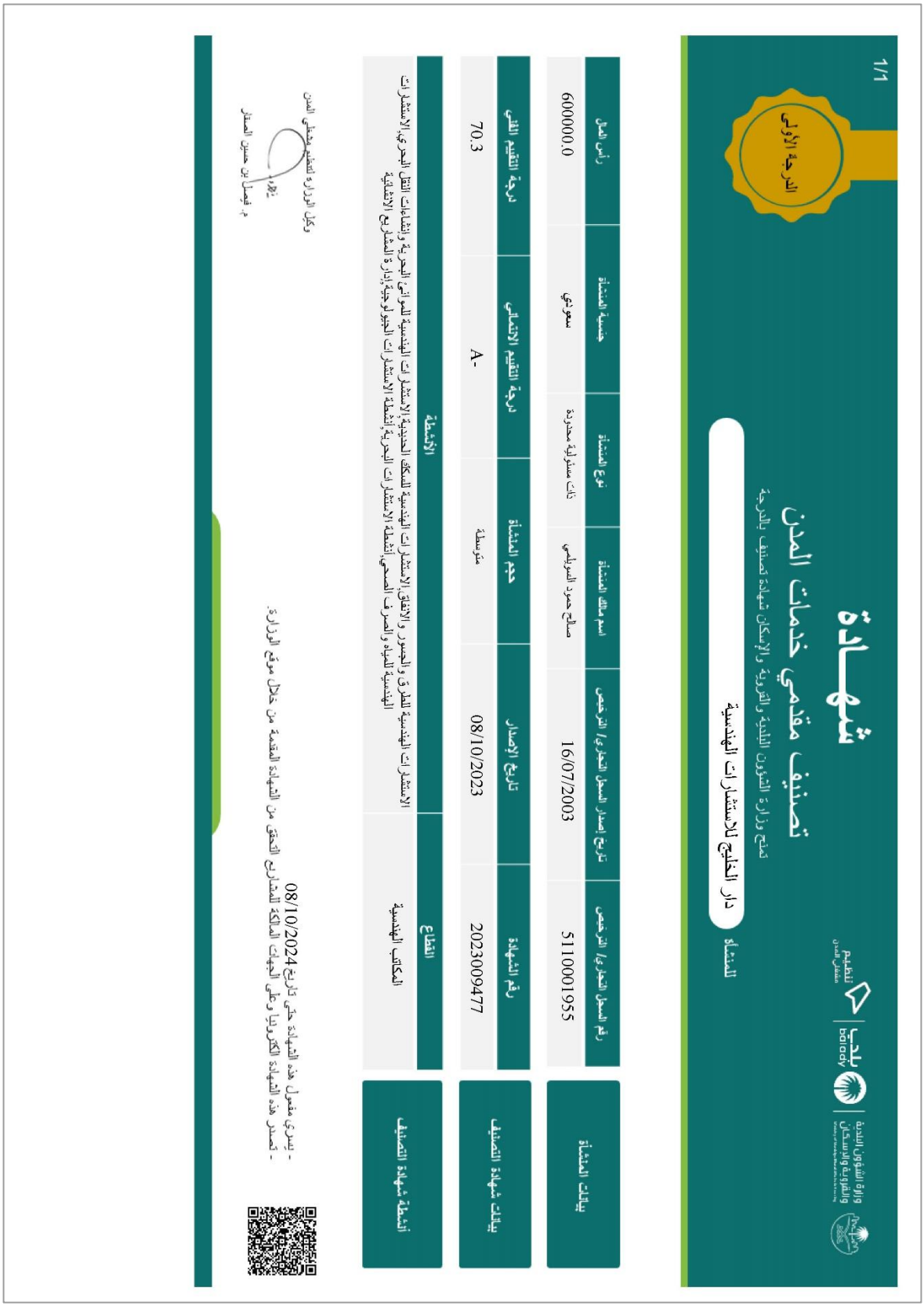
Traffic control sites



Traffic calming sites design

Traffic improvement at the intersection of Quraish Street with Hawazin Street

- **Accreditation Client Satisfaction Certificates**



شهادة

تصنيف مقدمي خدمات المدن

تمنح وزارة الشؤون البلدية والقروية والإسكان شهادة تصنيف بالدرجة

الدرجة الأولى

للمنشأة: دار الخليج للاستشارات الهندسية

رقم السجل التجاري/ الترخيص	تاريخ إصدار السجل التجاري/ الترخيص	اسم مالك المنشأة	حجم المنشأة	نوع المنشأة	جنسية المنشأة	رأس المال
5110001955	16/07/2003	مصلح حمد المريلمي	متوسطة	ذات مسئولية محدودة	سعودي	600000.0

يملك المنشأة	رقم الشهادة	تاريخ الإصدار	درجة التقييم الفني	درجة التقييم الائتماني
يملك شهادة التصنيف	2023009477	08/10/2023	70.3	A-

أنشطة شهادة التصنيف	القطاع	الأنشطة
	المكاتب الهندسية	الاستشارات الهندسية للطرق والجسور والانفاق,الاستشارات الهندسية للمكاتب الحديدية,الاستشارات الهندسية للموانئ البحرية وانشاءات النقل البحري,الاستشارات الهندسية للمياه والصرف الصحي,أنشطة الاستشارات البحرية,أنشطة الاستشارات الجيولوجية,إدارة المشاريع الانشائية

- يسري مفعول هذه الشهادة حتى تاريخ 08/10/2024 ما لم يتم سحبها قبل التحقق من الشهادة المقدمة من خلال موقع الوزارة.
- تصدر هذه الشهادة الكترونيا وعلى الجهات المالكة للمشاريع التحقق من الشهادة المقدمة من خلال موقع الوزارة.

وكيل الوزارة لتنظيم ومشغلي المدن

م. فيصل بن حسين الصقار

Classification certificate

Ministry of Municipal Rural and Affairs

هيئة المحتوى المحلي والمشتريات الحكومية
Local Content & Government Procurement Authority

التاريخ: 2023/12/12م
رقم الشهادة: M-0010036

شهادة المحتوى المحلي
Local content certification

تشهد هيئة المحتوى المحلي والمشتريات الحكومية أن نسبة المحتوى المحلي لـ شركة دار الخليج للاستشارات الهندسية سجل تجاري رقم (1010415504) ،لسنة المالية المنتهية بتاريخ 2022/12/31م، تبلغ 33.97% .

The Local Content & Government Procurement Authority certifies that the Local Content Score for Gulf Engineering House Consulting Commercial Register No. (1010415504) for the year ended 31/12/2022, is 33.97% .

صلاحية هذه الشهادة 19 شهراً من نهاية السنة المالية المذكورة أعلاه.

The validity of this certificate is 19 months from the above mentioned year ended.

تنويه:
تم إصدار هذه الشهادة بحسب الإجراءات المتبعة لدى الهيئة بناء على الإفصاح المقدم من المنشأة و التقرير الصادر من مكتب المراجعة المعتمد، دون أدنى مسؤولية على الهيئة.
هذه الوثيقة مرسلة عبر البريدالإلكتروني / النظام الآلي ولا تحتاج إلى توقيع.

Note:
This certificate was issued according to the procedures followed by the Authority and based on the disclosure submitted by the entity and the report issued by the approved audit firm, without holding LCGPA minimally responsible.
This certificate is sent via electronic mail/automated system and it does not require a signature.

يمكنك التحقق من صحة البيانات الواردة في الشهادة أعلاه من خلال الرابط التالي URL أو من خلال مسح الرمز الرقمي أعلاه

You can validate the information in this certificate via the following link URL or by scanning the above QR code

Local content certificate

صفحة ١ من ١

المملكة العربية السعودية
وزارة الشئون البلدية والقروية

أمانة العاصمة المقدسة
HOLY MAKKAH MUNICIPALITY

الموضوع: بشأن اعتماد مكتب دار الخليج للهندسة

سعادة مدير إدارة شؤون المباني والمكاتب الهندسية المؤقر

السلام عليكم ورحمة الله وبركاته،

المعاملة المتعلقة بشأن/ اعتماد مكتب دار الخليج للهندسة لعمل الدراسات المرورية .

نأمل الاطلاع واتخاذ اللازم نظاماً نحو :

- ☐ لإكمال اللازم من قبلكم حيث تم إرفاق المطلوب .
- ☐ لإكمال اللازم من قبلكم حيث تم تنظيم الموقع .
- ☐ التمشي بموجب التنظيم المرفق بالمعاملة لفة رقم ( ) .
- ☐ نفيدكم بأن التنظيم موجود على الشبكة .
- ☐ حفظ المعاملة لديكم حيث تم إجراء اللازم .
- ☐ إرفاق قرص ليزر (CD) للكروكي حتى يتسنى لنا إكمال مايلزم على ضوءه.
- ☑ نفيدكم بأنه تم اعتماد المكتب لعمل الدراسات المرورية بناءً على تحقيقه الاشتراطات وفق التعميم الوزاري رقم (٨٥٢ و ت) وتاريخ ١٤١٤/١/٢٤هـ .

والسلام عليكم ورحمة الله وبركاته !!!

مدير إدارة تخطيط النقل وهندسة المرور

مهندس/ علاء بن محمد علي وقاد

0125739555 0125734655 info@holymakkah.gov.sa www.holymakkah.gov.sa

http://tayseer.holymakkah.gov.sa/Lead/frmPrint.aspx?paperSize=A4 ٣٨/٠٣/٢٢

المملكة العربية السعودية
وزارة الشئون البلدية والقروية
إمانة العاصمة المقدسة
وكالة التعمير والمشاريع
الإدارة العامة للتخطيط العمراني
إدارة شئون المباني والمكاتب الهندسية

أمانة العاصمة المقدسة
HOLY MAKKAH MUNICIPALITY

الموضوع : بشأن شركة / دار الخليج للهندسة

السادة شركة / دار الخليج للهندسة المحترمين

السلام عليكم ورحمة الله وبركاته ،،،

إشارة إلى خطابكم المتضمن طلبكم باعتماد المكتب كاستشاري هندسة النقل والمرور في أمانة العاصمة المقدسة.

عليه نفيدكم بأنه تم اعتمادكم كاستشاري هندسة النقل والمرور لدى الأمانة بناء على الخطاب المرفق من قبل إدارة هندسة النقل والمرور.

وتقبلوا تحياتنا ،،،

مدير إدارة شئون المباني والمكاتب الهندسية

المهندس/ محمد بن عبدالله عبدالكريم

0125739555 0125734655 info@holymakkah.gov.sa www.holy-makkah.gov.sa

Qualification certificate

Makkah Municipality

أمانة المنطقة الشرقية
رقم المعاملة: ٣٩٠٠٠٢٢٩٠...
تاريخ المعاملة: ١٤٣٩/٠١/٢٩
المرفقات: بدون
WWW.EAMANA.GOV.SA

المملكة العربية السعودية
وزارة الشئون البلدية والقروية
أمانة المنطقة الشرقية
وكالة التعمير والمشاريع
إدارة مكتب إدارة المشاريع

الموضوع : تأهيل مكتب دار الخليج للاستشارات الهندسية.

السادة / مكتب دار الخليج للاستشارات الهندسية المحترمين

فاكس: (٠١٤٥٣٩٢٩٢) ص ب: ٢٧١٠٧ الرياض ١١٤١٧

السلام عليكم ورحمة الله وبركاته ، ، ،

بالإشارة إلى طلبكم تأهيل مكتبكم ضمن الشركات الهندسية المؤهله لدى وكالة التعمير والمشاريع – إدراة هندسة النقل والمرور.

نفيدكم أنه بدراسة طلبكم من قبل إستشارى إدارة المشاريع لدينا وبناءا على البيانات المقدمة منكم بنماذج التأهيل ونظرا لتحقيقكم المتطلبات الخاصه للتأهيل طبقا للمعايير الموضوعه فقد تم الإنتهاء من مرحلة التأهيل بإدارة هندسة النقل والمرور وتم تصنيف مكتبكم الموقر وفق التالى:-

التصنيف	الدراسات المرورية	الحالة
الأول	أقل من ٥٠٠ مركبه داخله وخارجه في ساعة الذروه	مصنف
الثاني	بين ٥٠٠ و١٥٠٠ مركبه داخله وخارجه في ساعة الذروه	مصنف
الثالث	أكثر من ١٥٠٠ مركبه داخله وخارجه في ساعة الذروه	مصنف

- الصلاحية سنة من تاريخ الخطاب

والسلام عليكم ورحمة الله وبركاته ، ، ،

وكيل الأمين للتعمير والمشاريع

المهندس/

عصام بن عبداللطيف الملا

ص.ب ٢٨٧٠ - الدمـام ٣١١٤٦ - تلفون : ٨٣٤١٠٠٠ - فاكس : ٨٣٣٩٩٧٧
P.O.Box 2870 - Dammam 31146 - Tel. : 8341000 - Fax : 8339977 - www.e-amana.gov.sa

أمانة جدة

شهادة تسجيل مكتب هندسي

رقم التسجيل	٣٧٠٠١٥٢٠١٩	تاريخ التسجيل	١٤٣٧/٠٧/٢٥
تاريخ الشهادة	١٤٣٧/٠٧/٢٥	صالحة الى	١٤٣٨/٠٧/٢٥
اسم صاحب المكتب	صالح حمود السويلمي		
المكتب الهندسي / الاستشاري	دار الخليج للهندسة ,مكتب استشاري		
رقم ترخيص مزاولة المهنة	٤٠٣٠٢٨٨٣٠٩	تاريخ الترخيص	١٤٣٧/٠٦/٠١ — صالحة الى ١٤٣٨/٠٦/٠٧
عنوان المكتب	شارع : امين سامي	الحي : العزيزية	
البريد الإلكتروني	monem@daralkhalij.com	هاتف	٠١٢٦١٩٨٣٧٥ — فاكس ٠١٢٦١٩٨٣٧٦
صندوق بريد	٢٠٨٤٢	الرمز البريدي	٢١٣٥١

تشهد أمانة محافظة جدة بأن المكتب : دار الخليج للهندسة

قد أتم متطلبات التسجيل لدى الأمانة ، في النشاطات التالية :

م	النشاط	فئة التصنيف	م	النشاط	فئة التصنيف
1	الهندسة المعمارية	-	7	//////////////////////	
2	الهندسة الإنشائية	-	8	//////////////////////	
3	هندسة النقل و المرور	-	9	//////////////////////	
4	هندسة إدارة المشاريع	-	10	//////////////////////	
5	هندسة التربة و المواد	-	11	//////////////////////	
6	//////////////////////		12	//////////////////////	

الاعتماد

الطباعة	فيصل محمد فلمبان	الاعتماد	مشعل عبدالله الجابري
مدير الإدارة	م/نزيه مصطفى المغربي		

تم طباعة شهادة التسجيل كاعتماد الكتروني وللتأكد من بيانات المكتب

يمكنكم الرجوع إلى موقع أمانة محافظة جدة على الرابط التالي :
https://www.jeddah.gov.sa/Business/EngOffices/offices1/index.php

www.jeddah.gov.sa | @JeddahAmanah 940 نعمل لغدٍ أجمل

Qualification certificate

Eastern Region Municipality

Qualification certificate

Jeddah Municipality

KINGDOM OF SAUDI ARABIA
Royal Commission for Jubail & Yanbu
Royal Commission in Jubail
(246 / 7)

المملكة العربية السعودية
الهيئة الملكية للجبيل وينبع
الهيئة الملكية بالجبيل
(٧ / ٢٤٦)

To: DR. SALEH AL-SWAILMI
Gulf Engineering House
P.O. Box 27108, Riyadh, 11417, K.S.A.
Tel No. : 011-4539282
Fax No. : 011-4539282
: 013-8210142
Mobile : 0505448718
E-mail: swailmi@daralkhalij.com

Subject: Request for Approval
Gulf Engineering House

Royal Commission in Jubail, Engineering Department has technically evaluated your Company (**Gulf Engineering House**) and are pleased to inform you that your company has demonstrated sufficient knowledge and expertise to the Royal Commission. Hence, you are approved as a contractor and will be invited to bid future Royal Commission project.

This approval, however, should not be construed as a commitment by Royal Commission, but your company will have the opportunity along with other approved sources to respond to RFP Packages in accordance with Royal Commission Standard.

Best Regards,

Ahmad M. Hassan
Director, Engineering Department

ST / ASG/ ARG/ ras

٤٠ عاماً
في صناعة الفرق

Jubail Industrial City 31961
P.O. Box : 10001
Tel.: (013) 341 3000
Fax: (013) 341 9891

RCJ – (GULF ENG) – 1671

www.rcjy.gov.sa
suggestion@RCjubail.gov.sa
Youtube.com/PRMediaCenter
@pr_rc_jubail

Approval Certificate
RCJY

المملكة العربية السعودية
وزارة الشؤون البلدية والقروية
أمانة المنطقة الشرقية
وكالة التعمير والمشاريع
إدارة الجودة

السادة / دار الخليج للهندسة
المحترمين

ص ب ٢٧١٠٨ الرياض ١١٤١٧ فاكس ٠١/٤٥٣٩٢٩٢

السلام عليكم ورحمة الله وبركاته

إشارة إلى حصول إدارة الجودة بأمانة المنطقة الشرقية على شهادة الأيزو (٩٠٠١:٢٠٠٨) في نطاق "تأهيل الجودة لمشاريع أمانة المنطقة الشرقية".

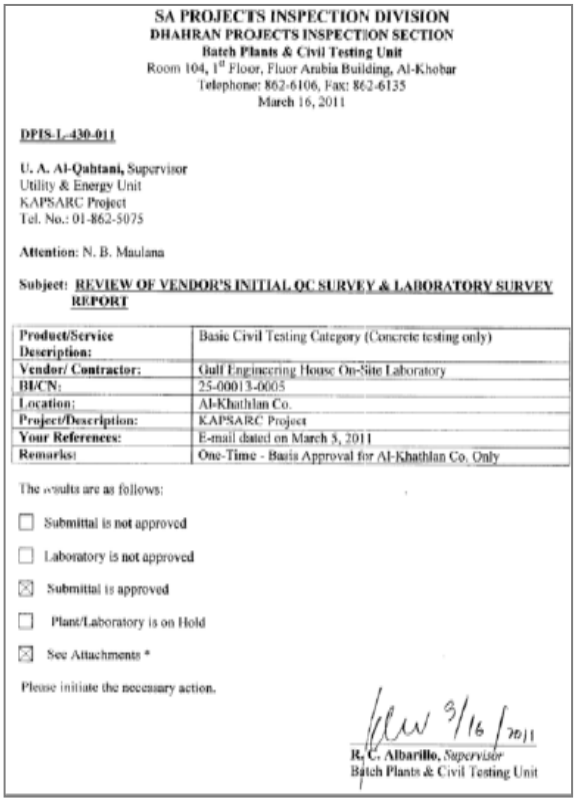
وحيث أن شركتكم هي إستشاري إدارة الجودة والذي شارك في تطبيق برنامج الجودة للمشاريع بالأمانة وتحسين نظام وإجراءات الجودة بفعالية وحماس مع المختصين بإدارة الجودة ، وأثمرت حصول إدارة الجودة على شهادة الأيزو (٩٠٠١:٢٠٠٨).

لذا، فإنني أشكركم على الجهود الطيبة التي بذلتموها في تطبيق وتحسين برنامج الجودة للمشاريع في أمانة المنطقة الشرقية.

وتقبلوا تحياتي ...

أمين المنطقة الشرقية
المهندس/
فهد بن محمد الجبير

Appreciation Certificate Eastern Region Municipality



SA PROJECTS INSPECTION DIVISION
DHAHRAN PROJECTS INSPECTION SECTION
Batch Plants & Civil Testing Unit
Room 104, 1st Floor, Fluor Arabia Building, Al-Khobar
Telephone: 862-6106, Fax: 862-6135
March 16, 2011

DPIS-L-430-011

U. A. Al-Qahtani, Supervisor
Utility & Energy Unit
KAPSARC Project
Tel. No.: 01-862-5075

Attention: N. B. Maulana

Subject: REVIEW OF VENDOR'S INITIAL QC SURVEY & LABORATORY SURVEY REPORT

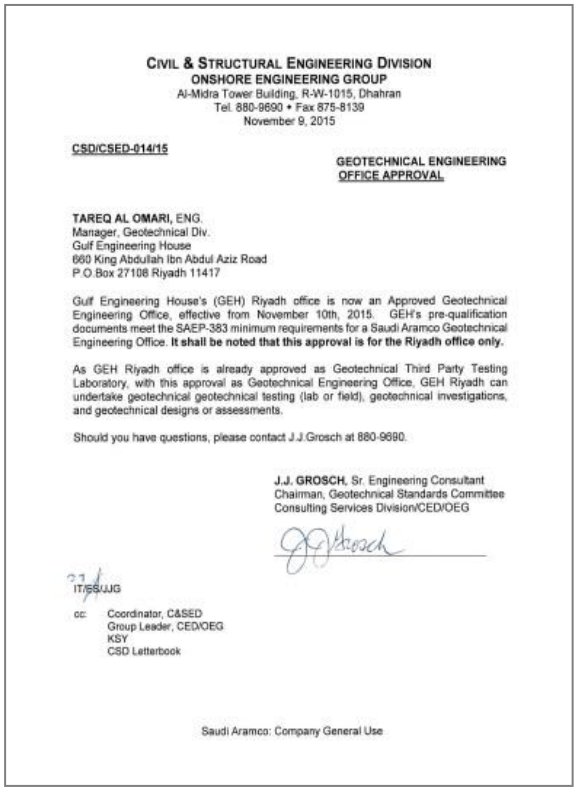
Product/Service Description:	Basic Civil Testing Category (Concrete testing only)
Vendor/ Contractor:	Gulf Engineering House On-Site Laboratory
BB/CN:	25-00013-0005
Location:	Al-Khathlan Co.
Project/Description:	KAPSARC Project
Your References:	E-mail dated on March 5, 2011
Remarks:	One-Time - Basis Approval for Al-Khathlan Co. Only

The results are as follows:

- ☐ Submittal is not approved
- ☐ Laboratory is not approved
- ☒ Submittal is approved
- ☐ Plant/Laboratory is on Hold
- ☒ See Attachments *

Please initiate the necessary action.

3/16/2011
R. C. Albarillo, Supervisor
Batch Plants & Civil Testing Unit



CIVIL & STRUCTURAL ENGINEERING DIVISION
ONSHORE ENGINEERING GROUP
Al-Midra Tower Building, R-W-1015, Dhahran
Tel. 880-9690 • Fax 875-8139
November 9, 2015

CSD/CSED-014/15

GEOTECHNICAL ENGINEERING OFFICE APPROVAL

TAREQ AL OMARI, ENG.
Manager, Geotechnical Div.
Gulf Engineering House
660 King Abdullah Ibn Abdul Aziz Road
P.O.Box 27108 Riyadh 11417

Gulf Engineering House's (GEH) Riyadh office is now an Approved Geotechnical Engineering Office, effective from November 10th, 2015. GEH's pre-qualification documents meet the SAEP-383 minimum requirements for a Saudi Aramco Geotechnical Engineering Office. **It shall be noted that this approval is for the Riyadh office only.**

As GEH Riyadh office is already approved as Geotechnical Third Party Testing Laboratory, with this approval as Geotechnical Engineering Office, GEH Riyadh can undertake geotechnical geotechnical testing (lab or field), geotechnical investigations, and geotechnical designs or assessments.

Should you have questions, please contact J.J.Grosch at 880-9690.

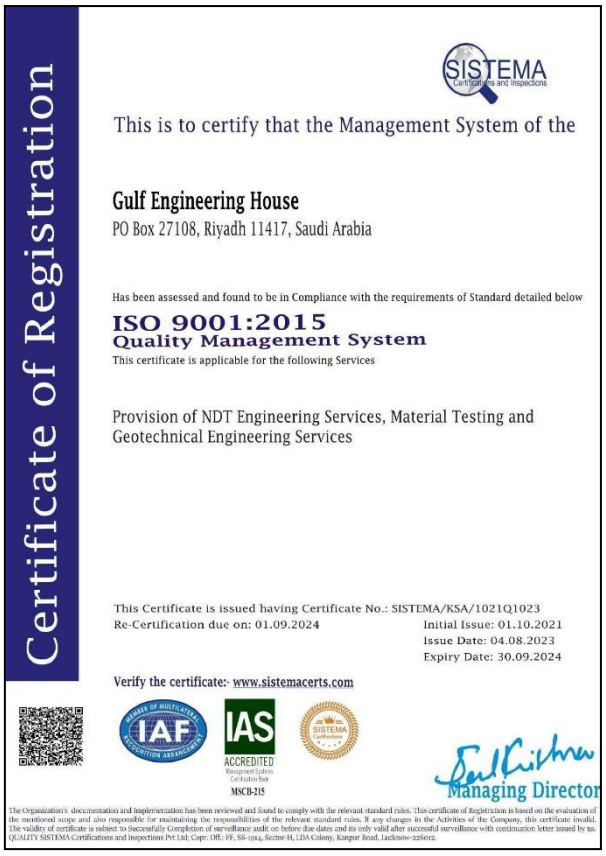
J.J. GROSCH, Sr. Engineering Consultant
Chairman, Geotechnical Standards Committee
Consulting Services Division/CED/OEG

IT/SS/JJG

cc: Coordinator, C&SED
Group Leader, CED/OEG
KSY
CSD Letterbook

Saudi Aramco: Company General Use

Aramco Vendor ID #10029181



Certificate of Registration

SISTEMA Certifications and Inspections

This is to certify that the Management System of the

Gulf Engineering House
PO Box 27108, Riyadh 11417, Saudi Arabia

Has been assessed and found to be in Compliance with the requirements of Standard detailed below

ISO 9001:2015
Quality Management System
This certificate is applicable for the following Services

Provision of NDT Engineering Services, Material Testing and Geotechnical Engineering Services

This Certificate is issued having Certificate No.: SISTEMA/KSA/1021Q1023
Re-Certification due on: 01.09.2024
Initial Issue: 01.10.2021
Issue Date: 04.08.2023
Expiry Date: 30.09.2024

Verify the certificate:- www.sistemacerts.com

IAF IAS ACCREDITED MSCB-215

Managing Director

The Organization's documentation and Implementation has been reviewed and found to comply with the relevant standard rules. This certificate of Registration is based on the evaluation of the mentioned scope and also responsible for maintaining the responsibilities of the relevant standard rules. If any changes in the Activities of the Company, this certificate invalid. The validity of certificate is subject to Successfully Completion of surveillance audit on before due dates and its only valid after successful surveillance with continuation letter issued by us. QUALITY SISTEMA Certifications and Inspections Pvt Ltd; Copr. Off.: FF, SS-1314, Sector-H, LDA Colony, Kanpur Road, Lucknow-226012.

ISO Certification 9001:2015

Certificate of Registration

SISTEMA Certifications and Inspections

This is to certify that the Management System of the

Gulf House Lab for Construction Materials
PO Box 27108, Riyadh 11417, Saudi Arabia

Has been assessed and found to be in Compliance with the requirements of Standard detailed below

ISO 14001:2015
Environment Management System
This certificate is applicable for the following Services

Civil Testing Laboratory

This Certificate is issued having Certificate No.: QSCIPL-KSA/GHL-2312-E685
First Surveillance Date: 20.11.2024
Issue Date: 20.12.2023
Second Surveillance Date: 20.11.2025
Expiry Date: 19.12.2026
Re-Certification due on: 20.11.2026

Verify the certificate:- www.sistemacerts.com

IAF IAS ACCREDITED MSCB-215

Managing Director

The Organization's documentation and Implementation has been reviewed and found to comply with the relevant standard rules. This certificate of Registration is based on the evaluation of the mentioned scope and also responsible for maintaining the responsibilities of the relevant standard rules. If any changes in the Activities of the Company, this certificate invalid. The validity of certificate is subject to Successfully Completion of surveillance audit on before due dates and its only valid after successful surveillance with continuation letter issued by us. QUALITY SISTEMA Certifications and Inspections Pvt Ltd; Copr. Off.: FF, SS-1314, Sector-H, LDA Colony, Kanpur Road, Lucknow-226012.

ISO Certification 14001-2015

Certificate of Compliance

SISTEMA Certifications and Inspections

This is to certify that the Management System of the

Gulf House Lab for Construction Materials
PO Box 27108, Riyadh 11417, Saudi Arabia

Has been assessed and found to be in Compliance with the requirements of Standard detailed below

ISO 22301:2019
Business Continuity Management System
This certificate is applicable for the following Services

Civil Testing Laboratory

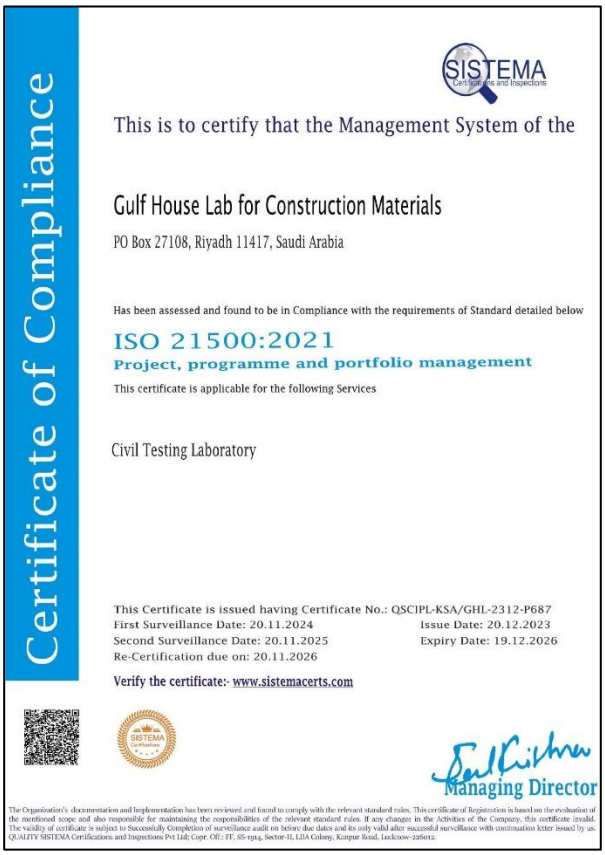
This Certificate is issued having Certificate No.: QSCIPL-KSA/GHL-2312-B688
First Surveillance Date: 20.11.2024
Issue Date: 20.12.2023
Second Surveillance Date: 20.11.2025
Expiry Date: 19.12.2026
Re-Certification due on: 20.11.2026

Verify the certificate:- www.sistemacerts.com

Managing Director

The Organization's documentation and Implementation has been reviewed and found to comply with the relevant standard rules. This certificate of Registration is based on the evaluation of the mentioned scope and also responsible for maintaining the responsibilities of the relevant standard rules. If any changes in the Activities of the Company, this certificate invalid. The validity of certificate is subject to Successfully Completion of surveillance audit on before due dates and its only valid after successful surveillance with continuation letter issued by us. QUALITY SISTEMA Certifications and Inspections Pvt Ltd; Copr. Off.: FF, SS-1314, Sector-H, LDA Colony, Kanpur Road, Lucknow-226012.

ISO Certification 22301:2019



Certificate of Compliance

SISTEMA Certifications and Inspections

This is to certify that the Management System of the

Gulf House Lab for Construction Materials
PO Box 27108, Riyadh 11417, Saudi Arabia

Has been assessed and found to be in Compliance with the requirements of Standard detailed below

ISO 21500:2021
Project, programme and portfolio management
This certificate is applicable for the following Services

Civil Testing Laboratory

This Certificate is issued having Certificate No.: QSCIPL-KSA/GHL-2312-P687
First Surveillance Date: 20.11.2024
Issue Date: 20.12.2023
Second Surveillance Date: 20.11.2025
Expiry Date: 19.12.2026
Re-Certification due on: 20.11.2026

Verify the certificate:- www.sistemacerts.com

Managing Director

The Organization's documentation and Implementation has been reviewed and found to comply with the relevant standard rules. This certificate of Registration is based on the evaluation of the mentioned scope and also responsible for maintaining the responsibilities of the relevant standard rules. If any changes in the Activities of the Company, this certificate invalid. The validity of certificate is subject to Successfully Completion of surveillance audit on before due dates and its only valid after successful surveillance with continuation letter issued by us. QUALITY SISTEMA Certifications and Inspections Pvt Ltd; Copr. Off.: FF, SS-1314, Sector-H, LDA Colony, Kanpur Road, Lucknow-226012.

ISO Certification 21500:2021

CERTIFICATE CERTIFICATO CERTIFICADO ZERTIFIKAT ΠΙΣΤΟΠΟΙΗΤΙΚΟ

DUV ISO CERTIFICATIONS & INSPECTIONS

CERTIFICATE OF REGISTRATION

It is confirmed that the Management System of

Gulf House Lab for Construction Materials

PO Box 27108, Riyadh 11417, Saudi Arabia

has been evaluated and complies with the requirements of relevant Standard

ISO/IEC 27001:2022

Information Security Management System

This certificate is valid for the following activities

Civil Testing Laboratory

SOA Detail: GHLCM/SOA/01 Rev.00 Dated: 22.08.2023

Certificate Number: GHL/DUV-KSA/1223-IS670
Issue Date: 22.12.2023
Expiry Date: 21.12.2024
Date of First Surveillance: 22.11.2024
Date of Second Surveillance: 22.11.2025
Recertification Date: 22.11.2026

Managing Director

CB-MS-6220

The Organization's Documentation and Implementation has been reviewed and found to comply with the relevant standard rules. This certificate of Registration is based on the evaluation of the mentioned scope and also responsible for maintaining the responsibilities of the relevant standard rules. If any changes in the Activities of the Company, this certificate will be invalid. The validity of certificate is subject to Successfully Completion of surveillance audit on or before due dates and its only valid after successful surveillance with continuation letter issued by us.

ISO 27001:2022

Certificate of Compliance

SISTEMA Certifications and Inspections

This is to certify that the Management System of the

Gulf House Lab for Construction Materials

PO Box 27108, Riyadh 11417, Saudi Arabia

Has been assessed and found to be in Compliance with the requirements of Standard detailed below

ISO 31000:2018

Risk Management

This certificate is applicable for the following Services

Civil Testing Laboratory

This Certificate is issued having Certificate No.: QSCIPL-KSA/GHL-2312-R688
First Surveillance Date: 20.11.2024 Issue Date: 20.12.2023
Second Surveillance Date: 20.11.2025 Expiry Date: 19.12.2026
Re-Certification due on: 20.11.2026

Verify the certificate:- www.sistemacerts.com

Managing Director

The Organization's documentation and Implementation has been reviewed and found to comply with the relevant standard rules. This certificate of Registration is based on the evaluation of the mentioned scope and also responsible for maintaining the responsibilities of the relevant standard rules. If any changes in the Activities of the Company, this certificate invalid. The validity of certificate is subject to Successfully Completion of surveillance audit on before due dates and its only valid after successful surveillance with continuation letter issued by us. QUALITY SISTEMA Certifications and Inspections Pvt Ltd; Copr. Off.: FF, SS-1314, Sector-H, LDA Colony, Kanpur Road, Lucknow-226012.

ISO 31000-2018

Certificate of Registration

SISTEMA Certifications and Inspections

This is to certify that the Management System of the

Gulf House Lab for Construction Materials

PO Box 27108, Riyadh 11417, Saudi Arabia

Has been assessed and found to be in Compliance with the requirements of Standard detailed below

ISO 45001:2018

Occupational Health & Safety Management System

This certificate is applicable for the following Services

Civil Testing Laboratory

This Certificate is issued having Certificate No.: QSCIPL-KSA/GHL-2312-O686
First Surveillance Date: 20.11.2024 Issue Date: 20.12.2023
Second Surveillance Date: 20.11.2025 Expiry Date: 19.12.2026
Re-Certification due on: 20.11.2026

Verify the certificate:- www.sistemacerts.com

IAS ACCREDITED MSCB-215

Managing Director

The Organization's documentation and Implementation has been reviewed and found to comply with the relevant standard rules. This certificate of Registration is based on the evaluation of the mentioned scope and also responsible for maintaining the responsibilities of the relevant standard rules. If any changes in the Activities of the Company, this certificate invalid. The validity of certificate is subject to Successfully Completion of surveillance audit on before due dates and its only valid after successful surveillance with continuation letter issued by us. QUALITY SISTEMA Certifications and Inspections Pvt Ltd; Copr. Off.: FF, SS-1314, Sector-H, LDA Colony, Kanpur Road, Lucknow-226012.

ISO Certification 45001:2018

التاريخ: ١٤٤٥/٠٤/٢٣هـ
الموافق: ٢٠٢٣/١١/٠٧م

المركز الوطني لسلامة الطرق
National Road Safety Center

شهادة شكر وإنجاز

يشهد المركز الوطني لسلامة الطرق أن الاستشاري دار الخليج للاستشارات الهندسية قد أنجز أعمال مشروع "تطوير نماذج تقدير أداء السلامة لرفع مستوى السلامة على الطرق" لمدة 18 شهراً خلال الفترة من 2021/12/23 وحتى 2023/06/15م، وقد شمل نطاق العمل في المشروع على تطوير ومعايرة نماذج دوال أداء سلامة الطرق (SPFs) وعوامل التعديل للحوادث (CMFs)، وإعداد كتيب أفضل وأحدث الممارسات لتحسين السلامة على الطرق و دليل التحليل الفني في حوادث الطرق، بالإضافة إلى القيام بدورات تدريبية للتعريف بدليل سلامة الطرق HSM وأهمية تطبيقه في المملكة العربية السعودية.

وقد أعطيت هذه الشهادة بناءً على طلب الاستشاري/ دار الخليج للاستشارات الهندسية لتقديمها إلى من يهمه الأمر دون أي مسئولية على المركز الوطني لسلامة الطرق.

ولكم أطيب التحايا،،

رئيس المركز الوطني لسلامة الطرق

أ.د. علي بن سعيد الغامدي

Safety First @SaudiNRSC

Certificate of completion project the development of safety performance assessment models to raise the level of road safety
National Road Safety Center

شهادة

تشهد المؤسسة العامة للخطوط الحديدية بالدمام بأن مكتب دار الخليج للهندسة هو من المكاتب الإستشارية المؤهلة لديها ويقوم حاليا بالإشراف على المشاريع التالية:

١- الإشراف على مشروع إستكمال إزدواج الخط المباشر رقم (١) بين الهفوف والرياض بطول ١٥٠ كلم بقيمة إجمالية ٢,٢٤٦,٠٠٠ ريال سعودي ويشمل ذلك مراجعة واعتماد التصاميم والإشراف على تنفيذ الأعمال المدنية وأعمال السكة.

٢- الإشراف على تنفيذ الجسر الحامل للخط الحديدي الكلم ٤٢٦ بقيمة إجمالية ٩٥٠,٠٠٠ ريال سعودي ويشمل ذلك مراجعة واعتماد التصميم.

وقد أعطيت هذه الشهادة بناءا على طلب الإستشاري / مكتب دار الخليج للهندسة لتقديمها إلى من يهمه الأمر دون أي مسئولية على المؤسسة العامة للخطوط الحديدية.

مدير عام الإدارة العامة للصيانة

م/ سعيد بن جبران الشهراني

Certificate of Completion

SRO

شهادة

تشهد وزارة النقل بالمملكة العربية السعودية بأن شركة دار الخليج للهندسة هو من المكاتب الإستشارية المؤهلة لديها وقد قامت خلال الخمس سنوات الأخيرة بإنجاز الخدمات الهندسية للمشاريع التالية :

١- دراسة خدمات نظم النقل العام داخل حاضرة جازان بمبلغ ٢،١٢٠،٠٠٠ ريال وقد قدمت الدراسة المخطط الهيكلي للنقل العام (Master Plan) الذي يتكون من خطوط النقل العام للقطارات الخفيفة (LRT) ، والحافلات السريعة (BRT) ، حافلات التغذية.

٢- دراسة تطوير النقل العام داخل مدينة بريدة بمبلغ ١،٥٩٣،٠١٧ وقد قدمت الدراسة المخطط الهيكلي للنقل العام (Master Plan) الذي يتكون من خطوط النقل العام للقطارات الخفيفة (LRT) ، والحافلات السريعة (BRT) ، حافلات التغذية.

٣- دراسة تطوير خدمات نظم النقل العام داخل حاضرة الدمام بمبلغ ٢،٦٩٢،٦٠٠ ريال وقد قدمت الدراسة المخطط الهيكلي للنقل العام (Master Plan) الذي يتكون من خطوط النقل العام للقطارات الخفيفة (LRT) ، والحافلات السريعة (BRT) ، حافلات التغذية.

٤- دراسة الجدوى والتصميم الهندسي المبدئي للمرحلة الأولى من نظام النقل العام بمدينة جدة وقد قدمت الدراسة التصميم الهندسي المبدئي للخطين الأزرق والبرتقالي للقطارات الخفيفة بطول ٦٦كم شاملا المحطات وورش الصيانة وتخزين القطارات ومواقع الوقوف والركوب.

وقد أعطيت هذه الشهادة بناءا على طلب الإستشاري لتقديمها إلى من يهمه الأمر دون أي مسئولية على الوزارة.

وكيل وزارة النقل لشئون النقل

د/ عبد العزيز بن عبد الرحمن العوهلي

Certificate of Completion

Ministry of Transport and Logistics Services

شهادة إنجاز

تشهد المؤسسة العامة للخطوط الحديدية أن مكتب / دار الخليج للهندسة استشاري مشروع تنفيذ الجسر الحامل لخط الإزدواج قام بمراجعة التصميم والاشراف على تنفيذ إزدواج الجسر الحامل للخط رقم (١) كلم ٦١٧ + ٤٢٦ حيث قام بالآتي :

- دراسة ومراجعة التصميم وتدقيق المخططات النهائية للتصميم
- الاشراف على اعمال الحفر الانشائي واعمال الخرسانة المسلحة
- الاشراف على اعمال المساند وفواصل التمدد والدرابزين والردم

(وقد اعطيت هذه الشهادة للاستشاري دار الخليج للهندسة بناء على طلبه ، ودون ادني مسئولية على المؤسسة العامة للخطوط الحديدية).

مدير إدارة صيانة الخطوط الحديدية

م/ نواف بن ناصر الهاجر

Certificate of Completion

SRO

شهادة شكر وإنجاز

تشهد المؤسسة العامة للخطوط الحديدية أن مكتب/ دار الخليج للهندسة هو من المكاتب الهندسة المؤهلة لديها، ويقوم حاليا بالعمل كاستشاري بمشروع "تقديم خدمات هندسية وفنية لإدارة المشاريع" التابع للإدارة العامة للمشاريع بالمؤسسة العامة للخطوط الحديدية" وأنه قد أتم خلال عامين في الفترة من ١٤٣٧/٠٢/٢٤هـ وحتى ١٤٣٩/٠٦/١٦هـ إنجاز جميع الخدمات الهندسية للمشروع.

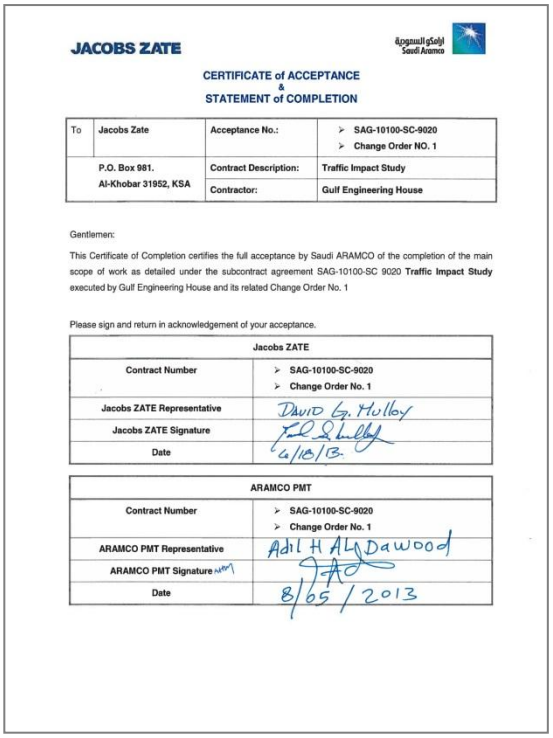
وقد أعطيت هذه الشهادة بناءاً على طلب الاستشاري مكتب/ دار الخليج للهندسة لتقديمها إلى من يهمه الأمر دون أي مسئولية على المؤسسة العامة للخطوط الحديدية.

مدير عام المشاريع

حسين بن ماتع الجفر

Certificate of Completion

SRO



JACOBS ZATE

ارامكو السعودية
Saudi Aramco

CERTIFICATE of ACCEPTANCE
&
STATEMENT of COMPLETION

To	Jacobs Zate	Acceptance No.:	➢ SAG-10100-SC-9020 ➢ Change Order NO. 1
	P.O. Box 981. Al-Khobar 31952, KSA	Contract Description:	Traffic Impact Study
		Contractor:	Gulf Engineering House

Gentlemen:

This Certificate of Completion certifies the full acceptance by Saudi ARAMCO of the completion of the main scope of work as detailed under the subcontract agreement SAG-10100-SC 9020 **Traffic Impact Study** executed by Gulf Engineering House and its related Change Order No. 1

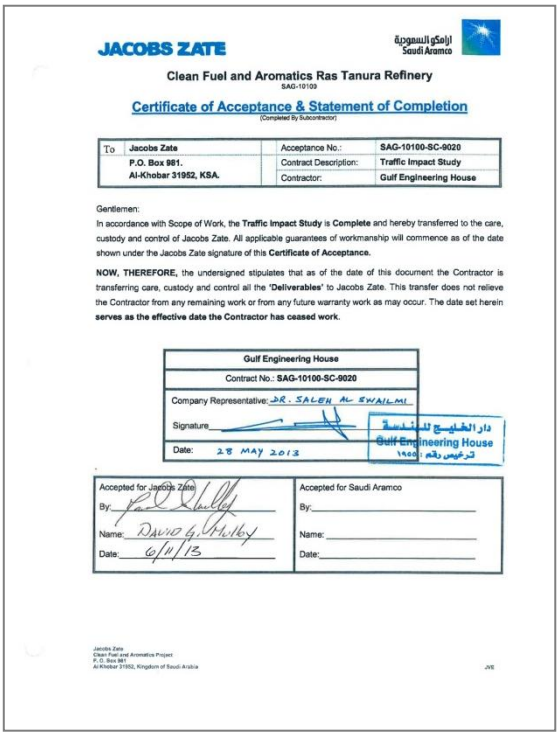
Please sign and return in acknowledgement of your acceptance.

Jacobs ZATE	
Contract Number	➢ SAG-10100-SC-9020 ➢ Change Order No. 1
Jacobs ZATE Representative	David G. Hulley
Jacobs ZATE Signature	
Date	6/11/13

ARAMCO PMT	
Contract Number	➢ SAG-10100-SC-9020 ➢ Change Order No. 1
ARAMCO PMT Representative	Adil H Al Dawood
ARAMCO PMT Signature	
Date	8/05/2013

Certificate of Completion

Aramco



JACOBS ZATE

ارامكو السعودية
Saudi Aramco

Clean Fuel and Aromatics Ras Tanura Refinery
SAG-10109

Certificate of Acceptance & Statement of Completion
(Completed By Subcontractor)

To	Jacobs Zate P.O. Box 981. Al-Khobar 31952, KSA.	Acceptance No.: Contract Description: Contractor:	SAG-10100-SC-9020 Traffic Impact Study Gulf Engineering House

Gentlemen:

In accordance with Scope of Work, the **Traffic Impact Study** is **Complete** and hereby transferred to the care, custody and control of Jacobs Zate. All applicable guarantees of workmanship will commence as of the date shown under the Jacobs Zate signature of this **Certificate of Acceptance.**

NOW, THEREFORE, the undersigned stipulates that as of the date of this document the Contractor is transferring care, custody and control all the **'Deliverables'** to Jacobs Zate. This transfer does not relieve the Contractor from any remaining work or from any future warranty work as may occur. The date set herein **serves as the effective date the Contractor has ceased work.**

Gulf Engineering House
Contract No.: SAG-10100-SC-9020
Company Representative: DR. SALEH AL SWAILMI
Signature
Date: 28 MAY 2013

دار الخليج للاستشارات الهندسية Gulf Engineering House ترخيص رقم ١٩٥٥

Accepted for Jacobs Zate	Accepted for Saudi Aramco
By:	By:
Name: David G. Hulley	Name:
Date: 6/11/13	Date:

Jacobs Zate
Clean Fuel and Aromatics Project
P. O. Box 981
Al Khobar 31952, Kingdom of Saudi Arabia

JVE

Certificate of Completion

Aramco

المملكة العربية السعودية
وزارة الشئون البلدية والقروية
أمانة منطقة الرياض
الإدارة العامة للدراسات والتصاميم
إدارة هندسة المرور

الموضوع : بخصوص طلب اعتماد التقرير النهائي دراسة التأثير المروري لمجمع البستان شمال مدينة الرياض

١٠٠ - ٢٦٦

المحترم
سعادة الوكيل المساعد للتعمير
مدير عام التخطيط العمراني

المحترمين
صورة للسادة شركة دار الخليج للهندسة
ص . ب ٤٨٥٧ الرياض ١١٤١٢

السلام عليكم ورحمة الله وبركاته ، ، ،

إشارة إلى خطاب الاستشاري (شركة دار الخليج للهندسة) الوارد للأمانة برقم ١٤٣٤/٢٥٢١٢٣ وتاريخ ١٤٣٤/١٠/١٤هـ ، والذي تم بموجبه تقديم طلب اعتماد دراسة التأثير المروري لمجمع البستان السكني شمال مدينة الرياض.

نفيد سعادتكم أنه قد تم مراجعة التقرير من قبل المختصين بالإدارة وتبين استيفاء التقرير للمتطلبات الفنية المتعلقة بالتصميم الهندسي للطرق وفقاً للمعايير المتبعة بأمانة منطقة الرياض.

وتقبلوا تحياتي وتقديري ، ، ،

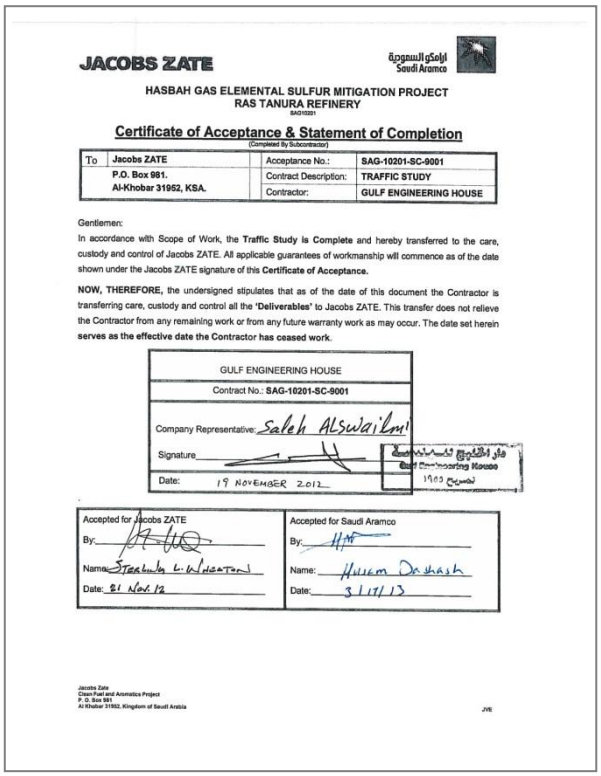
مدير عام الدراسات والتصاميم
م . سويلم بن صالح السويلم

Riyadh 11146 Tel.: 4111109 Fax : 2863731

الرياض ١١١٤٦ تليفون : ٤١١١١٠٩ فاكس : ٢٨٦٣٧٣١

Certificate of Completion

Riyadh Municipality



JACOBS ZATE

ارامكو السعودية
Saudi Aramco

HASBAH GAS ELEMENTAL SULFUR MITIGATION PROJECT
RAS TANURA REFINERY
SAG10201

Certificate of Acceptance & Statement of Completion
(Completed By Subcontractor)

To	Jacobs ZATE P.O. Box 981. Al-Khobar 31952, KSA.	Acceptance No.: Contract Description: Contractor:	SAG-10201-SC-9001 TRAFFIC STUDY GULF ENGINEERING HOUSE

Gentlemen:

In accordance with Scope of Work, the **Traffic Study** is **Complete** and hereby transferred to the care, custody and control of Jacobs ZATE. All applicable guarantees of workmanship will commence as of the date shown under the Jacobs ZATE signature of this **Certificate of Acceptance.**

NOW, THEREFORE, the undersigned stipulates that as of the date of this document the Contractor is transferring care, custody and control all the **'Deliverables'** to Jacobs ZATE. This transfer does not relieve the Contractor from any remaining work or from any future warranty work as may occur. The date set herein **serves as the effective date the Contractor has ceased work.**

GULF ENGINEERING HOUSE
Contract No.: SAG-10201-SC-9001
Company Representative: Saleh ALSwailmi
Signature
Date: 19 NOVEMBER 2012

دار الخليج للاستشارات الهندسية Gulf Engineering House ترخيص ١٩٥٥

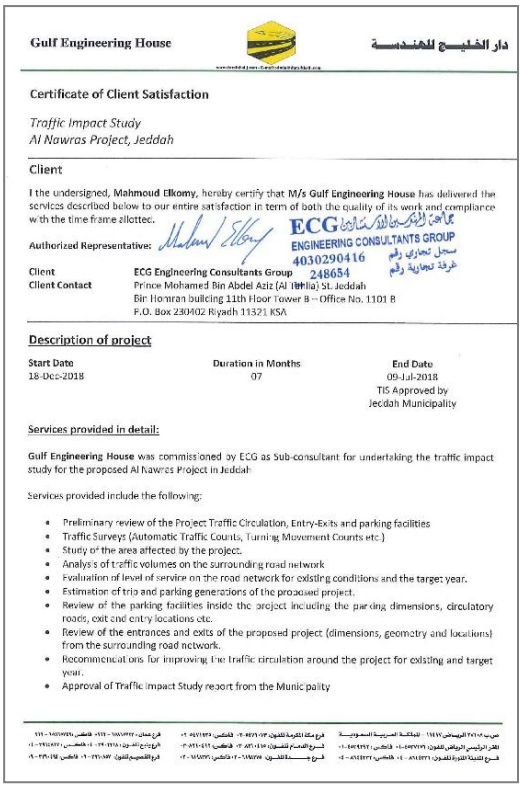
Accepted for Jacobs ZATE	Accepted for Saudi Aramco
By:	By:
Name: Stephen L. Wheaton	Name: Hulem Dahash
Date: 21 Nov. 12	Date: 3/17/13

Jacobs Zate
Clean Fuel and Aromatics Project
P. O. Box 981
Al Khobar 31952, Kingdom of Saudi Arabia

JVE

Certificate of Completion

Aramco



Gulf Engineering House — دار الخليج للهندسة

Certificate of Client Satisfaction

Traffic Impact Study
Al Nawras Project, Jeddah

Client

I the undersigned, **Mahmoud Elkomy**, hereby certify that **M/s Gulf Engineering House** has delivered the services described below to our entire satisfaction in term of both the quality of its work and compliance with the time frame allottec.

Authorized Representative:

ECG ENGINEERING CONSULTANTS GROUP 4030290416 248654

Client	ECG Engineering Consultants Group
Client Contact	Prince Mohamed Bin Abdel Aziz (Al Thalia) St. Jeddah Bin Homran building 11th Floor Tower B – Office No. 1101 B P.O. Box 230402 Riyadh 11321 KSA

Description of project

Start Date	Duration in Months	End Date
18-Dec-2018	07	09-Jul-2018 TIS Approved by Jeddah Municipality

Services provided in detail:

Gulf Engineering House was commissioned by ECG as Sub-consultant for undertaking the traffic impact study for the proposed Al Nawras Project in Jeddah

Services provided include the following:

- Preliminary review of the Project Traffic Circulation, Entry-Exits and parking facilities
- Traffic Surveys (Automatic Traffic Counts, Turning Movement Counts etc.)
- Study of the area affected by the project.
- Analysis of traffic volumes on the surrounding road network
- Evaluation of level of service on the road network for existing conditions and the target year.
- Estimation of trip and parking generations of the proposed project.
- Review of the parking facilities inside the project including the parking dimensions, circulatory roads, exit and entry locations etc.
- Review of the entrances and exits of the proposed project (dimensions, geometry and locations) from the surrounding road network.
- Recommendations for improving the traffic circulation around the project for existing and target year.
- Approval of Traffic Impact Study report from the Municipality

Certificate of Completion ECG

Gulf Engineering House — دار الخليج للهندسة

Certificate of Client Satisfaction

Traffic Impact Study
Dallah Al Ared Hospital, Riyadh

Client

I the undersigned, **Aly Mohamed Hany**, hereby certify that **M/s Gulf Engineering House** has delivered the services described below to our entire satisfaction in term of both the quality of its work and compliance with the time frame allotted.

Authorized Representative:

ECG ENGINEERING CONSULTANTS GROUP

Client	ECG Engineering Consultants Group
Client Contact	Al Jumaiah Building, Al Mohammadiah Riyadh 7th Floor (North Tower) P.O. Box 230402 Riyadh 11321 KSA

Description of project

Start Date	Duration in Months	End Date
12/12/2016	05	01/05/2017 TIS Approved by Municipality

Services provided in detail:

Gulf Engineering House was commissioned by ECG as Sub-consultant for undertaking the traffic impact study for the proposed Dallah Al Ared Hospital in Riyadh area

Services provided include the following:

- Traffic Surveys (Automatic Traffic Counts, Turning Movement Counts etc.)
- Study of the area affected by the project.
- Analysis of traffic volumes on the surrounding road network
- Evaluation of level of service on the road network for existing conditions and the target year.
- Estimation of trip and parking generations of the proposed project.
- Review of the parking facilities inside the project including the parking dimensions, circulatory roads, exit and entry locations etc.
- Review of the entrances and exits of the proposed project (dimensions, geometry and locations) from the surrounding road network.
- Recommendations for improving the traffic circulation around the project for existing and target year.
- Approval of traffic impact study report from the Municipality

Certificate of Completion ECG

SINOHYDRO *"Building Solutions for a Sustainable World"*

Date: December 06th 2019
SARU-L-SH-SC-010C. Signed dated 19/01/2019.

Certificate of Completion

This is to certify that **Gulf Engineering House (GEH)** have successfully completed their scope of work (Supervision of Rubblization & Structural Testing Work) as per Sub-Contract Agreement number mentioned above for Shaybah Airport Runway Upgrade Project in Shaybah Area.

This certificate is issued on the request of **Gulf Engineering House (GEH).**

Thanking you,

For Branch of Sinohydro Corporation Limited Company.

Mr. Li Shixiong
Contractor Representative

Place: Shaybah

Branch of Sinohydro Corporation Limited, Capital Paid-up : SAR500,000, C.R.1010305951
فرع شركة ساينو هايدرو كوربوريشن ليمتد (فرع شركة أجنبية)، رأس المال المدفوع 500 ألف ريال سعودي، س.ت 1010305951

Certificate of Completion Sinohydro

- **Our Clients**


جامعة الملك عبدالله للعلوم والتقنية
King Abdullah University of Science and Technology
أمانة الطائف
TAIF MUNICIPALITY
الهيئة الملكية للجبيل وينبع
Royal Commission for Jubail & Yanbu
GACA
الهيئة العامة للطيران المدني
General Authority of Civil Aviation
الهيئة الملكية لمدينة الرياض
ROYAL COMMISSION FOR RIYADH CITY
هيئة تطوير المدينة المنورة
AL-MADINAH AL-MUNAWARAH DEVELOPMENT AUTHORITY
الرياض
وزارة النقل
TRANSPORT MINISTRY
وزارة الشؤون البلدية والقروية
مشاريع الرؤية السعودية
روشن
مدن
MODON
أمانة الأحساء
ALAHSA MUNICIPALITY
أمانة القصيم
أمانة العاصمة المقدسة
HOLY MAKKAH MUNICIPALITY
أمانة جدة
أرامكو السعودية
saudi aramco
Aramco General Engineering Services Plus.
الخدمات الهندسية العاملة من خلال شركة أرامكو
wood.
JACOBS
Worley
energy | chemicals | resources
KBR
SNC·LAVALIN
شركاء دار الخليج العالميين ببعض المشاريع المنفذة
SENER
WSP
egis
Dornier Consulting
SYSTRA
KUIPER COMPAGNONS

- **GEH Traffic & Transportation Dept Capabilities**

Traffic & Transportation Department

دار الخليج للهندسة
GULF ENGINEERING HOUSE

Introduction

Gulf Engineering House (GEH) is a Multi-Disciplinary Saudi based Organization which provides Technical consulting services in the field of Infrastructures and Civil Engineering. Department of Traffic and Transportation Engineering is managed by distinguished team of highly qualified and experienced professionals to deliver high quality services as per Client requirements. Department provides consultation on all aspects of Traffic projects dealing with vehicle & pedestrian movements. We have state of art Equipment's and software's for Traffic Data Collection, Traffic Modelling and Transportation Planning. GEH Traffic department has a proven track record as a pioneer in Traffic and Transportation Engineering services in KSA.

Services

- Transportation and Traffic Engineering
- Transportation Planning
- Travel Demand Modeling & Simulation
- Public Transport Studies
- Intelligent Transportation System (ITS)
- Traffic Impact Studies (TIS)
- Traffic Management
- Traffic Signal, Signs and Pavement Markings
- Parking Studies
- Road Safety Audit (RSA)
- Accidents Studies
- Traffic Data Collection

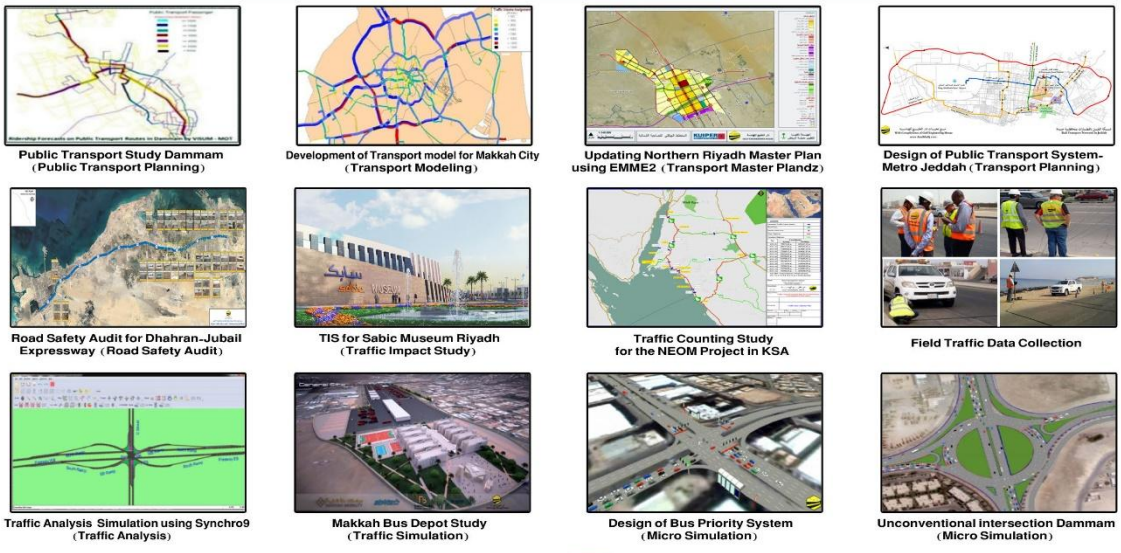
Traffic Softwares Used

TransCAD Transportation Planning Software | Caliper | Emme | PTV GROUP VISUM / VISSIM | Trafficware | HCS+ | SIDRA SOLUTIONS | AUTOTURN

Traffic Data Collection Equipments

Automatic Video Traffic Data Collection | Radar Traffic Counters | Weigh In Motion Stations | Permanent Traffic Counting Device | Portable Traffic Counting Device

Highlights of Previous Projects



Public Transport Study Dammam (Public Transport Planning)

Development of Transport model for Makkah City (Transport Modeling)

Updating Northern Riyadh Master Plan using EMME2 (Transport Master Plandz)

Design of Public Transport System-Metro Jeddah (Transport Planning)

Road Safety Audit for Dhahran-Jubail Expressway (Road Safety Audit)

TIS for Sabic Museum Riyadh (Traffic Impact Study)

Traffic Counting Study for the NEOM Project in KSA

Field Traffic Data Collection

Traffic Analysis Simulation using Synchro9 (Traffic Analysis)

Makkah Bus Depot Study (Traffic Simulation)

Design of Bus Priority System (Micro Simulation)

Unconventional intersection Dammam (Micro Simulation)

Major Clients

وزارة النقل TRANSPORT MINISTRY | SAPTCO | سابك sabic | GACA General Authority of Civil Aviation | الهيئة الملكية للجبيل وينبع Royal Commission for Jubail & Yanbu

GEH Vendor ID 10029181

ارامكو السعودية Saudi Aramco | JACOBS | Wood Group Mustang | SNC-LAVALIN | Worley Parsons | KBR

GEH partners

SENER | egis | WSP | KUIPER COMPAGNONS | SYSTRA | Dornier Consulting

Contact Us
Riyadh - Saudi Arabia
Gulf Engineering House - Traffic and Transport Department
Manager Director : Eng. Thamer Al-Swailmi
Mobile No. 0554414714 Phone No. 011-4537171 Ext. 329
E-Mail : admin@daralkhalij.com \ thamer@daralkhalij.com

5. GEOTECHNICAL ENGINEERING

The Geotechnical Engineering Unit is one of the basic departments in Dar Al Khaleej, as it provides engineering services in the field of Geotechnical Studies, and Dar Al Khaleej has expert technical teams and advanced laboratory in this field. The main objectives of the Geotechnical Department at Dar Al Khaleej office are to support the construction industry through geotechnical surveys, laboratory techniques, and provide technical support to its clients.

▪ Engineering Services

GEH performs geotechnical engineering analysis for a wide range of projects, which include highways, urban transit systems, bridges, buildings, dams, municipal and industrial facilities, residential and commercial developments, pipelines, cut-and-cover tunnels and landslides, among others. We provide geotechnical data reports, geotechnical engineering recommendations, and construction specifications. List of our engineering services are summarized below:

- **Foundation recommendations such for soil bearing capacity recommendations and soil stability analysis for different foundations:**
  - **Shallow foundations**
  - **Mat Foundations**
  - **Piles Foundations**
  - **Offshore Foundations**
- **Design of Earth Retaining Structures**
  - **Gravity, semi-gravity, cantilever, counter fort retaining walls**
  - **Cantilever and anchored sheet pile walls**
  - **Mechanically stabilized earth walls**
- **Ground Improvement**
  - **jet, compaction, permeation, and intrusion grouting**
  - **Dynamic compaction**
  - **Deep soil mixing**
  - **Blasting**
  - **Pre-compression**
  - **Stone columns**
  - **Prefabricated wick drains**

- **Other Designs**
  - **Natural and Man-Made Slopes**
  - **Tunnels**
  - **Design of Dams**

Reinforced Earth Wall

Installing rock slopes after installing a support grid

Sub Service Investigation Services

The site and geotechnical investigation department is equipped to carry out investigations of diverse projects and clients in the Middle East. Regardless of the size of the project, all GEH LABORATORY projects are approached with the expertise, technology and equipment required to meet the client needs to maximum satisfaction level.

GEH acquires geotechnical and other data to characterise the subsurface. Data is collected using a variety of in-house methods, tools and sensors ranging from cone penetration testing (CPT), geophysical methods to conventional drilling techniques and borehole tests. **GEH** owns and operates more than ten mobile drilling rigs which fully supplemented by trained and professional operators. GEH truck and trailer mounted drilling rigs can be mobilized, on a short notice, from our geographically wide spread regional offices and branches. GEH drilling personnel have combined extensive years of experience on a variety of projects. Soil samples, rock cores, and computer-generated test boring logs are reviewed by one of our engineers prior to transmittal to our clients. GEH maintains modern drilling and soil-rock sampling equipment designed for site investigation purposes according to the latest technologies.

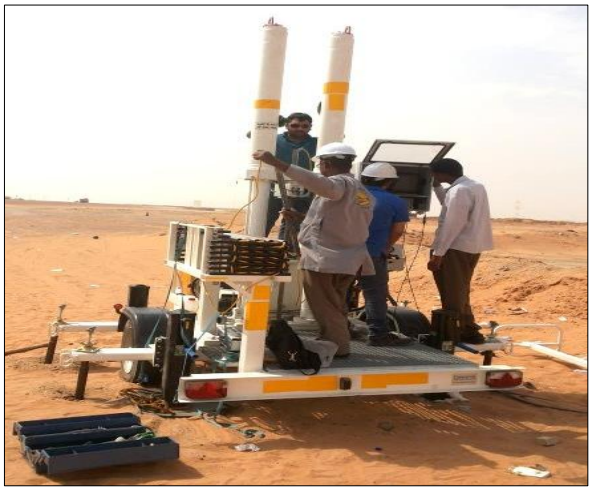
GEH has a strong commitment with gathering high quality field data, in order to enhance our geotechnical designs and engineering predictions. Furthermore, we try to keep up with the latest technologies available in the market. All of this is aimed to provide our clients with a wide menu of options for ground characterization based on site-specific needs.

GEH Drilling Rigs

Geotechnical Field Tests

Gulf Engineering House is committed to meticulous accuracy and quality in field data collection in order to provide geotechnical engineering designs. Moreover, we are trying to keep up with the latest technology available. **GEH** aims to provide our clients with engineering services for all sectors across the Kingdom of Saudi Arabia. Also **GEH** has a leading role in the field of scientific research and engineering studies to provide engineering solutions for all sectors of civil engineering, and **GEH** has a number of rigging technicians who hold certificates in this specialization, and it requires conducting ring tests on the soil at the site as needed, including:

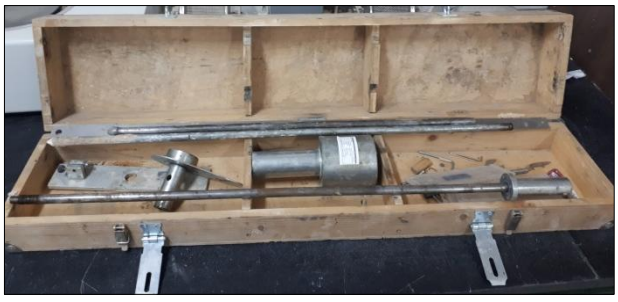
- **Penetration Tests:**
  - **Cone Penetration Test (CPT)**
  - **Vane Shear Test (VST)**
  - **Standard Penetration Test (SPT)**
  - **Dynamic Cone Penetration-Test (DCP)**



CPT Machine

SPT Equipment

Van Shear Equipment



Dynamic Cone Penetration- Equipment (DCP)

- **Geophysical Explorations & Utility Clearances**
  - Seismic Refraction Testing
  - Soil Electrical Resistivity
  - Soil Thermal Resistivity
  - Ground-penetrating Radar (GPR)

Soil Electrical Resistivity

Seismic Refraction Testing

GPR Software

Soil Thermal Resistivity

- **Pile Tests**
  - Pile load test. (axial & lateral)
  - Pile integrity
- **Permeability Tests** :

  A permeability test device for soil and concrete materials, which is computer-based (developed by GEH)
  - Pressure/Packer test.
  - Pumping test.
  - Percolation Test.

.(Percolation Test)

(Packer Test)

LABORATORY TESTING SERVICES

GEH has integrated laboratory equipment to carry out all the required tests and to conduct the laboratory tests used to determine the properties of soil and building materials. The experiments are conducted by highly qualified laboratory engineers, geologists and laboratory technicians. Laboratory experiments of soil samples and building materials are carried out in the laboratories of Gulf House for Engineering equipped with all the modern equipment and equipment necessary to carry out experiments and obtain results with high reliability.

- **Soil Tests:**

- **Sieve Analysis**
- **Hydrometer Analysis**
- **Atterberg limits.**
- **Specific Gravity**
- **Water Content**
- **Odometers Tests**
- **CBR Test**
- **Triaxial Test**
- **Direct Shear Test**

Hydrometer test

(**Set of Sieves**)

(**Spcific gravity**)

Atterberg Machine

CBR Machine

Odometer Machine

Direct Shear Test

Triaxial Test






Laboratories with the highest practical experience, and the highest readiness

- **Rock Tests:**
  - **Point Load Test.**
  - **Uniaxial Compressive Strength**

Uniaxial Compressive Strength

Point Load Test

- **Chemical Tests:**
  - **Soil acidity pH.**
  - **Water soluble sulfate ion content in soil.**
  - **Water soluble chloride ion content in soil.**
  - **Organic content.**

Geotechnical Field Tests

The field geotechnical tests carried out by the Gulf House office can be summarized as follows:

- **Penetration Tests:**
  - Standard Penetration Test (SPT)
  - Cone Penetration Test (CPT)
- **Van Shear Test**.
- **Plate Load Test**
- **Geophysical Explorations & Utility Clearances:**
  - Seismic Refraction Testing
  - Soil Electrical Resistivity
  - Soil Thermal Resistivity
  - Ground-penetrating Radar
- **Lugeon Test**

It is widely used to estimate the average hydraulic conductivity in rock masses, and the Logen value is defined as the amount of water loss in liters / minute per drill meter at a pressure of 10 bar.

Pile Load Test

GPR Used for Utility Clearance

Pile Integrity Tester

Cross hole Seismic Testing Equipment
Seismic

TRILPE X 200 Piston Pump

ذ

Vhp100 Hand Pump &
Data logger (Jet Dsp 10)

Single and Double Packers

Riyadh Metro

Softwares:

- gINT ADSCHECK
- Seismic Analysis
- Settlement
- Office, AutoCAD

References:

- Saudi Building Code (2007).
- ASTMs Standards
- AASHTO System
- ASCE - 7 – 2002
- SEAS – A – 113, 114, 112, Q – 001, 006
- BS System

Samples of the Implemented Projects:

SR. #	PROJECT TITLE	LOCATION	CLIENT	START DATE	COMPLETION DATE
1	Geotechnical Investigation Study for Replacement of Old Fire Fighting System at South Area- Al Khafji Joint Operation	Al Khafji	SNC Lavalinl Saudi Aramco	Oct 2013	Dec 2013
2	Geotechnical Investigations for Riyadh Metro Project Lines 1& 2	Riyadh	BACS Consortium	Jun,2013	Jun,2014
3	Madinah Haji City PKG 4A	Madinah	POSCO E&C	July 2016	September
4	Geotechnical Investigation Study for "Replace Jebel Dining and Recreational Complex,Ud haliyah	Udhaliyah	**Saudi Aramco**	Aug 2016	Oct 2016
5	Improvement and renovation Works for Runway of Certain Regional and Domestic Airports (7 Airports) (Phase 2)	Abha	Almabani General Contractors Co.	October 2016	October 2016
6	Concrete Pavement Testing and Geotechnical Investigations for Shaybah Airport Upgrade	Shaybah	Jacobs ZATE / Saudi Aramco	Jan 2017	March 2017
7	Geotechnical Investigation for Landfill Area in Abqaiq	Abqaiq	Alascon Co. Ltd. I Saudi Aramco	Jan 2017	Feb 2017
8	Geotechnical Investigation Services for Medium Industry Area Development (Package-9) at Jazan Economic City	Jazan	Ali Al-Ajmi Co. I Saudi Aramco	May 2017	August 2017
9	Geotechnical Investigation Services for Manifa SAOMPP Project	Manifa	Nasser Al Hajri Co. I Saudi Aramco	Jan 2017	Feb 2017
10	Geotechnical Investigation Services for Construction of SFNY 718 Water Disposal Well in Safaniyah	Safaniyah	Nasser Al Hajri Co. I Saudi Aramco	May 2017	July 2017
11	H DD Works at Khurasan iyah Gas Plant	Khurasaniyah	Nasser Al Hajri Co. I Saudi Aramco	May 2017	August 2017
12	GEOTECHNICAL INVESTIGATION REPORT For PROPOSED OFFICE BUILDING	Mubaraz	Saudi Aramco	August 2017	August 2017

SR. #	PROJECT TITLE	LOCATION	CLIENT	START DATE	COMPLETION DATE
13	H DD Works at Khurasan iyah Gas Plant	Khurasaniyah	Nasser Al Hajri Co. I Saudi Aramco	November 2017	November 2017
14	Geotechnical Investigations, Soil Testing, and Selection of Suitable Material for Design and Construction of New Runway at Prince Sultan Military Air Base Al-Kharj.	Al Kharj	Al Mabani		
15	Topographic Survey and Geotechnical Investigation for Solar Energy Project CPP- 3 Al Kharj	Al Kharj	Almarai Company	May 2017	August 2017
16	Improvement and renovation Abha Airport	Abha	Almabani General	January 2017	January 2017
17	AFL Buildings	Qaisoma Airport	Almabani General Contractors Co.	March 2017	March 2017
18	AFL Buildings	Turaif Airport	Almabani General Contractors Co.	August 2017	August 2017
19	West Runway Geotechnical Investigation and Structural Evaluation	KFIA	KFIA Managers	August 2017	August 2017
20	H DD Works at Khurasan iyah Gas Plant (Seismic)	Khurasaniyah	Nasser Al Hajri Co. I Saudi Aramco	Feb 2018	Feb 2018
21	H DD Works at Khurasan iyah Gas Plant	Qatif	Nasser Al Hajri Co. I Saudi Aramco	Feb 2018	March 2018
22	Well Core Facility	Duhran	AGC	Feb 2018	March 2018
23	Government School Project	Safwa,Saihat and Dammam	AGC	May 2019	June2019
24	Sewerage System in Qasim	Qasim	ASS	January 2019	March 2019
25	Central and North regions	Eastern Province	Jacob ZATE	January 2019	May 2019
26	Pipe Line Construction	Dammam	Arkad	January 2019	On-going
27	Telecommunication Tower constructions	Madina, WASIT and Jubail	Tamimi	July 2019	On-going

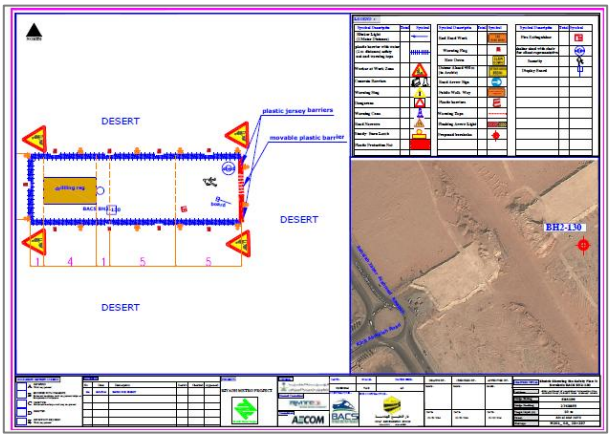
Riyadh Metro Project, High Authority for the Development of Riyadh
KSA /Riyadh

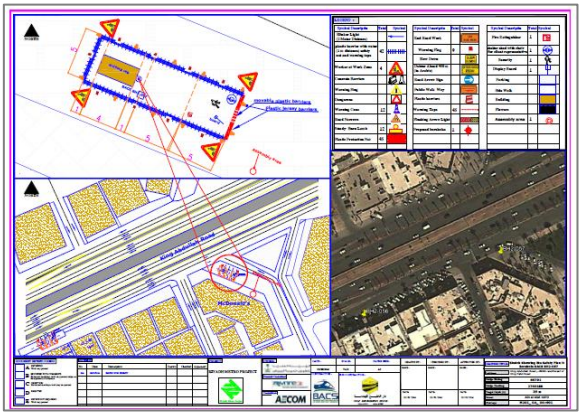
Client
High Authority for the Development of Riyadh

Date
2016

Services
Geotechnical Investigations

The Metro project (lines 1 + 2), many field and laboratory tests were carried out, the most important of which are (drill bits, seismic assessment tests, tests that assess groundwater levels, groundwater pressure tests, examination of the presence of ground services and surveying works for the area). Geotechnical reports are prepared at the highest technical levels.





Shybah Airport Upgrade
KSA /Shybah

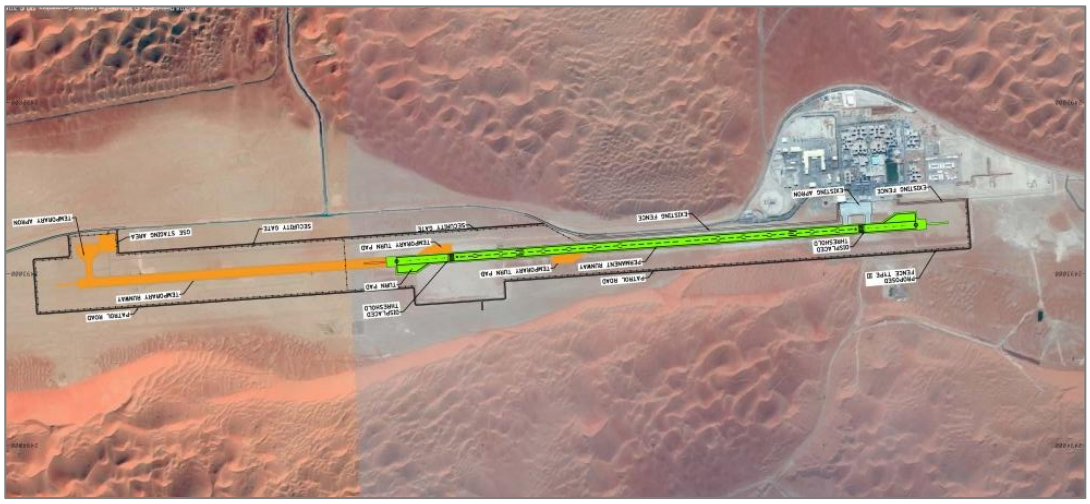
Client
Saudi Aramco

Date
2016

Services

Geotechnical Investigations

In this study, a geotechnical study of the existing Shaybah airport, which is to be expanded, was carried out. The work included soil investigations, static cone testing, and airport material tests in general, with the aim of assessing the current condition of the airport, studying the characteristics of soil in order to design the expansion and after determining the points of coordinates and locations of the required field tests and approving them from the client (Saudi Aramco), to confirm that there were no Utilities before starting work, the work was carried out, and the work included 31 Boreholes, 14 Static Penetration Tests and 31 Trail Pit tests, in addition to the DCP tests.



JAZAN economic City Upgrading/Jazan

KSA /Jazan

Client
Saudi Aramco

Date
2017

Services

Geotechnical Investigations

After located the locations of the required field tests, then they were approved by the client (Saudi Aramco) to confirm that there are no utilities lines before starting work. GEH carried out the study, which included 6 Boreholes, 10 Static Penetration Cone, 5 Electrical Resistivity tests, 5 thermal conductivity tests, in addition to 32 Trail Pits.

The western runway evaluation project for King Fahd Airport

KSA /Damam

Client

General Authority of Civil Aviation

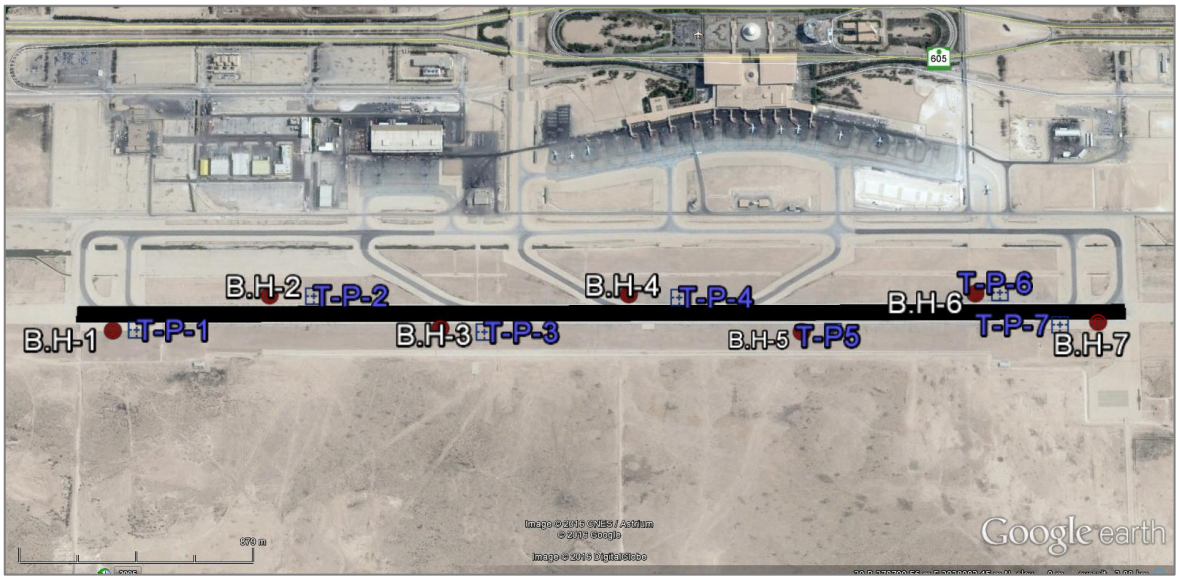
Date

2017

Services

Geotechnical Investigations

GEH has identified the required field test locations and has been approved by the client (King Fahd Airport) to ensure that the Utilities line are not available before starting work. The work consisted of 7 Boreholes, 7 Trial Pits, in addition to tests to evaluate the current runway by taking core samples from the runway layers, and testing them in the laboratory.



Solar farm project in Al-Kharj
KSA /Al Kharj

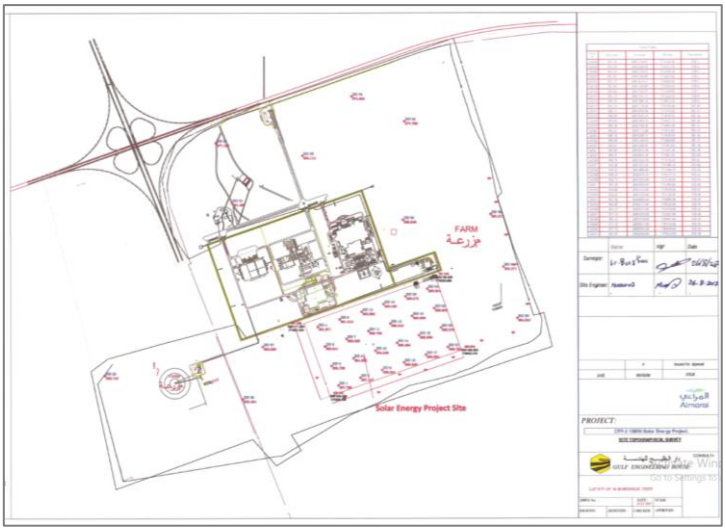
Client
Almarai Company

Date
2018

Services

Geotechnical Investigations

GEH has surveyed the project and identified the locations of the required field tests, which have been approved by the client (Almarai Company) to ensure that there are no utilities line before starting work. The work consisted of 36 Boreholes, 5 Trail Pits, 15 electrical conductivity tests, 15 thermal conductivity tests, 5 Plate Load tests, and 5 permeability tests.



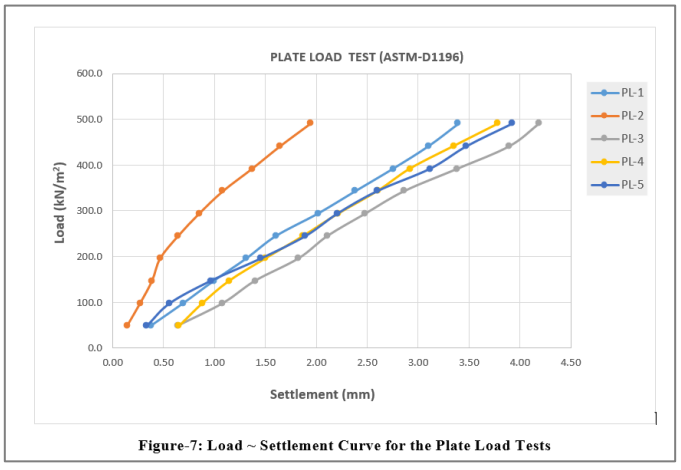


Figure-7: Load ~ Settlement Curve for the Plate Load Tests

Samples of Accreditations

المملكة العربية السعودية
وزارة الشئون البلدية والقروية
وكالة الوزارة للشئون الفنية
الإدارة العامة للشئون الهندسية

الموضوع : بخصوص تأهيل مكتب
دار الخليج للهندسة
بالرياض.

السادة مكتب دار الخليج للهندسة
ص.ب ٢٧١٠٨ الرياض ١١٤١٧

السلام عليكم ورحمة الله وبركاته :

إشارة لخطابكم رقم ١١/١ رب ٢٩/١ وتاريخ ١٤٢٩/٣/١١هـ المشار فيه إلى أنه سبق تأهيلكم في مجال هندسة الطرق وهندسة المرور والمعلومات الجغرافية وطلبكم التأهيل في مجال "هندسة التربة والمواد".

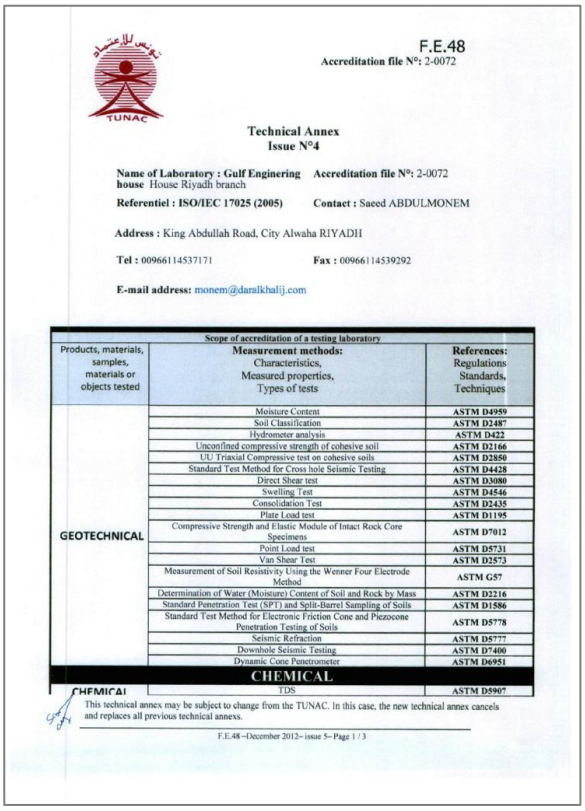
نفيدكم أنه بدراسة الأوراق والمستندات الخاصة بالمكتب والمشاريع التي أنجزها ، ونظراً لإنطباق شروط لتأهيل ، فقد تم تأهيل المكتب في مجال " هندسة التربة والمواد " إضافة إلى التخصصات السابقة الواردة بالتعميم رقم ٤/٥٧١٨٠/وف وتاريخ ١٤٢٣/١١/٩هـ .

آمل الإطلاع والإحاطة .

والسلام عليكم ورحمة الله وبركاته .

وكيل الوزارة للشئون الفنية

عبدالعزيز بن علي العبدالكريم



F.E.48
Accreditation file N°: 2-0072

TUNAC

Technical Annex
Issue N°4

Name of Laboratory : Gulf Engineering house House Riyadh branch — Accreditation file N°: 2-0072
Referentiel : ISO/IEC 17025 (2005) — Contact : Saeed ABDULMONEM
Address : King Abdullah Road, City Alwaha RIYADH
Tel : 00966114537171 — Fax : 00966114539292
E-mail address: monem@daralkhalij.com

Scope of accreditation of a testing laboratory

Products, materials, samples, materials or objects tested	Measurement methods: Characteristics, Measured properties, Types of tests	References: Regulations Standards, Techniques
GEOTECHNICAL	Moisture Content	ASTM D4959
	Soil Classification	ASTM D2487
	Hydrometer analysis	ASTM D422
	Unconfined compressive strength of cohesive soil	ASTM D2166
	UU Triaxial Compressive test on cohesive soils	ASTM D2850
	Standard Test Method for Cross hole Seismic Testing	ASTM D4428
	Direct Shear test	ASTM D3080
	Swelling Test	ASTM D4546
	Consolidation Test	ASTM D2435
	Plate Load test	ASTM D1195
	Compressive Strength and Elastic Module of Intact Rock Core Specimens	ASTM D7012
	Point Load test	ASTM D5731
	Van Shear Test	ASTM D2573
	Measurement of Soil Resistivity Using the Wenner Four Electrode Method	ASTM G57
	Determination of Water (Moisture) Content of Soil and Rock by Mass	ASTM D2216
	Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils	ASTM D1586
	Standard Test Method for Electronic Friction Cone and Piezocone Penetration Testing of Soils	ASTM D5778
	Seismic Refraction	ASTM D5777
	Downhole Seismic Testing	ASTM D7400
	Dynamic Cone Penetrometer	ASTM D6951
CHEMICAL		
CHEMICAL	TDS	ASTM D5907

This technical annex may be subject to change from the TUNAC. In this case, the new technical annex cancels and replaces all previous technical annexes.

F.E.48 –December 2012– issue 5– Page 1 / 3

OWNER	SAUDI ARABIAN OIL COMPANY
MAIN CONTRACTOR	SNC-LAVALIN ARABIA ENGINEERING CONSULTANCY AL KHOBAR – 31952, KSA
SUB-CONTRACTOR	GULF ENGINEERING HOUSE (GEH)
DATE	12 FEB 2014

WORK COMPLETION CERTIFICATE

1.	SERVICE AGREEMENT NO.	003-700002-Rev.0
2.	GEH REF NO.	GEH-SNC/01-2013
3.	Work Description	GEOTECHNICAL INVESTIGATION REPORT - REPLACEMENT OF OLD FIREFIGHTING SYSTEM
4.	Order Quantity	1
5.	Quantity Completed	100% DOCUMENTATION COMPLETED

PREPARED BY	CERTIFIED BY
12/02/2014	
Signature	Signature
Name: Eng. Mutaz Mustafa	Name: SABIHUL HASAN DIBAJI
Title: GEH Representative	Title: PROJECT HEAD
Company Name : GEH	Company Name : SNC-LAVALIN

دار الخليج للهندسة
Gulf Engineering House
ترخيص رقم ١٩٥٥

ADVANCED CERTIFICATION

CERTIFICATE OF REGISTRATION

THIS IS TO CERTIFY THAT THE MANAGEMENT SYSTEMS OF

Gulf Engineering House

PO Box 27108, Riyadh 11417, Saudi Arabia

HAVE BEEN ASSESSED AND REGISTERED BY
ADVANCED CERTIFICATION LIMITED AGAINST THE PROVISIONS OF

ISO 14001:2015

FOR THE SCOPE OF

Provision of NDT Engineering Services, Material Testing and Geotechnical Engineering Services

This registration is subject to the company continuing to maintain effective management systems to control the above that shall be monitored by Advanced Certification Limited

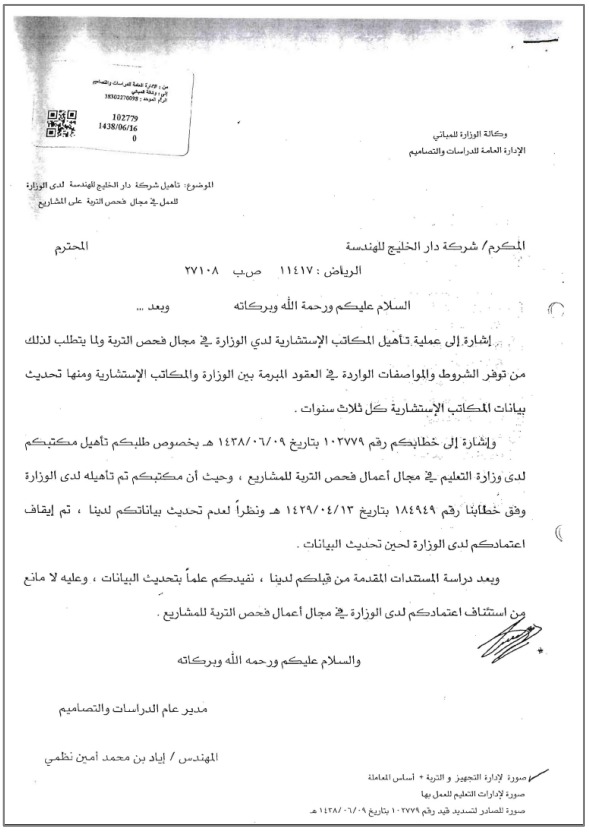
AUTHORISED BY

JOHN ELEN, MANAGING DIRECTOR

Advanced Certification Ltd
Suite S01a, Kestrel Court, Harbour Road,
Portishead, Bristol, BS20 7AN, UK
T: +44 (0)1275 390 568
www.advancedcertification.co.uk

CERTIFICATE NUMBER 00367
ORIGINAL REGISTRATION DATE 02/02/2017
RE-ISSUE DATE 07/07/2017
RE-AUDIT DUE DATE 29/12/2019
CERTIFICATE EXPIRY DATE 01/02/2020

IAF UKAS 8872



وكالة الوزارة للمياني
الإدارة العامة للدراسات والتصاميم

102779
1438/06/16

الموضوع: تأهيل شركة دار الخليج الهندسة لدى الوزارة للعمل في مجال فحص التربة على المشاريع

المحترم
المكرم/ شركة دار الخليج للهندسة
الرياض : ١١٤١٧ ص.ب ٢٧١٠٨

السلام عليكم ورحمة الله وبركاته وبعد ...

إشارة إلى عملية تأهيل المكاتب الإستشارية لدي الوزارة في مجال فحص التربة ولما يتطلب لذلك من توفر الشروط والمواصفات الواردة في العقود المبرمة بين الوزارة والمكاتب الإستشارية ومنها تحديث بيانات المكاتب الإستشارية كل ثلاث سنوات .

وإشارة إلى خطابكم رقم ١٠٢٧٧٩ بتاريخ ١٤٣٨/٠٦/٠٩ هـ بخصوص طلبكم تأهيل مكتبكم لدى وزارة التعليم في مجال أعمال فحص التربة للمشاريع ، وحيث أن مكتبكم تم تأهيله لدى الوزارة وفق خطابنا رقم ١٨٤٩٤٩ بتاريخ ١٤٢٩/٠٤/١٣ هـ ونظراً لعدم تحديث بياناتكم لدينا ، تم إيقاف اعتمادكم لدى الوزارة لحين تحديث البيانات .

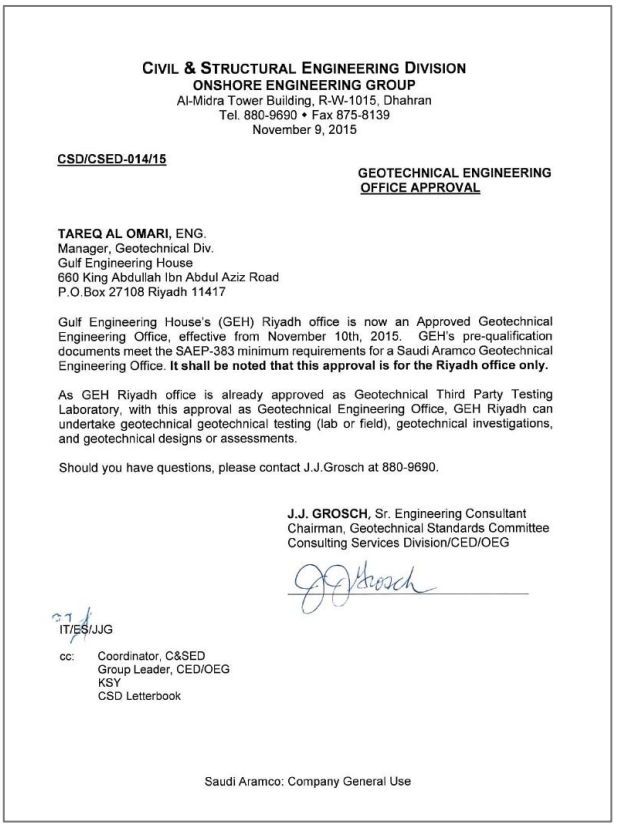
وبعد دراسة المستندات المقدمة من قبلكم لدينا ، نفيدكم علماً بتحديث البيانات ، وعليه لا مانع من استئناف اعتمادكم لدى الوزارة في مجال أعمال فحص التربة للمشاريع .

والسلام عليكم ورحمه الله وبركاته

مدير عام الدراسات والتصاميم

المهندس / إياد بن محمد أمين نظمي

صورة لإدارة التجهيز و التربة + أسس المعاملة
صورة لإدارات التعليم للعمل بها
صورة للصادر لتسديد قيد رقم ١٠٢٧٧٩ بتاريخ ١٤٣٨/٠٦/٠٩ هـ



CIVIL & STRUCTURAL ENGINEERING DIVISION
ONSHORE ENGINEERING GROUP
Al-Midra Tower Building, R-W-1015, Dhahran
Tel. 880-9690 • Fax 875-8139
November 9, 2015

CSD/CSED-014/15

GEOTECHNICAL ENGINEERING OFFICE APPROVAL

TAREQ AL OMARI, ENG.
Manager, Geotechnical Div.
Gulf Engineering House
660 King Abdullah Ibn Abdul Aziz Road
P.O.Box 27108 Riyadh 11417

Gulf Engineering House's (GEH) Riyadh office is now an Approved Geotechnical Engineering Office, effective from November 10th, 2015. GEH's pre-qualification documents meet the SAEP-383 minimum requirements for a Saudi Aramco Geotechnical Engineering Office. **It shall be noted that this approval is for the Riyadh office only.**

As GEH Riyadh office is already approved as Geotechnical Third Party Testing Laboratory, with this approval as Geotechnical Engineering Office, GEH Riyadh can undertake geotechnical geotechnical testing (lab or field), geotechnical investigations, and geotechnical designs or assessments.

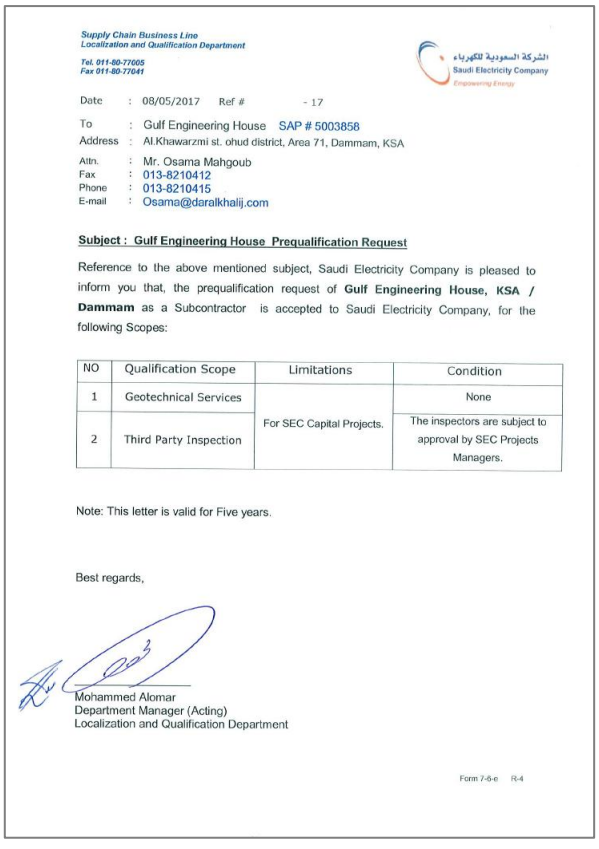
Should you have questions, please contact J.J.Grosch at 880-9690.

J.J. GROSCH, Sr. Engineering Consultant
Chairman, Geotechnical Standards Committee
Consulting Services Division/CED/OEG

IT/ES/JJG

cc: Coordinator, C&SED
Group Leader, CED/OEG
KSY
CSD Letterbook

Saudi Aramco: Company General Use



Supply Chain Business Line
Localization and Qualification Department
Tel. 011-80-77005
Fax 011-80-77041

الشركة السعودية للكهرباء
Saudi Electricity Company
Empowering Energy

Date : 08/05/2017 Ref # - 17
To : Gulf Engineering House SAP # 5003858
Address : Al.Khawarzmi st. ohud district, Area 71, Dammam, KSA
Attn. : Mr. Osama Mahgoub
Fax : 013-8210412
Phone : 013-8210415
E-mail : Osama@daralkhalij.com

Subject : Gulf Engineering House Prequalification Request

Reference to the above mentioned subject, Saudi Electricity Company is pleased to inform you that, the prequalification request of **Gulf Engineering House, KSA / Dammam** as a Subcontractor is accepted to Saudi Electricity Company, for the following Scopes:

NO	Qualification Scope	Limitations	Condition
1	Geotechnical Services	For SEC Capital Projects.	None
2	Third Party Inspection		The inspectors are subject to approval by SEC Projects Managers.

Note: This letter is valid for Five years.

Best regards,

Mohammed Alomar
Department Manager (Acting)
Localization and Qualification Department

Form 7-6-e R-4

Kingdom of Saudi Arabia
Ministry of National Guard
Health Affairs
King Abdulaziz Medical City
Project Management Office

المملكة العربية السعودية
وزارة الحرس الوطني
الشؤون الصحية
مدينة الملك عبد العزيز الطبية
إدارة المشاريع

التاريخ : ١٤٤٠/٠٢/٢٧ هـ
الموافق : ٢٠١٨/١١/٠٥ م

EXI-RYD-18-9681-20834

المحترمين
السادة / شركة بلدات للتجارة والمقاولات

الموضوع : عقد رقم PCR-T/0002/18
مشروع إنشاء مستودع طبي بعيادات اسكان مدينة الأمير بدر السكنية بالرياض التابعة للشؤون الصحية بوزارة الحرس الوطني
اعتماد شركة دار الخليج للهندسة كمختبر متكامل لإجراء اختبارات الحقلية والمخبرية للأعمال الإنشائية

السلام عليكم ورحمة الله وبركاته...

بالإشارة إلى الموضوع أعلاه وإلى خطابكم رقم ١٠٦٣/ش.م/خ وتاريخ ٢٠١٨/١٠/٢٩م (مرفق صورة)، نفيدكم بأنه تمت دراسة الشركة والبروفايل وهي مناسبة لنوع المشروع والعمل وعليه فإنه قد تم اعتمادها كمختبر رسمي للمشروع لعمل جميع أنواع الاختبارات الحقلية والمخبرية التي يحتاجها المشروع.

وتقبلوا تحياتي ...

مدير مشروع بإدارة المشاريع بالمنطقة الوسطى
المهندس / عاصم الريدي

صورة مع التحية للمهندس / عمر المقرن – مدير إدارة المشاريع بالمنطقة الوسطى
صورة للمهندس / محمد محسن – مهندس ميكانيكي بإدارة المشاريع بالمنطقة الوسطى
صورة للمهندس / محمد بن حنين - مهندس كهربائي بإدارة المشاريع بالمنطقة الوسطى
صورة للمهندس / احمد شحاتي – مهندس حساب الكميات- إدارة المشاريع بالمنطقة الوسطى

G2-401
/MA

3113
Proj_mngt-cr@ngha.med.sa
40995 / 40994
45497

- [GEH Geotechnical Capabilities]

6. NON DESTRUCTIVE TESTING (NDT) PRE-QUALIFICATIONS

6.1 Non-Destructive Testing Services

Non-Destructive Testing (NDT) is the branch of engineering concerned with all methods of detecting and evaluating flaws in materials. Flaws can affect the serviceability of the material or structure, so NDT is important in guaranteeing safe operation as well as in quality control and assessing plant life. The flaws may be cracks or inclusions in welds and castings, or variations in structural properties that can lead to loss of strength or failure in service. The essential feature of NDT is that the test process itself produces no deleterious effects on the material or structure under test.

6.2 GEH NDT Services

1. Advanced NDT Services

❖ TOFD	❖ Magnetic Flux Leakage-Floor Scanning
❖ Phased Array UT	❖ Magnetic Flux Leakage-Tubular Scanning
❖ Eddy Current Testing	❖ Internal Rotating Inspection System (IRIS)
❖ Near Field Testing (NFT)	❖ Remote Field Testing (RFT)

2. Conventional NDT Services

❖ Radiographic Testing	❖ Safe rad used by SCAR projector (QC-global)
❖ Ultrasonic Testing	❖ Positive material identification (PMI)
❖ Magnetic Particle Testing	❖ Dye penetrant testing
❖ Visual Inspection Testing	❖ Hardness Testing – telebrinnel & MIC 10

3. OTHER SERVICES

❖ Third Party Inspection Services	❖ Welder Qualification
❖ Post Weld Heat Treatment	❖ Pre-Heat

4. Training & Certification Program

❖ Radiographic Testing Level I & II	❖ Ultrasonic Testing Level I & II
❖ Penetrant Testing Level I & II	❖ Magnetic Particle Testing Level I & II
❖ Visual Inspection Testing Level- I & II	

6.3 GEH NDT Techniques

1. Radiographic Testing

A well-established NDT technique, radiography uses gamma-rays to produce the image of an object onto film. The source of radiation is a sealed source of radioactive material emitting gamma-rays: Iridium 192, Cobalt 60, Selenium 75. Applications include wall loss detection and sizing in pipes and plate through to manufacturing defects in welds, forgings castings etc.

2. Safe Rad used by SCAR Projector (QC-Global)

(Small Controlled Area Radiography)

Up to 15 curie Iridium 192, or 81 curie Selenium 75

Using SCAR radiography can be performed with:

- Minimal impact on other activities (6 foot radius controlled area)
- Enhanced radiation safety (isotope never leaves the exposure device)
- Innovative shielding materials and techniques.
- Lower activity isotopes.
- Allows for 24 Hour radiography.
- Reduces radiation dose.
- No flash dose during exposure or retraction of sealed source
- Sealed source does not leave the device during exposures.

Safety Advantages

- Reduces radiation dose
- No radiation incident emergencies
- No risk of source detachment
- No interference with emergency escape routes
- positive control over the controlled area

3. Ultrasonic Testing

Ultrasonic methods of NDT use beams of mechanical waves (vibrations) of short wavelength and high frequency, transmitted from a small probe in contact with the specimen surface and detected by the same or other probes. Such mechanical vibrations have different forms depending on the direction of particle movement in the wave motion, so there are several forms of ultrasonic waves. The most common and widely used in NDT are compressional and transverse (shear) waves. They can travel large distances in fine-grain metal and an oscilloscope display (A-scan) shows the time that it takes for an ultrasonic pulse to travel to a reflector (flaw or back surface). Applications include location of manufacturing defects in welds and castings through to Corrosion / Erosion monitoring and large-scale corrosion mapping.

4. AUT (Phased Array & ToFD)

Advanced UT Technologies provide an innovative solution to many unique and difficult geometries and applications. Services range from ASME code-compliant weld examinations to the detection of in-service defects in of Piping, Forgings, Tanks and Pressure Vessels. Phased Array, Time-of-Flight Diffraction and other Advanced UT Techniques are valuable tools that have great benefit. Our specialty is complex geometries, Advanced PA & ToFD techniques.

Our Equipment - OmniScan MX2

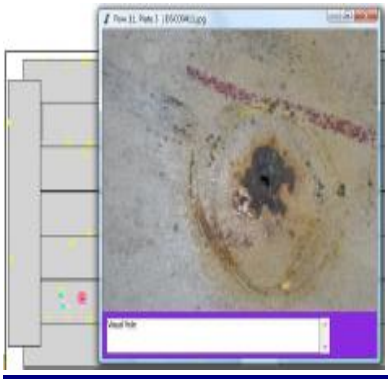
The OmniScan MX2 offers a high acquisition rate and new powerful software features for efficient manual and automated inspection performance—all in a portable, modular instrument.

5. Magnetic Flux Leakage Testing For Storage Tank Floors

MFL technology is similar to Magnetic Particle Inspection (MPI) - without the ink! In both cases the component is magnetized to a level at which the presence of a significant local reduction in material thickness causes sufficient distortion of the internal magnetic field to allow flux lines to break the test surface at the site of the discontinuity. In the case of traditional MPI, a ferromagnetic powder, in wet or dry form, is used to mark the spot so that it is readily visible by the inspector. With MFL, suitable sensors are used to give an electrical signal at the leakage site. This signal may operate an audible or visual alarm to alert the inspector, or may store the event for computer mapping of the area. Thus both techniques require two basic things, a method of magnetization, and a method of detecting the leakage field.

Magnetic Flux Leakage (MFL) systems are heavily reliant on the inspection surface, on which they operate. It is important to understand that as the conditions of the inspection surface deteriorates, so can the effectiveness of any MFL system.

MFL systems interpret a leaking field and any influencing factors that affect this leaking field must be understood and factored into the inspection process. In order to maintain detection capabilities, it must be understood that as plate thickness increases, the detection sensitivity must increase. As the detection sensitivity increases, the likelihood of spurious defects increases accordingly.



Our Equipment - Floormap3Di

This Equipment is inspection of bulk liquid above ground storage tank floors using Silverwing Floormap3Di to determine the top and bottom surface corrosion levels in combination with Manual Ultrasonic thickness for in accessible areas.

It is suitable for the inspection of floors made of mild steel up to 12.5 mm thick including floors with non-magnetic coatings up to 6 mm thick

6. Positive Material Identification

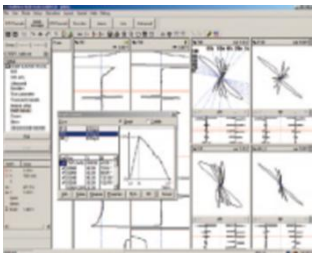
The requirement for positive material identification (PMI) in alloys used throughout the physical plant is more critical than ever. Simply relying on spot testing of parts and subassemblies is too risky and unacceptable; in fact, best practices today include 100% PMI testing of all critical materials

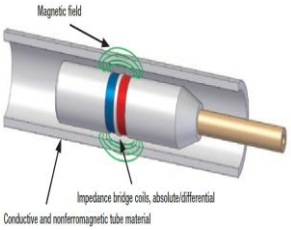
Our Equipment - Thermo Scientific Niton XRF Analyzers

Thermo Scientific Niton handheld x-ray fluorescence (XRF) analyzers are revolutionizing elemental analysis with the simple pull of the trigger.

7. Tube Inspection with Eddy Current Testing (ECT)

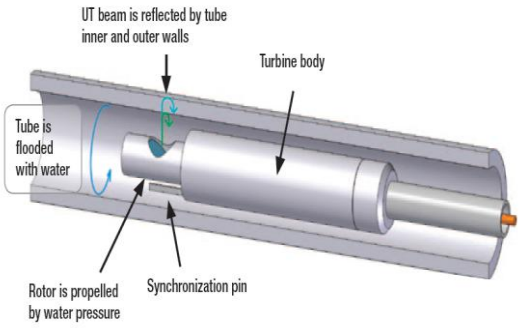
Eddy current testing is a noncontact method used to inspect non ferromagnetic tubing. Thi technique is suitable for detecting and sizing metal discontinuities such as corrosior erosion, wear, pitting, baffle cuts, wall loss, and cracks in nonferrous materials.

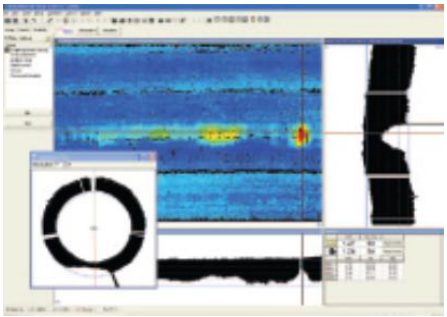




8. Tube Inspection with Internal Rotating Inspection System (IRIS)

The ultrasonic IRIS option is used to inspect a wide range of materials including ferrous, nonferrous, and nonmetallic tubing. This technique detects and sizes wall loss resulting from corrosion, erosion, wear, pitting, cracking, and baffle cuts. Olympus digital IRIS inspection technology is used extensively as a prove-up technique for remote field testing, magnetic flux leakage, and eddy current inspections.

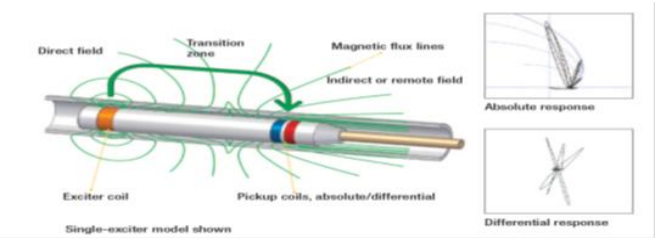




9. Tube Inspection with Remote Field Testing (RFT)

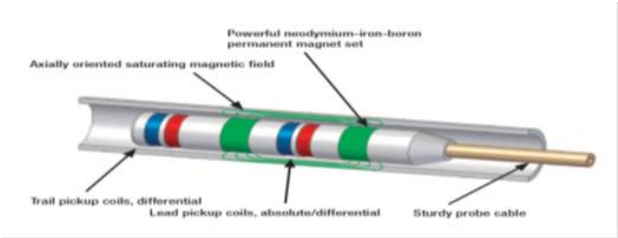
Remote field testing (RFT) is being used to successfully inspect ferromagnetic tubing such as carbon steel or ferritic stainless steel. This technology offers good sensitivity when detecting and measuring volumetric defects resulting from erosion, corrosion, wear, and baffle cuts.

Olympus remote field probes and the MultiScan™ MS 5800 are used to successfully inspect heat exchangers, feed water heaters, and boiler tubes, around the world.



10. Tube Inspection with Magnetic Flux Leakage (MFL)

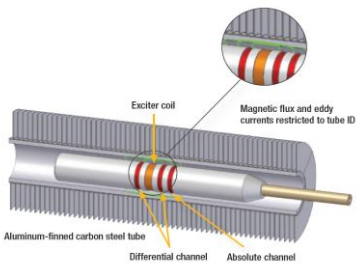
Magnetic flux leakage (MFL) is a fast inspection technique, suit-able for measuring wall loss and detecting sharp defects such as pitting, grooving, and circumferential cracks. MFL is effective for aluminum-finned carbon steel tubes because the magnetic field is almost completely unaffected by the presence of such fins.

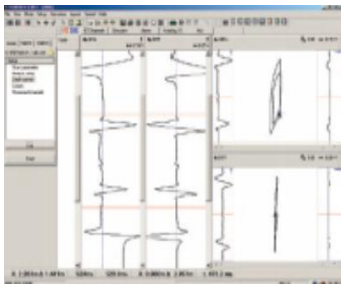


11. Tube Inspection with Near Field Testing (NFT)

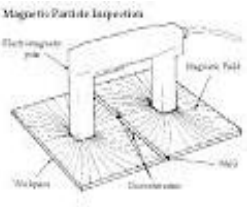
The near field testing (NFT) technology is a rapid and inexpensive solution intended specifically for fin-fan carbon-steel tubing inspection. This new technology relies on a simple driver-pickup eddy current probe design providing very simple signal analysis.

NFT is specifically suited for the detection of internal corrosion, erosion, or pitting on the inside of carbon steel tubing. The NFT probes measure lift-off or “fill factor” and convert it to amplitude-based signals (no phase analysis). Because the eddy current penetration is limited to the inner surface of the tube, NFT probes are not affected by the fin geometry on the outside of the tubes.

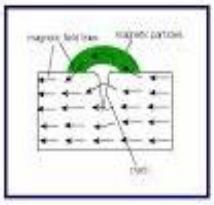


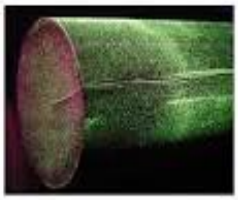


12. Magnetic Particle Testing



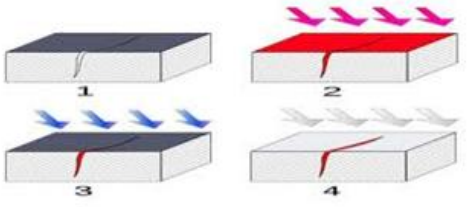
An extremely cost effective method for the detection of surface and near surface flaws in ferromagnetic materials, MPI is primarily used for crack detection. Following magnetization the specimen is covered with a detection medium (Ferrous oxide particles), either dry or suspended in a liquid. Surface breaking flaws distort the magnetic field causing local magnetic flux leakages that attract the detection medium producing a buildup that can be seen visually.





Dye Penetrant Testing

DPT is low cost method of detecting surface breaking flaws, such as cracks, cold laps, porosity etc. Dye penetrant is drawn into a surface breaking flaw by capillary action and excess surface penetrant is then removed; a developer is then applied to the surface, drawing out the penetrant in the crack and producing a surface indication. The technique can be applied to many non-porous clean materials, metallic or non-metallic.



13. Visual Inspection

Visual inspection (VT) relies upon the detection of surface imperfections using the eye. Normally applied without the use of any additional equipment, VT can be improved by using aids such as a magnifying glass to improve its effectiveness and scope

14. Hardness Testing

Hardness is a characteristic of a material, not a fundamental physical property. It is defined as the resistance to indentation, and it is determined by measuring the permanent depth of the indentation. More simply put, when using a fixed force (load) and a given indenter, the smaller the indentation, the harder the material. Indentation hardness value is obtained by measuring the depth or the area of the indentation using one of over 12 different test methods.

6.4 GEH Heat Treatment Services

Heat treatment is the process of heating and cooling metals to achieve desired physical and mechanical properties through modification of their crystalline structure.

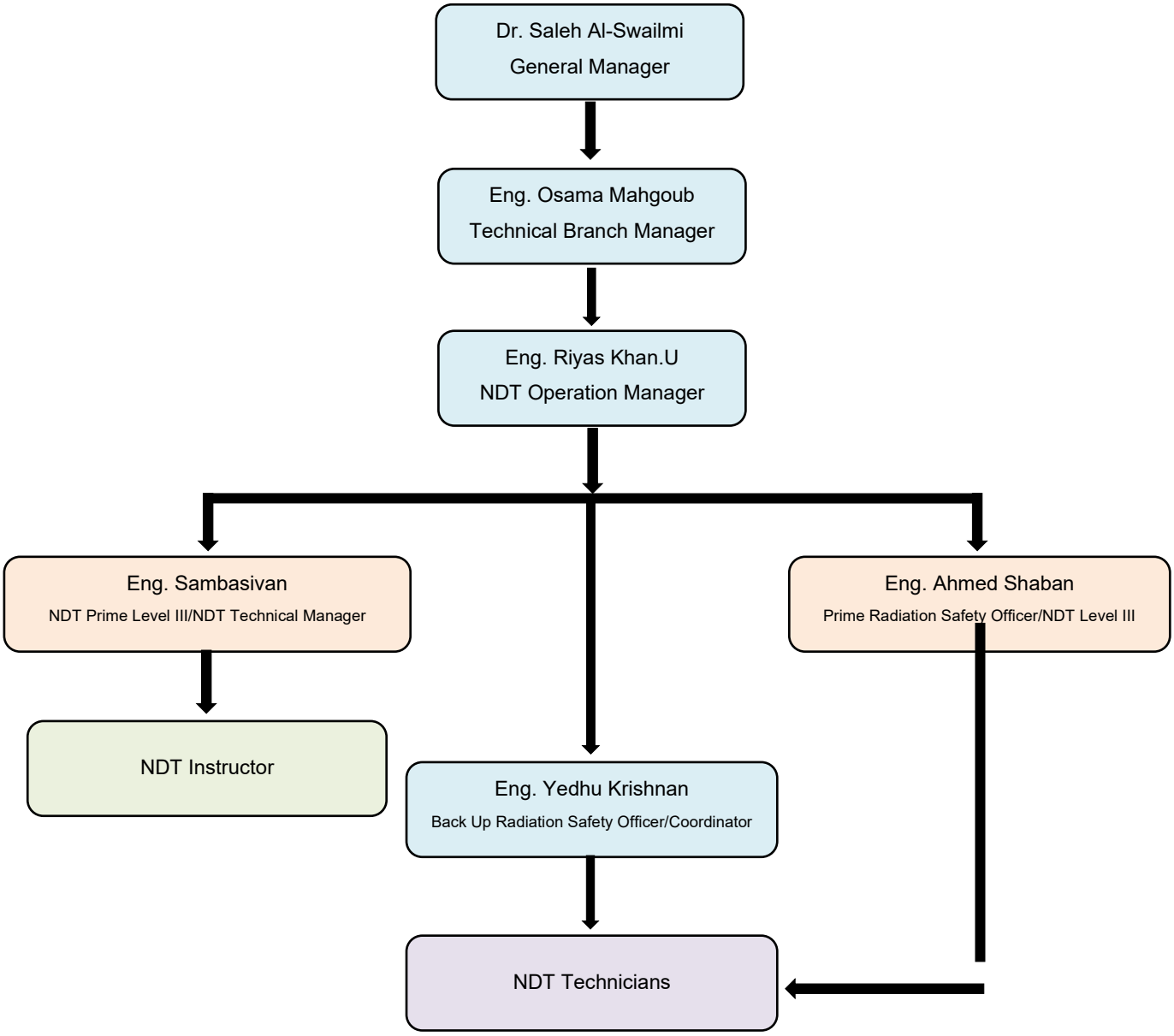
The temperature, length of time, and rate of cooling after heat treatment will all impact properties dramatically. The most common reasons to heat treat include increasing strength or hardness, increasing toughness, improving ductility and maximizing corrosion resistance.

Heat Treatment is often associated with increasing the strength of material, but it can also be used to alter certain manufacturability objectives such as improve machining, improve formability, and restore ductility after a cold working operation.

6.5 GEH Major Clients

1. أرامكو السعودية saudi aramco
الشركة السعودية للكهرباء Saudi Electricity Company طاقة مثمرة
MA'ADEN معادن
سابك sabic
المؤسسة العامة لتحلية المياه المالحة Saline Water Conversion Corporation
كيان السعودية saudi kayan
Royal Commission for Jubail and Yanbu (RCJY) الهيئة الملكية للجبيل وينبع
شركة تروبا العربية Trubarabia trubarabia.com
شركة بمكو العربية للمقاولات ARABIAN BEMCO CONTRACTING CO.
CAMERON
NATIONAL PIPE CO. LTD. A World Class Pipe Manufacturer
GLOBAL Sources A member of NIDAL Group
Sinopec
INMA
ZAMIL STEEL
مجموعة بن لادن السعودية SAUDI BINLADIN GROUP PUBLIC BUILDINGS & AIRPORTS
SPPI
SK E&C
VISION ETIMAAD
Networks
ECI
alfanar construction
Al Muhaidib المهيدب Contracting للمقاولات

6.6 NDT Organization Chart



6.7 Administration List of ASNT Level-III's

List of Certified Personnel's												
#	Name	RT	MT	PT	VT	UT	PAUT	ToFD	RFET	MFL	AUT	OTHERS
1	Varun Sharma	X	X	X	X	X	X	X			X	ASNT Level III & PCN Level II
2	Sambasivan	X	X	X	X	X						ASNT Level III
3	Ahmed Shaban	X	X	X	X	X						ASNT Level III
4	Rohit Puri						X	X	X	X	X	Manufacturer Certified
5	Motaz Jally						X	X	X	X		Manufacturer Certified
6	Assad Bashir						X	X	X	X		Manufacturer Certified

6.8 Skilled Manpower List

Discipline	PT	MT	RT	VT	UT	UTT	RTFI
Number of Technicians	61	61	64	41	37	26	10

6.9 Equipment's List

No.	Items	Qty
1	Olympus MX – 2	1
2	Olympus MS 5800	1
3	Silver wing MFL Floor Scanner 3Di	1
4	Pipe WIZARD AUT Olympus	1
5	Scar Projector	1
6	Black light	3
7	White/Black light meter	2
8	MT Yokes	09
9	UT Thickness Meters	04
10	UT Weld's Flaw detectors	43
11	V1 block	05
12	V2 block	18
13	Step-wedge	37
14	UT transducers (0)	36
15	UT transducers (45)	38
16	UT transducers (60)	43
17	UT transducers (70)	45
18	Film viewer	09
19	Guide Tubes	62
20	Crank Unit	35
21	Projectors	32
22	Survey Meters	93
23	Thermo luminescent dosimeter, (TLD)	176
24	Electronic Pocket Dosimeter (EPD)	104
25	RT Collimators	35
26	Densitometers	12
27	PWHT Machines with accessories	30

6.10 Projects Competition Certificates

No	Project Name	Client	Period
1	NDT Conventional Project	Saudi Aramco	1 Mar 2010 – 28 Feb 2016
2	Supply experience NDT Inspection for RTR 2015 South shutdown	Saudi Aramco, Rastanourah Refinery	19 May 2015 – 30 Jun 2015
3	NDT & PWHT services for Wasit GAS Plant	SINOPEC	1 Dec 2012 – 31 Dec 2014
4	NDT services for Saudi Kayan Project, Aljubail, SABIC	SINOPEC	3 Nov 2011 – 31 Mar 2014
5	NDT services & Inspection Shutdown	Saudi Aramco, Riyadh Refinery	2014
6	NDT & PWHT services for Quarayyah Combined Cycle Power Plant	Global Solutions for General Contracting Est.	30 Sep 2012 – 31 Jul 2013
7	NDT services at PP10 Alkharj Power Plant	Truba Arabia	21 Nov 2011 – 1 Aug 2012
8	NDT work for Port area Packages 6 & 7 Tank Farm Project	Saudi Kayan	13 Jun 2009 – 10 Sep 2011
9	Welder & Welding Qualification for Haram expansion Project – Jeddah	Sharqawi Factory	2012
10	NDT services at Qurrayah Power Plant	Truba Arabia	4 Nov 2008 – 1 Aug 2010

6.11 List of Awarded Projects

#	Client	Contract No	Contract Scope	Date Awarded	Date Completed
1	Saudi Arabian Oil Company	6600024026	NDT Services	1 Mar 2010	26 Feb 2016
2	Aramco Riyadh Refinery	6510658652	NDT Services	03 May 2014	30 June 2014
3	Aramco Rastanurah Refinery	6510724316	NDT Services	15 May 2015	30 June 2015
4	Aramco Rastanurah Refinery	6510749342	NDT Services	8 Nov 2015	31 Dec 2015
5	Sinopec E&C Middle East Co. Ltd	SME/BCC2012-WASIT-SV-0009-IK	NDT Services	18 Dec 2012	30 Mar 2014
6	Trubarabia	NO044/QR/SC/1108	NDT& PWHT Services	04 Nov 2008	31 Dec 2013
7	Saudi Preinsulated Pipes Industries	SPPI-GE-001	NDT Services	18-Jul-2011	On going
8	Arabian Global Sources	GS/2079/2097/12	NDT& PWHT Services	01 Sep 2012	31 Dec 2013
9	Arabian Bemco Contracting Co	BC 109/3756	NDT& PWHT Services	21 Nov 2012	31 Dec 2013
10	Inma Utilities Contracting Co	10000042	NDT Services	26 Feb 2013	On going
11	Trubarabia	NO17/PP-12/SC/2014	NDT& PWHT Services	05 Feb 2014	On going
12	Arabian Bemco Contracting Co	BC 117/4270	NDT Services	05 Feb 2014	On going
13	National Pipe Co. Ltd	COM15-0121-L	NDT Services	30 Apr 2015	On going
14	Sinopec E&C Middle East Co. Ltd	SEG/BSNEI2015-U&I-SC-0002-IK	NDT& PWHT Services	01 June 2015	On going

6.12 Radiation Practice License

License Number:	10210RY-02	رقم الرخصة:
Version:	1	الإصدار:
Effective Date:	15/10/2023	تاريخ الإصدار:
Expiration Date	15/10/2026	تاريخ الإنتهاء:

هيئة الرقابة النووية والإشعاعية
Nuclear and Radiological Regulatory Commission

Operation Operation
For Use of radiation sources in gauges and exploration

رخصة تشغيل
لممارسة استخدام المصادر الإشعاعية للقياس والاستكشاف

Facility Details تفاصيل المنشأة

Organization Name:	Gulf Engineering House Riyadh شركة دار الخليج للاستشارات الهندسية	**إسم الجهة:**
Facility Name:	Gulf Engineering House Riyadh دار الخليج للهندسة الرياض	**إسم المنشأة:**
Facility Code:	10210RY	**رقم المنشأة:**
Province:	الرياض/Riyadh	**المنطقة:**
City:	الرياض	**المدينة / المحافظة:**
Location:	46.71132466358607 - 24.74708901938933	**الموقع:**

This is a license to perform the following radiation practices: تتيح هذه الرخصة للمنشأة القيام بالممارسات الإشعاعية التالية:

Use of nuclear moisture / density gauges استخدام المصادر الإشعاعية النووية لقياس الكثافة أو الرطوبة

Radiation source inventory limit: الحد الاعلى لكميات المصادر الإشعاعية المسموح باستخدامها

Radioactive Materials (Sealed Sources) المواد المشعة (مصادر مختومة)

Radionuclide	Maximum Radioactivity of each source - radionuclide	Number of Sources
Cs-137	(mCi) ملي كيوري 8.00	20
Am-241/Be	(mCi) ملي كيوري 40.00	20

Operational Limits and Conditions: حدود وشروط التشغيل:

1. **sources 40**

To check authenticity of the license by visiting the link below on the website of NRRC

https://aman.nrrc.gov.sa/LicenseVerification

or

By using the following identifier code:

للتحقق من صحة وصلاحية الرخصة عبر زيارة الرابط أدناه في الموقع الإلكتروني لهيئة الرقابة النووية والإشعاعية

https://aman.nrrc.gov.sa/LicenseVerification

أو

عن طريق استخدام الرمز المعرف التالي:

6.13 Contacts

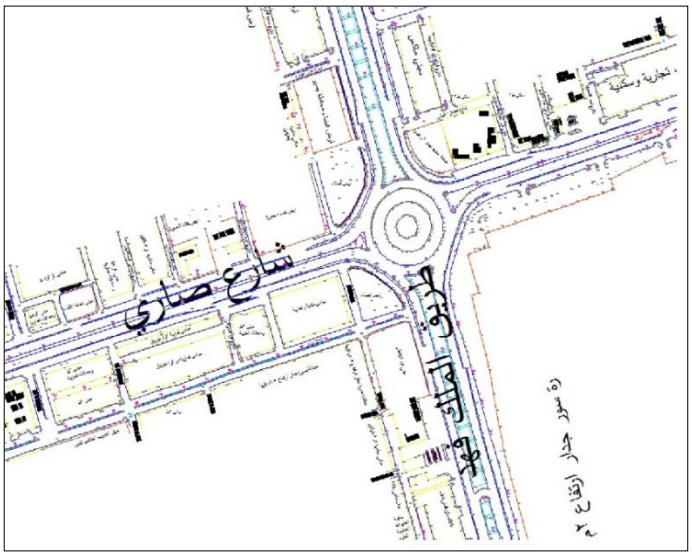
Osama Mahgoub **Branch Technical Manager** **T: + 966 13 821 0415 x 111** **F: + 966 13 821 0412** **Cell: + 966 564072139** **Email:** **osama@daralkhalij.com**	**ndt@daralkhalij.com**	**Riyas Khan.U** **NDT Operation Manager** **T: + 966 13 821 0415 x 106** **F: + 966 13 821 0412** **Cell: + 966 546622090** **Email: riyas@daralkhalij.com**
Post Box: 3569 Dammam 31481,Alkhwarizmi Street, Saudi Arabia		

7. Land Survey Engineering

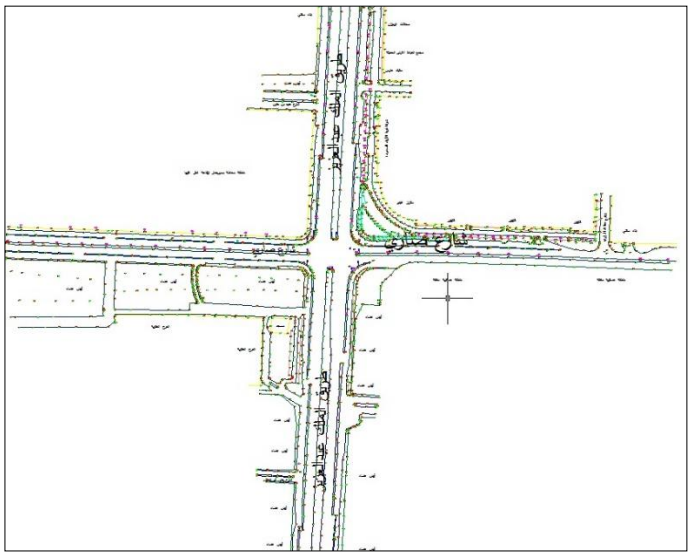
GEH has got comprehensive capabilities and experienced team in undertaking Land / Topographic Survey work for transportation and other engineering projects during design and also in construction supervision stage. GEH has performed topographic survey work for major highway and public transportation projects including:

- Detailed Design of Makkah Fourth Ring Road Project.
- Preliminary Design of Jeddah LRT Project (Orange and Blue Lines)
- Madinah LRT Project for all three lines.
- Preliminary Design of Jazan BRT Project.

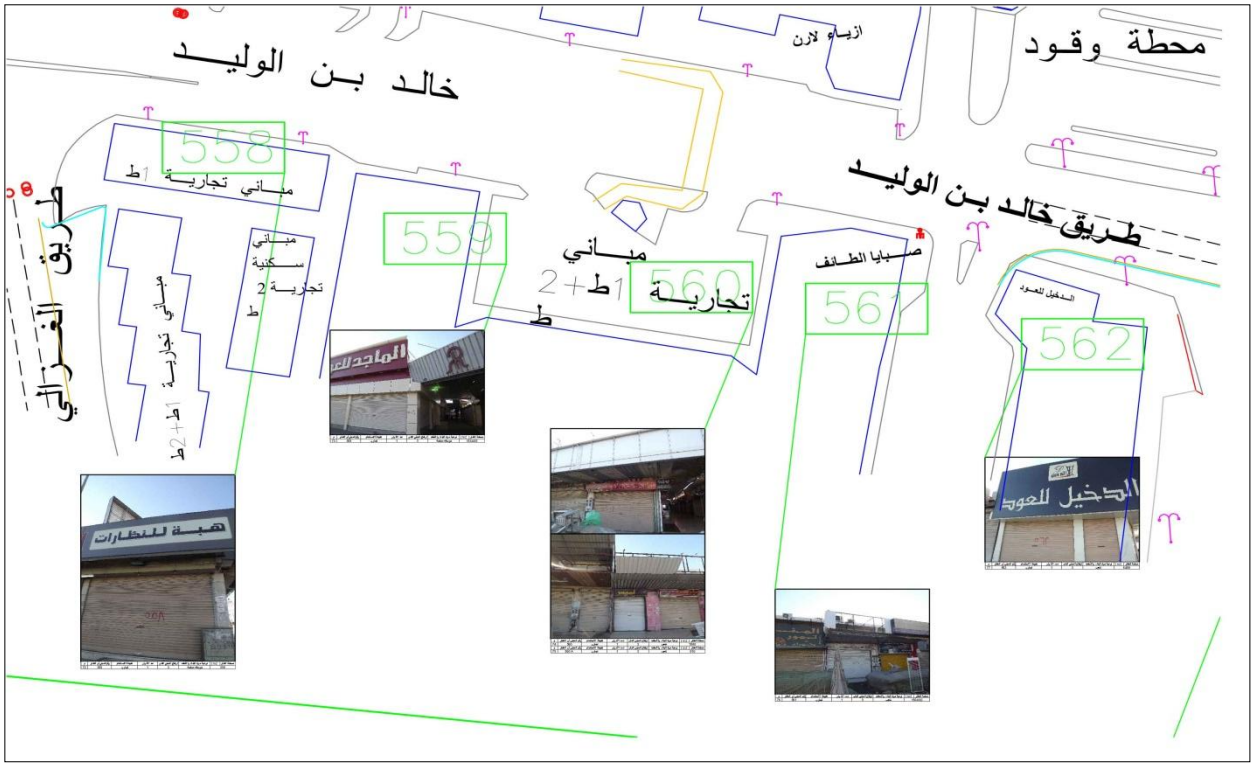
The topographic surveys of the project sections carried out involve monumentation, establishment of control points for x, y and z coordinates, double leveling, traversing and topographic surveys using Total Station and GPS equipment. Example of some topographic survey / land acquisition survey works are shown below:



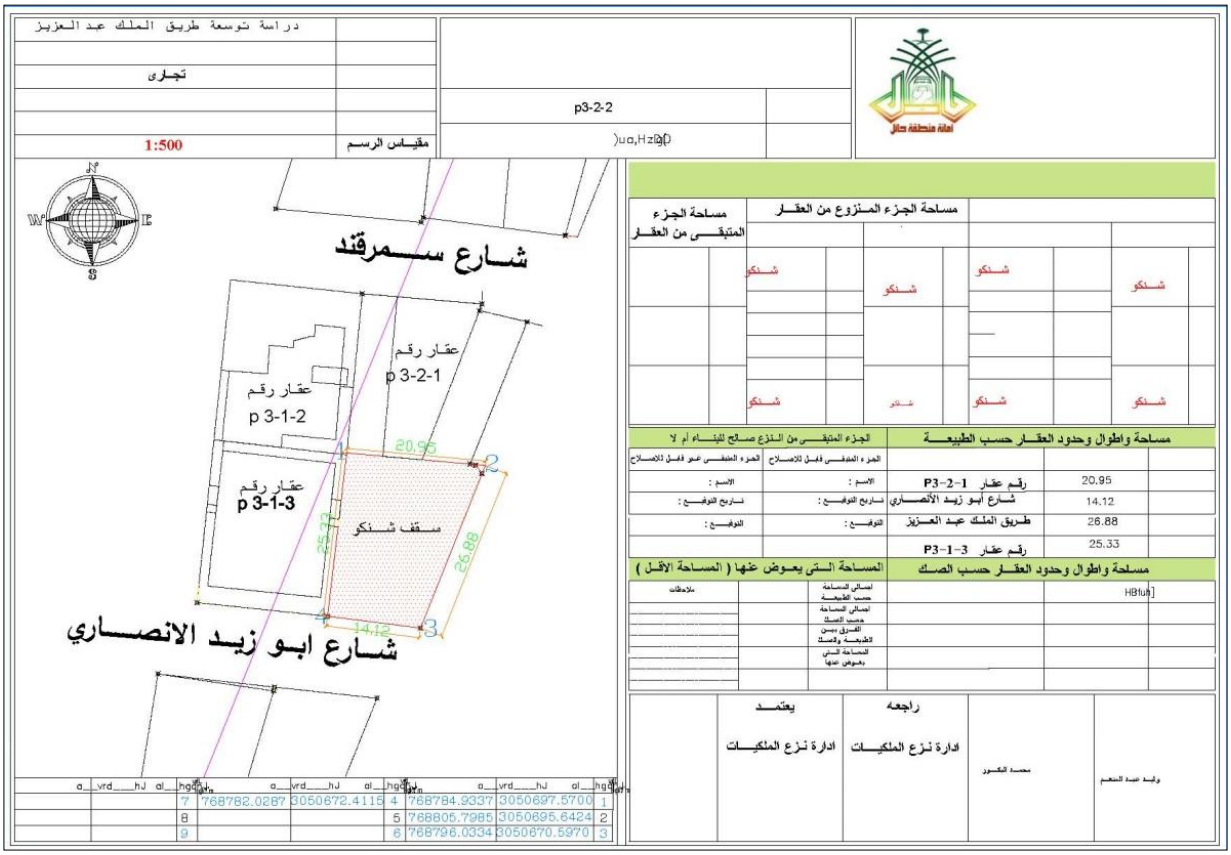
Topographic Survey Map of King Abdul Aziz Road Intersection with Sary Street



Topographic Survey Map of King Abdul Aziz Road Intersection with Al Tahlia Street



Topographic survey of the properties boundary samples



Saheefa sample of some project done by GEH

All Topographic Survey jobs performed by GEH according to the required standard and specifications, mainly the work follow the required specification. And in general all survey works performed according to the following specifications:

- Latest issues of MOT Topographic Survey Manual.
- Latest issues of Saudi Aramco Standards and Specifications.
- The reference of the survey will be according to the WGS 84, or Ain Al Abed Station.

GEH own the latest version of the related software which is:

- AutoCAD 2014, AutoCAD Land Desktop 2009, AutoCAD Civil 3D 2013, ArcGIS 10.1 Surfer 10, hypack 2012.
- Leica Geosystem, Topcon Positioning Systems, SOKKIA measurement technology Systems, Trimble measurement.
- GPS measurement station

GEH has the latest technology of the devices used in the Topographic Survey such as:

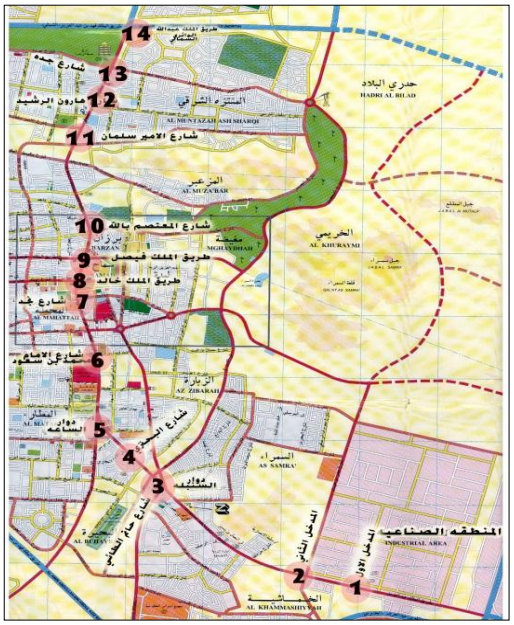
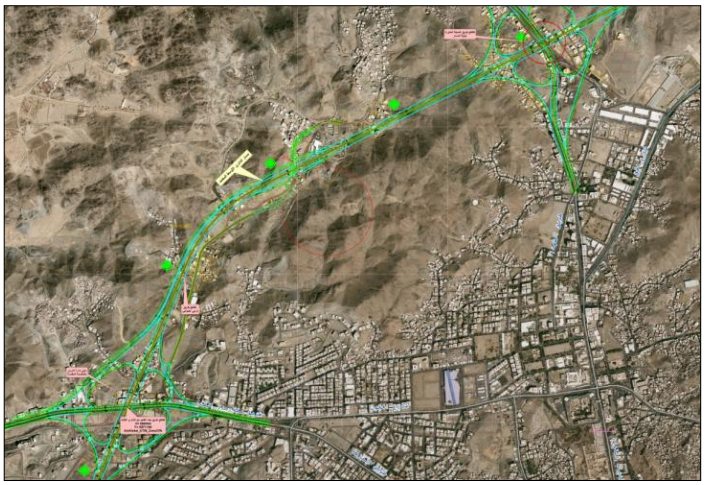
- Global Positioning System (GPS)
- Total station
- Level Measurement

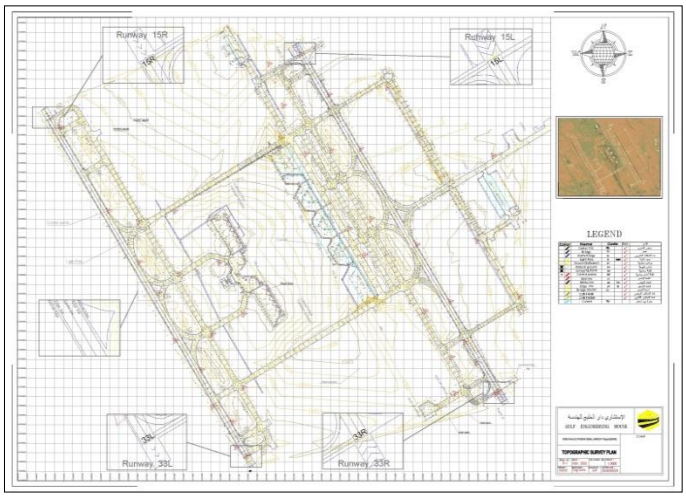
Topcon -25_0

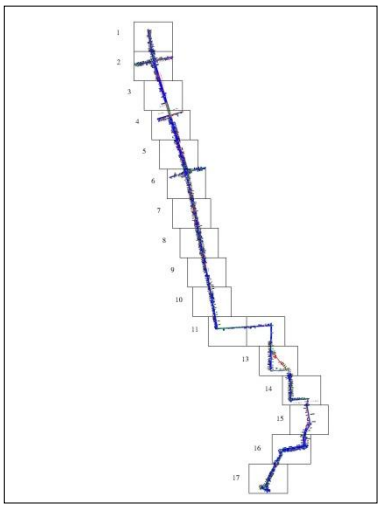
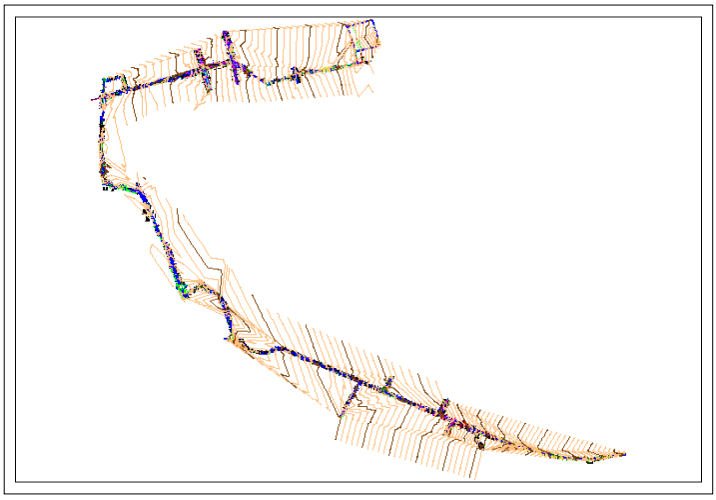
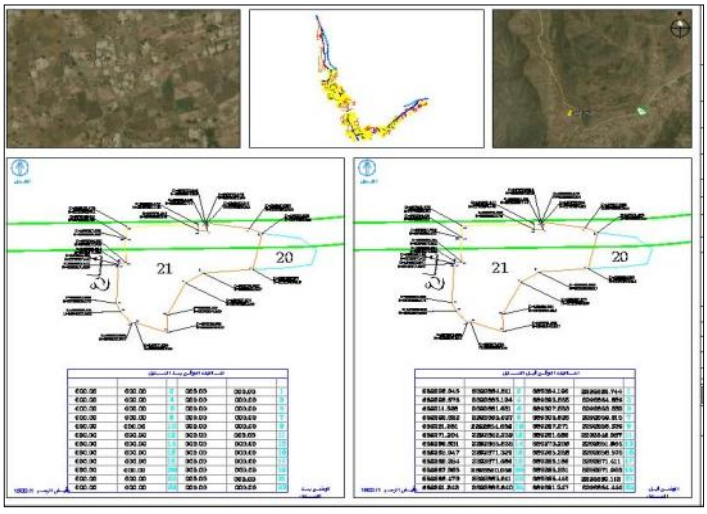
Gps devices

Total Station

7-1 A brief description of the GEH Topographic / Land Survey Works is shown below:

Developing of Al Horaidah Beach Jizan Municipality **Type of Contract: Design** **The Topographic Survey was used in the roads and location design.** **The Client: Jizan Municipality.** **Consultant: GEH**	
Developing and Design of King Abdul Aziz Road – Hail **Type of Contract: Design** **The Topographic Survey was used in the roads and location design.** **The Client: Hail Municipality.** **Consultant: GEH**	
Design of Third Ring Road – Makkah **Type of Contract: Design** **The Topographic Survey was used in the roads and location design. And Identifying the conflict area with the final corridor of 3th Ring Road** **The Client: Makkah Municipality.** **Consultant: GEH**	

Evaluation of 14 Domestic Airport and identifying the Safety issues in the Airfield Area **Type of Contract: Evaluation** **The Client: General Authority of Civil Aviation (GACA).** **Consultant: GEH**	
Design of Several Intersection in Jizan **Type of Contract: Design** **The Topographic Survey was used in the roads and location design. And Identifying the conflict area with the final corridor.** **The Client: Jizan Municipality.** **Consultant: GEH**	
Design of Several Pedestrian Bridges in Jizan **Type of Contract: Design** **The Topographic Survey was used in the roads design. And Identifying the conflict area with the final design area.** **The Client: Jizan Municipality.** **Consultant: GEH**	

Design of Light Rail Train for Jeddah City Option 1 **Type of Contract: Design** **The Topographic Survey was used in the LRT corridor design.** **The Client: Jeddah Municipality & MOT.** **Consultant: GEH**	
Design of Light Rail Train for Jeddah City Option 2 **Type of Contract: Design** **The Topographic Survey was used in the LRT corridor design.** **The Client: Jeddah Municipality & MOT.** **Consultant: GEH**	
Land acquisition of King Abdul Aziz Road – Hail **Type of Contract: Topographic Survey** **The Topographic Survey was used in the roads and location for land acquisition.** **The Client: Hail Municipality.** **Consultant: GEH**	

7-2 Ground Penetration Radar For Underground Utilities Mapping

Based on the commitment of Gulf Engineering House for continual improvement of the road construction industry and associated structures in addition to our continuous research in road projects management, GEH has identified the obstacles causing delays in the infrastructure projects particularly in the roads sector.

The most important obstacles were in the management of utility lines underneath roads. For many years the accurate identification of underground utilities has been a nightmare for contractors and owners (municipalities or road authorities). In many cases construction work caused damages and interruption of services and even caused fatalities of workers on site. In all situations project costs will increase considerably due to the absence of reliable information.

The archived plans of utility lines underneath roads did not reduce the size of this problem and in many cases these plans are incomplete or inaccurate.

1. GPR Definition:

In many infrastructure projects especially projects that required deep constructions for long distances like roads, bridges, and tunnels, the most difficult task is to accurately determine the different utilities locations, which is most necessary to save and transfer the affected utilities without damaging or interrupting that services. Many studies figured that the insufficiency of locating utilities lines is a major cause for projects delay.

Ground penetration radar (GPR) is one of advanced geophysical tests according to (11-ASTM D6432), and it is providing a complete solution for that issue. The GPR has been developed to deliver a complete solution to high accuracy of detecting, locating, and mapping the underground utilities.

2. GPR Applications:

There are many applications & projects that GPR is used, for example:

- Underground utilities scanning & mapping for all type of facilities such as schools, hospitals, and government buildings which is used for rehabilitation, construction, and maintenance.
- Underground utilities scanning & mapping for roads which is used for infrastructure construction such as transportation, bridges, and tunnels projects.
- Municipalities' general utilities automation.

3. Previous projects:

1- **Riyadh Metro Project – Arriyadh Development Authority,**
   Underground utilities scanning for The geotechnical Studies for Metro lines (1 and 2) under supervision of (BACS).

2- **Khurais Central Processing Facility, Saudi Aramco,**
   Underground utilities scanning for Arabian Gulf Construction Co.

3- **Medina intersections design, AlMedina Development Authority The project of in -.**
   Underground utilities scanning for intersections design.

4- **Network in Hiteen district, National Water Company,**
   Underground utilities scanning for AWW & Partners.

4. GPR Flyer

Ground Penetration Radar (GPR) Equipment For Underground Utilities Mapping

GULF ENGINEERING HOUSE
دار الخليج للهندسة

Introduction

Based on the commitment of Gulf Engineering House for continual improvement of the road construction industry and associated structures in addition to our continuous research in road projects management, GEH has identified the obstacles causing delays in the infrastructure projects particularly in the roads sector.
The most important obstacles were in the management of utility lines underneath roads. For many years the accurate identification of underground utilities has been a nightmare for contractors and owners (municipalities or road authorities). In many cases construction work caused damages and interruption of services and even caused fatalities of workers on site. In all situations project costs will increase considerably due to the absence of reliable information.
The archived plans of utility lines underneath roads did not reduce the size of this problem and in many cases these plans are incomplete or inaccurate.

GPR Definition

In many infrastructure projects especially projects that required deep constructions for long distances like roads, bridges, and tunnels, the most difficult task is to accurately determine the different utilities locations, which is most necessary to save and transfer the affected utilities without damaging or interrupting that services. Many studies figured that the insufficiency of locating utilities lines is a major cause for projects delay.
Ground penetration radar (GPR) is one of advanced geophysical tests according to (11-ASTM D6432), and it is providing a complete solution for that issue. The GPR has been developed to deliver a complete solution to high accuracy of detecting, locating, and mapping the underground utilities.

Geophysics Tests

Geophysical testing is one of the important geotechnical surveys to study the different types of soil layers, and also to locate the utilities lines and objects inside the earth.
GPR has been developed in the last ten years to be a major remote scanner to locate utilities without expensive excavations using the dual frequency technology.

GPR Applications

There are many applications & projects that GPR is used, for example:

1-Underground utilities scanning & mapping for all type of facilities such as schools, hospitals, and government buildings which is used for rehabilitation, construction, and maintenance.

2-Underground utilities scanning & mapping for roads which is used for infrastructure construction such as roads, bridges, and tunnels projects and various public transportation projects.

3-Municipalities' general utilities automation.

Previous Projects

1-Riyadh Metro Project, Arriyadh Development Authority,
Underground utility scanning for the geotechnical studies for Metro lines (1 and 2) under supervision of (BACS).

2-Khurais Central Processing Facility, Saudi Aramco,
Underground utility scanning for Arabian Gulf Construction co.

3- Madina Intersection Design, Almdaina Development Authority,
Underground utility scanning for intersection design.

4-Network in Hiteen district, National Water Company,
Underground utility scanning for AWW & Partners.

Contact Us
Riyadh - Saudi Arabia
Gulf Engineering House
Phone No. 011-4537171
E-Mail : admin@daralkhalij.com

المملكة العربية السعودية
وزارة النقل
٢٨١

الإدارة العامة للصيانة
التقييم والبرمجة

الرقم: ٦٥٤٥/١٠١
التاريخ: ١٤٢٩/٥/٢٨
المرفقات: بدون

الموضوع : الموافقة على تأهيل مكتب دار الخليج للهندسة لعمل الرفع المساحي لمسارات الطرق .

المحترم

المكرم مدير عام مكتب دار الخليج للهندسة

ص.ب : ٢٧١٠٨ ، الرياض : ١١٤١٧

السلام عليكم ورحمة الله وبركاته :

إشارة لخطابكم رقم ٢٠٣/ج م ٢٠٠٨/١ وتاريخ ١٤٢٩/٥/٢هـ المتضمن طلبكم تأهيلكم لرفع مسارات الطرق وفقا لشروط ومواصفات الوزارة .

نفيدكم بالموافقة على تأهيلكم للقيام بعمل الرفع المساحي لمسارات الطرق بناء على خبرتكم السابقة في تنفيذ هذه الأعمال ضمن مشروع مسح وتقييم الطرق والمنشآت الذي سبق التعاقد معكم عليه .

ولكم تحياتنا ،،،

٥/٢٧,١٥١

مدير عام إدارة الصيانة المكلف

المهندس/ محمد بن عبدالله الشهري

بسم الله الرحمن الرحيم

المملكة العربية السعودية
وزارة الشئون البلدية والقروية
وكالة الوزارة للشئون الفنية

الإدارة العامة للشئون الهندسية

الموضوع : بخصوص تأهيل مكتب
دار الخليج للهندسة
بالرياض.

السادة مكتب دار الخليج للهندسة

ص. ب ٢٧١٠٨ الرياض ١١٤١٧

السلام عليكم ورحمة الله وبركاته :

إشارة لخطابكم رقم ١١/١ رب ٢٩/١ وتاريخ ١٤٢٩/٣/١١هـ المشار فيه إلى أنه سبق تأهيلكم في مجال هندسة الطرق وهندسة المرور والمعلومات الجغرافية وطلبكم التأهيل في مجال "هندسة التربة والمواد" .

نفيدكم أنه بدراسة الأوراق والمستندات الخاصة بالمكتب والمشاريع التي أنجزها ، ونظراً لإنطباق شروط لتأهيل ، فقد تم تأهيل المكتب في مجال " هندسة التربة والمواد " إضافةً إلى التخصصات السابقة الواردة بالتعميم رقم ٤/٥٧١٨٠/وف وتاريخ ١٤٢٣/١١/٩هـ .

آمل الإطلاع والإحاطة .

والسلام عليكم ورحمة الله وبركاته .

وكيل الوزارة للشئون الفنية

عبدالعزيز بن علي العبدالكريم

أ/ت ٥ (m810)

الرقم ١٩٩١٨ / ٤ / وف التاريخ ١٤٢٩/٤/١٥هـ المرفقات بدون

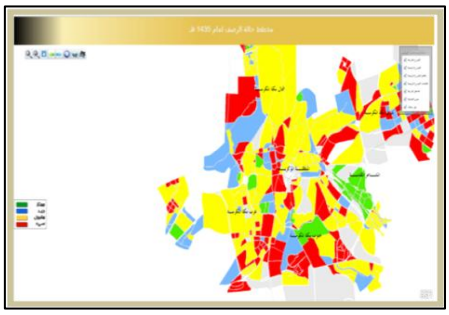
الرياض - الرمز البريدي ١١١٣٦

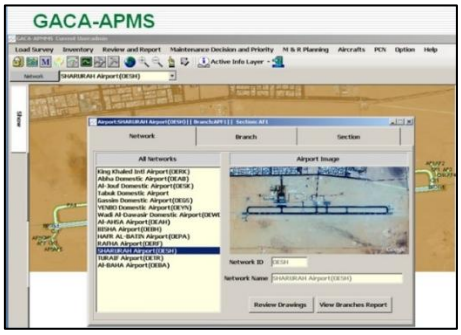
8. GIS Capabilities :

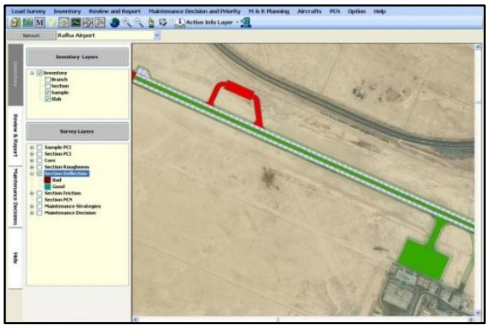
GEH has developed comprehensive capabilities in undertaking Geographic Information System assignments for various inside the Kingdom for Ministries and Municipalities. Special expertise have been developed in the development GIS based pavement and road asset management systems.

GEH GIS capabilities include capturing spatial data using the latest technology (Total Stations, GPS, DGPS, and Laser Scanners), resources (Satellite and Arial Imagery), and methodology (Digitizing, Photogrammetry, Data interpolation).

- Designing and implementing of geospatial databases using the most modern database technology (Oracle SDO, PostGIS, EsriSDE etc.).
- Analyzing GIS data using the most powerful techniques, including topological, statistical and interpolation analysis, map production, DEM analysis.
- GEH is using ESRI ArcGIS, and QGIS.
- Developing web and desktop GIS applications using ESRI ArcGIS JavaScript, Open layers, and Python.







Previous GIS Projects

- Makkah Municipality Pavement Maintenance Management system.
- Madinah Municipality Pavement Maintenance Management system.
- Taif Municipality Pavement Maintenance Management system.
- Riyadh Municipality Projects Coordination Office.
- Riyadh Municipality Pavement Maintenance Management system.
- Ministry of Transportation Pavement Maintenance Management system.
- General Authority of Civil Aviation Airports Pavement Maintenance system.
- Qassim Municipality Quality Control System.
- Jeddah Municipality Pavement Maintenance Management system.

9. GEH KEY PERSONNEL

Dr Saleh Al Swailmi

He has PhD in Highway Engineering from Oregon State University, USA. He has worked in USA at Strategic Highway Research Program (SHRP) where he contributed asphalt pavement test systems and test procedures by inventing Environment Conditioning Systems (ECS) which is a testing system for asphalt pavement design. He has been involved in Pavement Evaluation Projects of various international airports. Principal Investigator in several research projects funded by King Abdul Aziz City for Science and Technology (KACST). Worked as Project Manager for more than 15 years and supervised several construction and maintenance projects which include: Roads, Bridges, and Underpasses. He is the General Manager of Gulf Engineering House.

General Manager

Mr. Abdullah Al-Saqr

He holds a university degree in social sciences and worked at the Real Estate Development. He moved to municipal work as Director of the Office of the Undersecretary for Technical Affairs at the Ministry of Municipal and Rural Affairs. He was appointed Undersecretary of the Ministry of Municipal and Rural Affairs for Rural Affairs in addition to his work as General Supervisor of the Office of the Minister of Municipal and Rural Affairs until his retirement on 8/30/1442 AH. He is currently working as General Supervisor at Gulf Engineering House Consulting.

General Supervisor

Eng. Thamer Al Swailmi

Eng. Thamer holds MSc. in Transportation Planning and Engineering from New York University, New York, USA, 2013. Eng. Thamer has worked at the Civil Engineering Department at NYU during 2011-2013 as Researcher. He is now working as the Manager of Traffic & Transportation department at Gulf Engineering House. He has been involved in several Transportation and Traffic Studies.

Manager Transportation & Traffic Engineering Dept.

Dr. Mohammad Tawfik Aboulela

He holds a Ph.D. in Transportation Engineering from University of New Brunswick, Canada in 1981. He worked as a faculty member in Jordan University of Science and Technology and Minia University, Egypt. He has supervised more than 15 M.Sc. theses. He participated in several consulting activities covering a wide range of projects in the design of interchanges and urban intersections, railway systems and public transportation planning. He is also a registered Quality Management Systems Auditor and audited more than 100 firms. He is now working as Transportation, Railway Engineering and Quality Management Expert in Gulf Engineering House.

Expert, Transportation, Railways & Quality Management

Dr Basheer Hassoun

Dr Basheer has as PhD in Pavement Engineering from Cairo University. He has more than 17 years of experience in the field of "Pavement Engineering" including pavement management, highway design and quality control for major road projects in and outside the Kingdom. He has previously worked as Deputy Manager of Maintenance Department in MOT in Syria and Training Manager of the Road Institute, Riyadh, KSA. He is now the Highway and Airport Engineering Department Manager at Gulf Engineering House.

Transport Engineering Expert

Eng. Naveed Hassan

He graduated from NED Engineering University Karachi and obtained M.Engg degree from AIT, Thailand. He has more than 20 years of experience in the field of "Transportation Engineering" including project management, transportation planning, highway design, and traffic engineering and urban public transportation. He has been involved in roadway designs, preparation of design reports, feasibility study reports, traffic studies / traffic impact assessment reports and traffic analyses using state of the art traffic & planning software (HCS+, AASIDRA, VISUM etc.). He is also experienced with Quality Management Systems (ISO 9001) and has worked as Quality Coordinator with a reputed Consultant in Pakistan. Presently working as Projects Manager in GEH.

Manager ,Transportation Projects

Eng. Tanweer Oakasa

He has MS in Transportation Engineering from University of Wisconsin-Madison, USA in 2003. His key specialization lies in traffic analysis, transportation planning and software development. He is proficient in urban transportation planning and public transportation planning tasks using VISUM, development of travel demand models, and traffic analysis of junctions and corridors using CORSIM, VISSIM and HCS. He is proficient in developing computer programs that expedite and automate the major transportation planning and traffic engineering tasks using innovative procedures and logic. He has published number of research papers in international conferences and symposiums. He has instructed in several training programs for application and use of traffic micro simulation and transportation planning software.

Traffic engineer and modeling expert

Eng. Mohammad Qaid Al Jabri

He holds a master's degree in Civil Engineering from the University of Technology in Iraq, 2003. He worked in the Ministry of Public Works and Highways in Yemen as a Deputy Manager in research laboratories and standards department. He worked as project manager to oversee the project implementation of roads in the city of Buraydah. He worked in the field of traffic studies and intersections design on several projects in Taif. He is currently working as Sr. Engineer in Traffic & Transportation Engineering Department.

Road Design Expert

Eng. Karthick Esakkinathan

Holding Master's degree of Transportation Engineering and Management from local institute of Science at India 2009. Currently, working as an expert in the Traffic and Transportation Engineering department especially in TIS projects, intersections analysis and traffic simulation. An expert in the use of several traffic software(s) including HCS, VISSIM, SIDRA, SYNCHRO.

Traffic Engineer

Eng. Mohammed faqueem

Holding Master's degree of Transportation Engineering from Othman University at India 2013. Currently, working as an expert in the Traffic and Transportation Engineering department especially in TIS projects, intersections analysis and traffic simulation. An expert in the use of several traffic software(s) including HCS, VISSIM, SIDRA, SYNCHRO.

Traffic Engineer

Eng. Rashid Mohammedzain

Holds a B.S.C. in Computer Sciences from University of Khartoum, Sudan. He has more than 18 years experience as a software programmer, database administrator, geospatial data expert, and IT/GIS project manager. He is an International Geospatial Society member. He has certificates of Geographic Information Systems from ESRI. He has the capability to deal with all the GIS software, develop applications and plug-ins, design and implement geospatial databases, and perform analysis on GIS data and imagery. He currently works in the IT department at Gulf Engineering House..

Senior GIS Specialist

Eng. Mohammed Abdel-Hamid Saad Abdamogne

He holds a Bachelor of Civil Engineering from the Jordan University of Science and Technology - June 2011 , he worked as a supervising engineer in supervision unit . Currently he works as a bridge engineer at Gulf Engineering House.

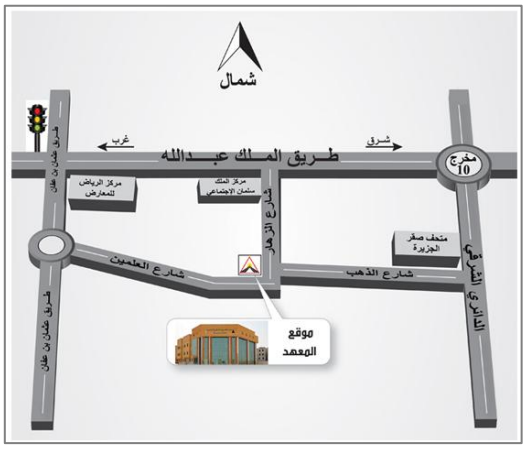
Structural Engineer

Gulf House Institute (training arm of GULF ENGINEERING HOUSE).

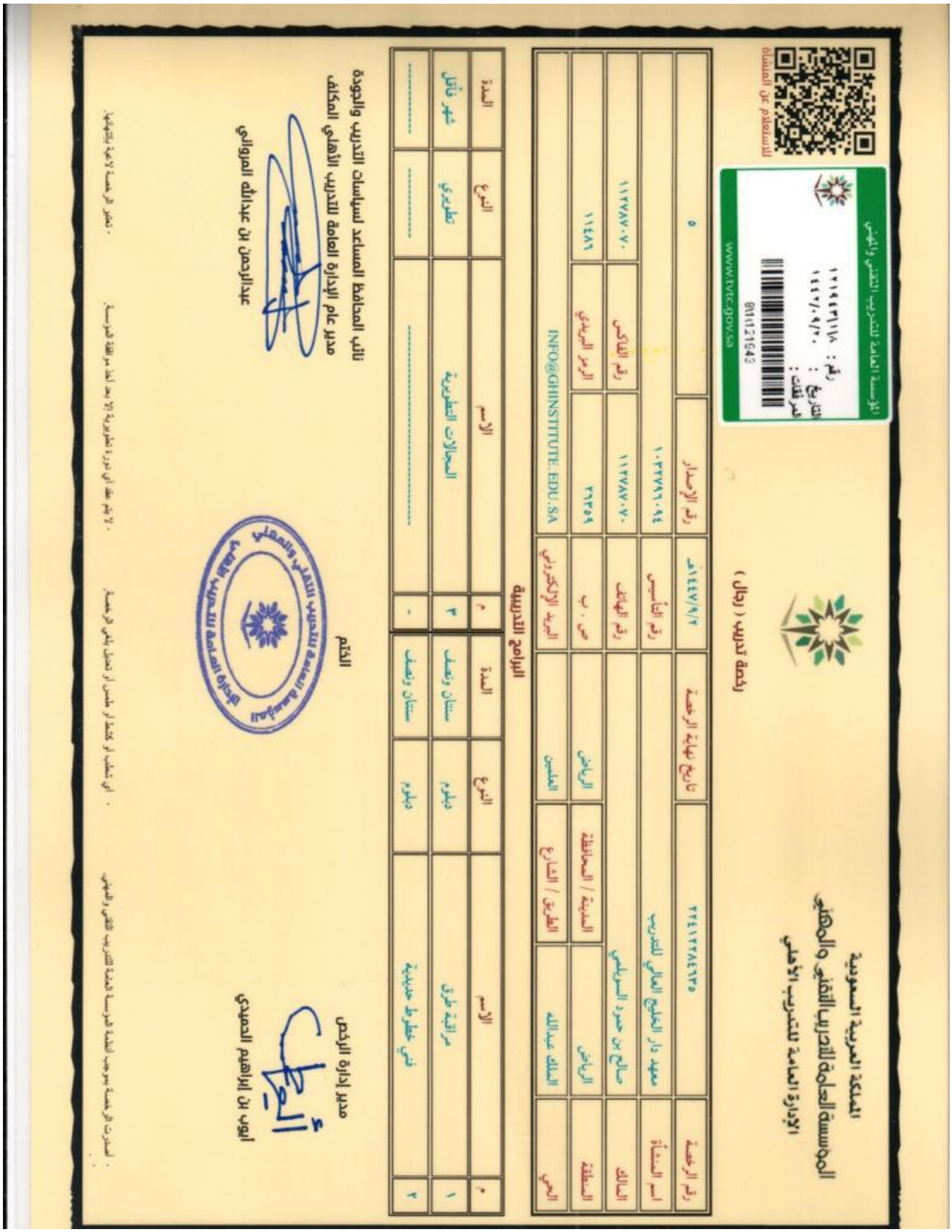
The Gulf House Institute is an educational and training institute that has been established in 2002 in the city of Riyadh, Saudi Arabia. Gulf House Institute provides the tools and program that handle the training and qualifying of technicians and the engineers in the field of highways and transportation engineering. Gulf House Institute offers two kinds of programs:

1. Diploma programs:
   - Road Inspector
   - Civil Inspector
2. Development training programs

Figure 1 shows the map location and the building of Gulf House Institute. Figure 2 is the training license of Gulf House Institute. Figure 3 is the Ministry of Trade and Industry Certification for Gulf House Institute.



.Figure 1: the map location and the building of Gulf House Institute



المملكة العربية السعودية
المؤسسة العامة للتدريب التقني والمهني
الإدارة العامة للتدريب الأهلي

رخصة تدريب (رجال)

المؤسسة العامة للتدريب التقني والمهني
رقم : ١٢١١٤٣١١٨
التاريخ : ١٤٤٢/٠٩/٢٠
المرفقات :
www.tvtc.gov.sa
للاستعلام عن المنشأة

رقم الرخصة	٢٢٤١٢٢٨٤٦٢٥	تاريخ نهاية الرخصة	١٤٤٧/٩/٢ هـ	رقم الإصدار	٥
اسم المنشأة	معهد دار الخليج العالي للتدريب	رقم التأسيس	١٠٠٣٢٧٩٦٠٩٤		
المالك	صالح بن حمود السويلمي	رقم الهاتف	١١٢٧٨٧٠٧٠	رقم الفاكس	١١٢٧٨٧٠٧٠
المنطقة	الرياض	المدينة / المحافظة	الرياض	ص . ب	٢٦٣٥٩	الرمز البريدي	١١٤٨٦
الحي	الملك عبدالله	الطريق / الشارع	العلمين	البريد الإلكتروني	INFO@GHINSTITUTE.EDU.SA

البرامج التدريبية

م	الاسم	النوع	المدة	م	الاسم	النوع	المدة
١	مراقبة طرق	دبلوم	سنتان ونصف	٣	المجالات التطويرية	تطويري	شهر فأقل
٢	في خطوط حديدية	دبلوم	سنتان ونصف	-	----------	----------	----------

الختم

مدير إدارة الرخص
أيوب بن إبراهيم الحميدي

نائب المحافظ المساعد لسياسات التدريب والجودة
مدير عام الإدارة العامة للتدريب الأهلي المكلف
عبدالرحمن بن عبدالله المرواني

- لا يتم عقد أي دورة تطويرية إلا بعد أخذ موافقة المؤسسة.
- أي شطب أو كشط أو طمس أو تعديل يلغي الرخصة.
- تعتبر الرخصة لاغية بانتهائها.
- لا يتم عقد أي دورة تطويرية إلا بعد أخذ موافقة المؤسسة.
- تعتبر الرخصة لاغية بانتهائها.

Figure 2 : the training license of Gulf House Institute

First: The diploma programs:

1. Road Inspector:

The Road Inspector diploma program is under the supervision of Technical and Vocational Training Corporation, Accredited by the Ministry of Civil Service, where graduates are employed under the functional name of Road Inspector on the sixth rank of first class.

The diploma certificate is a specialty road technician for holders of secondary school certificate. Students spend two studying years divided into four training semesters. During this period they study specialized subjects in the field of road engineering and its laboratories.
Figure 4 shows the Accreditation of the Ministry of Civil Service for Road Inspector Diploma, and Table 1 shows graduates Number of Road Inspector diploma

Table 1: graduates Number of Road Inspector diploma

Year	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426
graduates Number	93	35	15	33	19	7	17	22	16	19	17	28

2. Civil Inspector:

Gulf House Institute offers for construction contracting companies and consulting engineering companies a training program for qualification of Civil Works Inspectors for secondary school certificate holders for inspection of the construction-sites and utilities construction work to ensure complete adherence to the approved standards and specifications.

سعادة رئيس معهد الطرق للتدريب بالرياض المحترم

س . ب (٢٧١٠٨) الرياض ١١٤١٧

السلام عليكم ورحمة الله وبركاته ،

إشارة إلى خطابكم رقم (٢٩٥) وتاريخ ١٤٢٥/٧/٩هـ بشأن طلبكم تقييم البرنامج الذي يقوم المعهد بمنحه في اختصاص مراقبة الطرق لمدة عامين دراسيين والمعتمد من المؤسسة العامة للتعليم الفني والتدريب المهني وتحديد المستويات ومجالات العمل المناسبة لها في الخدمة المدنية .

يسرني إفادتكم أنه تمت دراسة هذا البرنامج في ضوء مواده وأهدافه وما يوفره من معارف وقدرات ومهارات وبمشاركة الجهات المختصة ، وقد صدر قرار معالي وزير الخدمة المدنية رقم (٩٠٤/٤٥٤) وتاريخ ١٤٢٦/٥/١٨هـ بالتقييم الموضح بالبيان (المرفق) .

وتقبلوا تحياتي ،،،

مدير عام التصنيف والرواتب

إبراهيم بن صالح الجهيمان

البرامج الإعدادية الصادرة من معهد الطرق للتدريب (الأهلي)

م	اسم البرنامج	مسار	مدته	مجاله	مؤهل الدخول	مجالات العمل المناسبة	المستوى	
							المرتبة	الدرجة
١	دبلوم مراقبة الطرق	معهد الطرق للتدريب	سنتان		الثانوية العامة	مراقب طرق – فني مختبر (١)	٦	١

الإيضاحات : (١) اختبارات التربة ، اختبارات الإسفلت

Figure 4 : the Accreditation of the Ministry of Civil Service for Road Inspector Diploma

Every training program is implemented independently as required by the company that needs to qualify required Saudi youth in the field of inspection of construction works by identifying the number of candidates and duration of training and coordinating with on-the-job training, which is performed inside the construction or engineering company .

The duration of the program is 2.5 years divided into five periods, Accredited by the Ministry of Civil Service, where graduates are employed under the functional name of Civil Inspector on the sixth rank of first class. There is a possibility to upgrade to civil engineering at an accredited university by the Ministry of Education.

During the program the candidates will study specialized subjects in the field of Civil Engineering (work and laboratories). The training program will focus on English language education during the first year, as well as the training in the fields of construction engineering for mastering the job duties of civil inspectors which include the following:

- Inspect and monitor construction-sites to meet safety standards, building codes and specifications.
- Conduct inspection using survey instruments, measuring devices and test equipment e.g. concrete strength etc.
- Review and interpret plans, blueprints, site layouts, specifications, data/records and construction methods to monitor any changes to the structures.
- Training on AutoCAD and its basic features, in reading and working on drawings.
- Training on the construction materials Engineering and their types and functions.
- Study and review the design and shop drawings plans for electrical and mechanical works in construction projects.
- Engineering tests for quality control of concrete and earthworks.

Second: Development training programs:

Development training program through short courses and workshops for the notable experts with qualification and experience in the field of highway and transportation engineering. Gulf House Institute seeks to upgrade the practice, professionally and technically, through organizing training programs. Figure 5 shows the Training Plan for year 2017.

Gulf House Institute designed and implemented training programs for 3 weeks for the engineers in the Ministry of Municipal and Rural Affairs for the past 6 years.

These programs are accredited by the Ministry of Civil Service, Figure 6 shows the Accreditation of the development programs of the Ministry of Civil Service, And approved by the Minister of Municipal and Rural Affairs, Figure 7 shows the Approval of Minister of Municipal and Rural Affairs for "Applying the General Specifications to Construct the Roads" Program, and Figure 8 shows the brochure of "Applying the General Specifications to Construct the Roads" Program.

الخطة التدريبية لعام ٢٠١٧ م

م	عنوان الدورة	المدة باليوم	تاريخ الدورة	مكان الانعقاد
١	المحسنات الأسفلتية ودورها في مواصفات تنفيذ الطرق الأسفلتية حسب نظام سوبربيف	٣	١٠ – ١٢ ربيع الثاني ١٤٣٨ هـ ٨ – ١٠ يناير ٢٠١٧م	الرياض
٢	تطبيق نظام المعلومات الجغرافي ونظام تحديد الموقع في مسح و تقييم و إدارة الطرق والمرافق	٣	٢٤ – ٢٦ ربيع الثاني ١٤٣٨ هـ ٢٢ – ٢٤ يناير ٢٠١٧م	الرياض
٣	السلامة المرورية في مناطق أعمال تنفيذ وصيانة الطرق	٣	٨ – ١٠ جمادى الأولى ١٤٣٨ هـ ٥ – ٧ فبراير ٢٠١٧م	الرياض
٤	تصميم الخلطات الخرسانية	٣	٢٩ جمادى الأولى – ١ جمادى الآخرة ١٤٣٨ هـ ٢٦ – ٢٨ فبراير ٢٠١٧م	الرياض
٥	الأعمال المساحية وحساب الكميات واستخدام نظام تحديد المواقع العالمي	٣	٦ – ٨ جمادى الآخرة ١٤٣٨ هـ ٥ – ٧ مارس ٢٠١٧م	الرياض
٦	عيوب وأنواع صيانة طبقات رصف الطرق	٣	٢٧ – ٢٩ جمادى الآخرة ١٤٣٨ هـ ٢٦ – ٢٨ مارس ٢٠١٧م	الرياض
٧	تطبيق مواصفات الأعمال المدنية في مشاريع تمديد المرافق العامة	٣	١٩ – ٢١ رجب ١٤٣٨ هـ ١٦ – ١٨ أبريل ٢٠١٧م	الرياض
٨	تصميم الخلطات الأسفلتية بطريقة مارشال	٣	٤ – ٦ شعبان ١٤٣٨ هـ ٣٠ أبريل – ٢ مايو ٢٠١٧م	الرياض
٩	مراقبة وضبط الجودة في مشاريع تنفيذ الطرق والمرافق العامة	٣	٢٥ – ٢٧ شعبان ١٤٣٨ هـ ٢١ – ٢٣ مايو ٢٠١٧م	الرياض
١٠	مواصفات صيانة رصفات الطرق الأسفلتية	٣	٩ – ١١ رمضان ١٤٣٨ هـ ٤ – ٦ يونيو ٢٠١٧م	الرياض
١١	تطبيقات إدارة الصيانة لتحسين أداء الطرق	٣	١٥ – ١٧ شوال ١٤٣٨ هـ ٩ – ١١ يوليو ٢٠١٧م	الرياض
١٢	تقييم و قبول أعمال طبقات رصف الطرق	٣	٧ – ٩ ذو القعدة ١٤٣٨ هـ ٣٠ يوليو – ١ أغسطس ٢٠١٧م	الرياض
١٣	ادارة المشاريع الاحترافية	٣	٢١ – ٢٣ ذو القعدة ١٤٣٨ هـ ١٣ – ١٥ أغسطس ٢٠١٧م	الرياض
١٤	مواصفات وإختبارات التربة والركام في أعمال الطرق	٣	٢٦ – ٢٨ ذو الحجة ١٤٣٨ هـ ١٧ – ١٩ سبتمبر ٢٠١٧م	الرياض
١٥	الأساسيات الفنية للاشراف على تنفيذ الطرق	٣	١١ – ١٣ محرم ١٤٣٩ هـ ١ – ٣ أكتوبر ٢٠١٧م	الرياض
١٦	تقنيات تقييم وتأهيل رصف الطرق	٣	٢ – ٤ صفر ١٤٣٩ هـ ٢٢ – ٢٤ أكتوبر ٢٠١٧م	الرياض
١٧	الاستخدام الصحيح و الأمن للأجهزة النووية في اختبارات مواد الطرق و معايرتها	٣	١٦ – ١٨ صفر ١٤٣٩ هـ ٥ – ٧ نوفمبر ٢٠١٧م	الرياض
١٨	اجراءات الاختبارات الهندسية لمواد المختبرات واجراءات ضبط و تاكيد الجودة	٣	٨ – ١٠ ربيع الأول ١٤٣٩ هـ ٢٦ – ٢٨ نوفمبر ٢٠١٧م	الرياض
١٩	هندسة و سلامة المرور و معايير تحديد المواقع الخطرة	٣	١٥ – ١٧ ربيع الأول ١٤٣٩ هـ ٣ – ٥ ديسمبر ٢٠١٧م	الرياض
٢٠	تقنيات تنفيذ طبقات رصف الطرق لتحقيق متطلبات الاستوائية	٣	٦ – ٨ ربيع الثاني ١٤٣٩ هـ ٢٤ – ٢٦ ديسمبر ٢٠١٧م	الرياض

Figure 5: the Training Plan for year 2017

بسم الله الرحمن الرحيم

KINGDOM OF SAUDI ARABIA
MINISTRY OF CIVIL SERVICE

المملكة العربية السعودية
وزارة الخدمة المدنية

الأمانة العامة للجنة التدريب والابتعاث

إن لجنة تدريب وابتعاث موظفي الخدمة المدنية :-

بناءً على الصلاحيات الممنوحة لها بموجب لائحة التدريب الصادرة بقرار مجلس الخدمة المدنية رقم (١٦) وتاريخ ١٣٩٨/٢/١٩هـ ، وبناء على ما تضمنته السياسة العامة للتدريب الصادرة بتعميم اللجنة رقم (٣٠) وتاريخ ١٣٩٨/٥/٢٩هـ، وبناء على طلب وزارة الشئون البلدية والقروية رقم (٥٥٧٩٥) وتاريخ ١٤٣٥/١٠/٢٤هـ بالموافقة على تنفيذ البرنامج التدريبي (صيانة الأنفاق والجسور) فقد ناقشت اللجنة الموضوع في اجتماعها رقم (٥٩٤) المنعقد بتاريخ ١٤٣٦/١١/٣هـ. و قررت ما يلي:

١- الموافقة على تنفيذ برنامج (صيانة الأنفاق والجسور) ومدته ثلاثة أسابيع بصفة دائمة لدى معهد الطرق العالمي للتدريب.

٢- تطبيق لائحة التدريب على الملتحقين به من الموظفين المشمولين بنظام الخدمة المدنية وفق فئات الوظائف المستهدفة في البرنامج حسب دليل تصنيف الوظائف وهي:
- سلاسل فئات وظائف الهندسة المدنية من المراتب ٧- ١٠.
- سلاسل فئات وظائف مراقبي الإنشاءات من المراتب ٥- ١٠.
- سلاسل فئات وظائف مراقبي الطرق من المراتب ٥- ١٠.

وزير الخدمة المدنية
رئيس لجنة تدريب وابتعاث موظفي الخدمة المدنية
خالد بن عبدالله الصرح

[٥٩٤/١١٦٥٣] ١٤٣٦/١١/٠٣هـ

www.mcs.gov.sa

بسم الله الرحمن الرحيم

الأمانة العامة للجنة التدريب والابتعاث

طلب الإستمرار في تنفيذ برنامج تدريبي

أولا: بيانات عامة عن البرنامج

أسم البرنامج	تطبيق المواصفات العامة لإنشاء الطرق
الجهة التي تشرف على تنفيذ البرنامج	وزارة الشئون البلدية والقروية
اسم الجهة الحكومية المستفيدة	وزارة الشئون البلدية والقروية
نوع البرنامج	[✓] تدريبي [ ] إعدادي
مدة البرنامج	ثلاثة أسابيع

ثانيا: معلومات تفصيلية عن البرنامج

مكان عقد البرنامج	الرياض ـ جدة ـ الدمام ـ حائل ـ أبها .
الجهة التي تقوم بتنفيذ البرنامج	معهد الطرق للتدريب بالرياض
صفة البرنامج	[✓] دائم [ ] مؤقت
مجال البرنامج	[ ] اداري [✓] فني [✓] مهني
مستوى البرنامج	[ ] مبتدئ [ ] متوسط [✓] متقدم

ثالثا: قرار اللجنة — رقم القرار [٥٤٩/٦٣٥٠] التاريخ ١٤٣٤/٠٤/٠٩هـ

بناء على خطاب وكيل وزارة الشئون البلدية والقروية للتخطيط والبرامج رقم (٨٠٤٧) وتاريخ ١٤٣٤/٠٢/١٣هـ بشأن طلب الإستمرار في تنفيذ برنامج (تطبيق المواصفات العامة لإنشاء الطرق) ومدته ثلاثة أسابيع ، و بناءً على الصلاحيات الممنوحة للجنة تدريب وابتعاث موظفي الخدمة المدنية بموجب لائحة التدريب الصادرة بقرار مجلس الخدمة المدنية رقم (١٦) وتاريخ ١٣٩٨/٢/١٩هـ ، وبناء على ما تضمنته السياسة العامة للتدريب الصادرة بتعميم اللجنة رقم (٣٠) وتاريخ ١٣٩٨/٥/٢٩هـ، وبناء على قرار اللجنة رقم (٤٦٢/٥٥٥) وتاريخ ١٤٣٠/٠٥/١٧هـ القاضي بالموافقة على تنفيذ البرنامج بصفة مؤقته، فقد تمت مناقشة الموضوع في اجتماع اللجنة رقم (٥٤٩) المنعقد بتاريخ ١٤٣٤/٠٤/٠٩هـ ، و قررت :

الموافقة على الاستمرار في تنفيذ برنامج (تطبيق المواصفات العامة لإنشاء الطرق) ومدته ثلاثة أسابيع بصفة دائمة ، وإخضاع الملتحقين به لأحكام لائحة التدريب من الموظفين المشمولين بنظام الخدمة المدنية شاغلي الوظائف المستهدفة للبرنامج وهي : سلسة فئات وظائف الهندسة المدنية من المرتبة (٥- ١١) وسلسة فئات وظائف مراقبي الإنشاءات من المرتبة (٥- ١١) وسلسلة فئات وظائف مراقبي الطريق من المرتبة (٧- ١١).

وزير الخدمة المدنية
رئيس لجنة تدريب وابتعاث موظفي الخدمة المدنية
د. عبدالرحمن عبدالله المبارك

صورة للأمانة العامة للجنة التدريب والابتعاث

الأصل للتنبيه
صورة للإدارة العامة للتنمية للمعلومات

Figure 6 : the Accreditation of the development programs of the Ministry of Civil Service

Figure 7 : the Approval of Minister of Municipal and Rural Affairs for "Applying the General Specifications to Construct the Roads" Program

Figure 8: Brochure of "Applying the General Specifications to Construct the Roads" Program

Globally, Gulf House Institute collaborated with major international consulting firms as well as international universities and institutes, and organized several specialized courses outside the KSA.

Gulf House Institute held specialized courses in public transport systems from the beginning of 2006, and this effort resulted to starting the public transport studies in the KSA, and the Kingdom allocated large budget for studies and designs, and create these systems.

Gulf House Institute organized a course in Paris, 2006 (Figure 9), Included all the public transportation systems and their Properties and economics of operation.
Gulf House Institute held a course on (Rail public transportation) in Madrid 2014 (Figure 10).

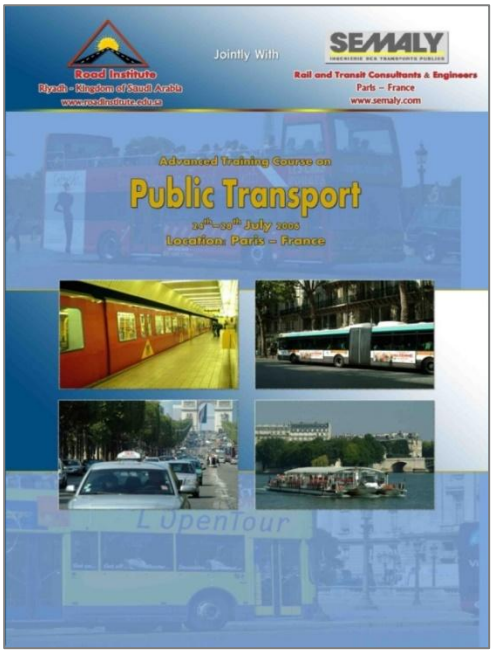


Figure 9: Brochure of "Public transport" Training Course, Paris, 2006

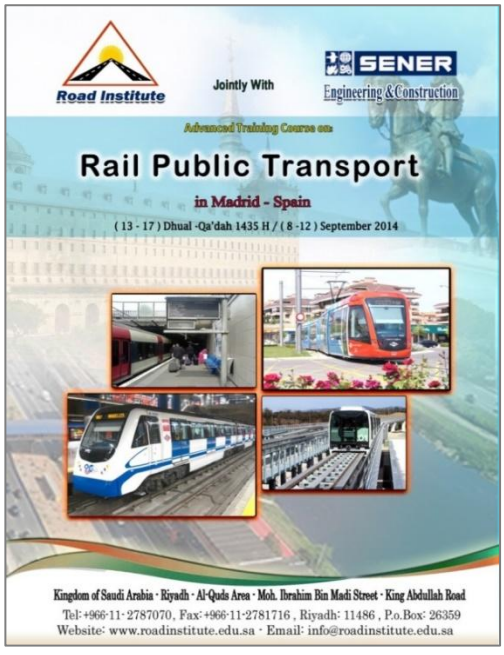


Figure 10: Brochure of "Rail public transportation" Training Course, Madrid 2014

In addition to the Training Courses of public transport, Gulf House Institute organizes specialized courses in many countries, including:

- Engineering and management in Stockholm, Sweden in 2003 (Figure 11).
- Pavement evaluation and rehabilitation technology in Nottingham, United Kingdom, 2004 (Figure 12).
- Traffic engineering and safety in Stockholm, Sweden, 2005 (Figure 13)
- Pavement evaluation and rehabilitation technology in Cologne, Germany, 2005 (Fig. 14)
- Pavement and asphalt evaluation and Maintenance in Stockholm, Sweden, 2006, (Figure 15)
- Road and airprt Pavement evaluation technology in Melbourne , Australia, 2008, (Figure 16).

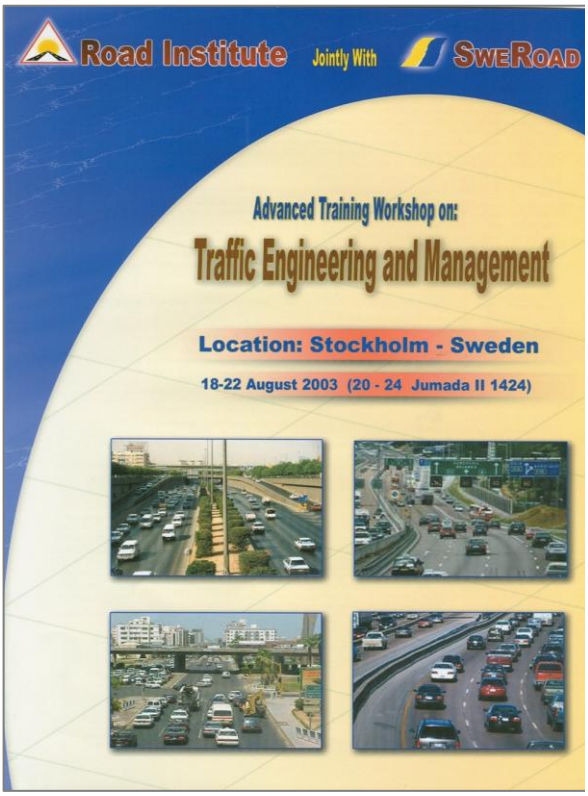


Figure 11: Brochure of "Traffic engineering and management" Training Course, Stockholm, Sweden in 2003

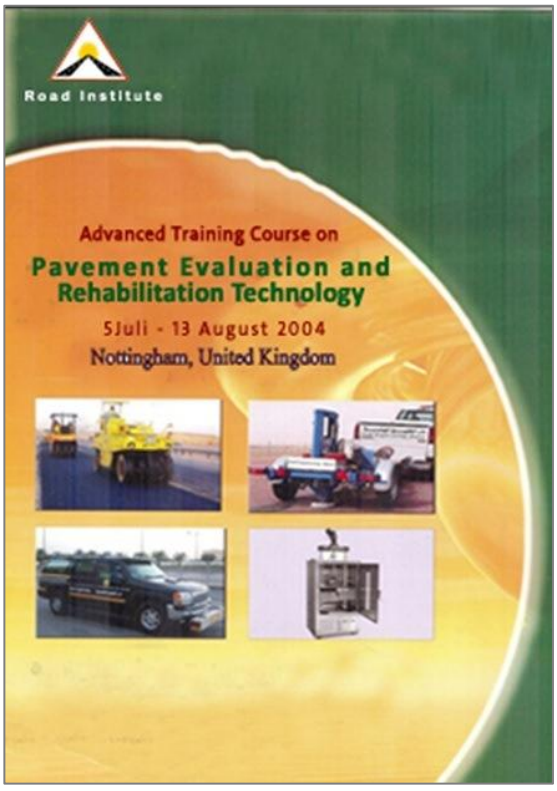


Figure 12: Brochure of "Pavement evaluation and rehabilitation" technology" Training Course, Nottingham, United Kingdom, 2004

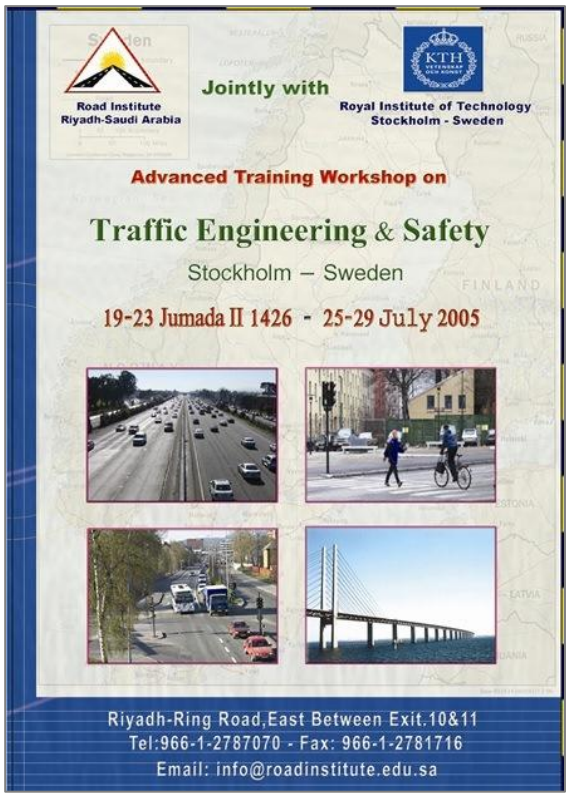


Figure 13: Brochure of "Traffic engineering and Safety" Training Course, Stockholm, Sweden in 2005

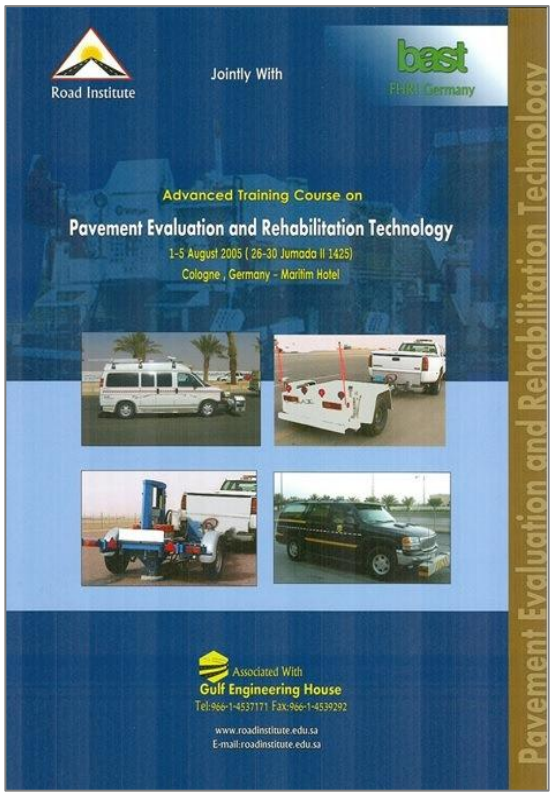


Figure 14: Brochure of "Pavement evaluation and rehabilitation technology" Training Course, Cologne, Germany, 2005

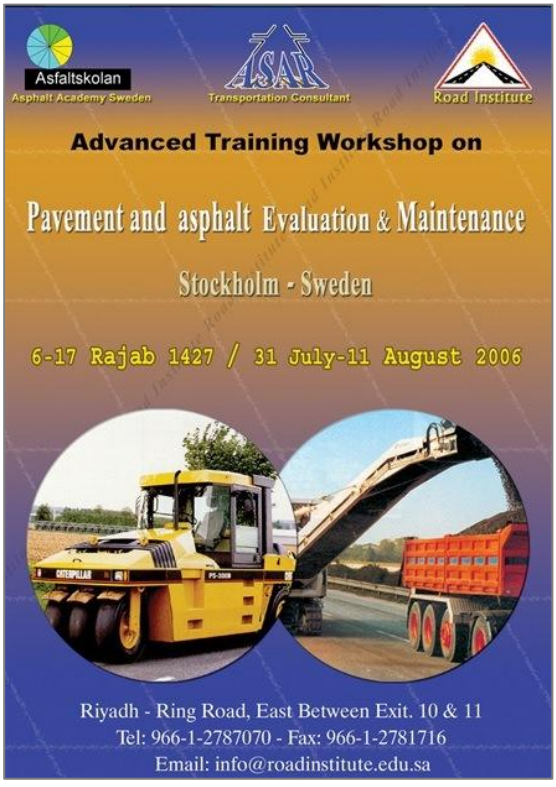


Figure 15: Brochure of "Pavement and asphalt evaluation and Maintenance" Training Course, Stockholm, Sweden in 2006

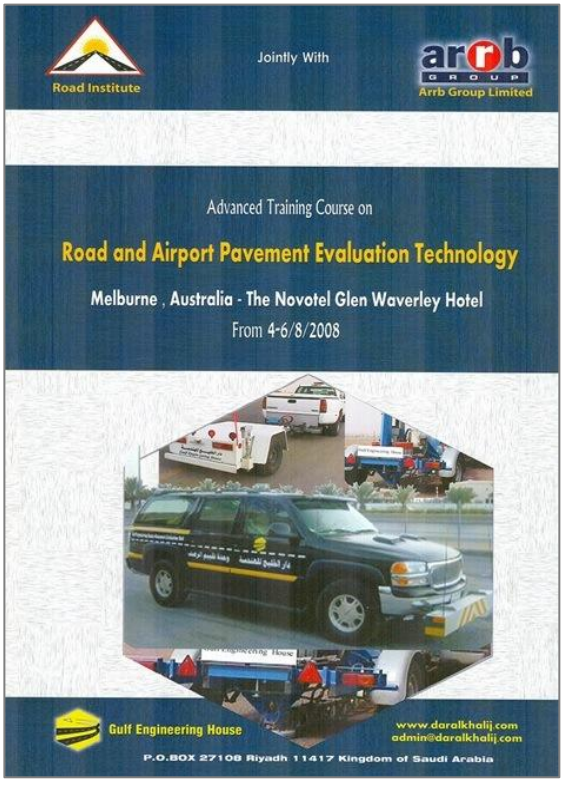


Figure 16: Brochure of " Road and airprt Pavement evaluation technology" Training Course, Melbourne , Australia, 2008

Engineering System Technology (Technological arm of GULF ENGINEERING HOUSE).

1. Introduction:

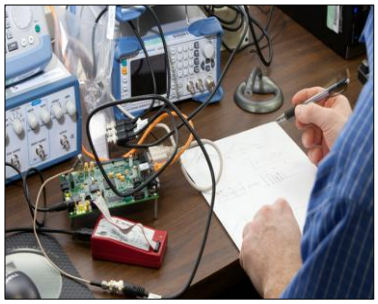
Engineering System Technology EngTech, is established in Saudi Arabia having it is head office at Riyadh and having branches at Dammam, Jeddah, Makkah, Madinah, Qaseem, distinguished reputation of high experience and profession in the Middle East and Gulf Region.
The Calibration and Maintenance Division of Engineering Systems Technology was established to address the company's requirements for technical support of its growing number of equipments and Calibration
Recently, the Calibration and Maintenance Division took another step in improving the efficiency of all EngTech assets. Through the purchase of various Equipment and laboratory calibration the EngTech now offers to sales Pavement Evaluation Equipment and Materials laboratory testing machine.

2. Calibration Laboratory

Reduce your Risk with EngTech Calibration Laboratory

We all know that calibration is often required by an organization's internal quality standards or by various international or national standards or laws. Sometimes over-looked is the key role proper calibration can play in minimizing your costs and reducing the risks to your business or research. Regular calibration identifies, controls, and can even prevent changes in the accuracy of an instrument over time.

EngTech Has National Presence with Qualified People to Meet Your Needs



- ✓ EngTech expert calibration service is available virtually anywhere.
- ✓ Factory trained staff maintain the highest level of quality and calibrate consistently to 'best practice' procedures no matter where they are located.
- ✓ EngTech's quality and international acceptance is demonstrated by having obtained accreditation ISO/IEC 17025 from Saudi Accreditation Committee (SAC).

EngTech Expertise will optimize performance and Extend Useful Life

- ✓ Expert preventive maintenance of your equipment extends its useful life and reduces your costs.
- ✓ As the original designer and manufacturer of the equipment, EngTech has the expertise to make the necessary adjustments or repairs so that the calibration is optimized.
- ✓ EngTech calibration's low uncertainties of measurement help you minimize the uncertainties associated with your data, and allow calibration of your instrument to its full potential.

High Quality Calibration That You Can Trust

Backed by a large engineering department and over experience working locally, nationally with the materials testing community, standards bodies, regulatory authorities and national measurement institutions

- ✓ All measurements are traceable to internationally recognized centers of primary measurement such as NPL in London and NIST in Washington
- ✓ All staff are factory trained and independently approved by the accreditation body
- ✓ All methods and software are documented and validated

We Make Life Easier For You

- ✓ On site calibrations
- ✓ We calibrate most types and brands of materials testing machines
- ✓ We calibrate all parameters critical to obtaining good data from your testing instrument
- ✓ We keep track of re-calibration dates, so we can call ahead of time, and schedule convenient and timely re-calibrations
- ✓ Your data is well managed. Critical information about your equipment is stored in our databases for up to 5 years as well as all c alibration data and reports.

Certificate and Scope of Accreditation

Our Calibration Laboratory is ISO 17025 Accredited by Saudi Accreditation Committee SAC

KINGDOM OF SAUDI ARABIA
SAUDI ACCREDITATION COMMITTE

المملكة العربية السعودية
اللجنة السعودية للاعتماد

NO. .... الرقم
ATTACH. .... المرفقات
SUB. .... الموضوع
Dep. .... إدارة
Date .... التاريخ

(٧٥ع/١٤٣٤)
الاختبارات المعتمدة لمختبر المعايرة التابع لمؤسسة تقنية الأنظمة الهندسية بالرياض

Item No.	Equipment to be Calibrated	Measurand	Capability	Best Measurement Capability	Reference Standard / Method
A.	DIMENSIONAL				
1.	Calibration of Caliper	Internal Length, External Length, Depth	0 to 1000mm	±1 µm	ISO 13385
2.	Calibration of Micrometer	Internal Length, External Length, Depth			ISO 3611, BS 6468, BS 959
3.	Calibration of Feeler Gauge	External Length	[illegible]	±0.00068mm	BS 957
4.	Calibration of Dial Gauge	External Length	0–20mm		BS EN ISO 463 JIS B 7503
5.	Calibration of Dial Test Indicator	External Length	[illegible]		BS EN ISO 9493 JIS B 7533
6.	Calibration of Angle Measuring Equipment	Angle	[illegible]	[illegible]	ISO 2768
7.	Calibration of Pin Gauge	External Length	[illegible]	±0.00068mm	Manufacturer's Manual
B.	MASS				
8.	Calibration of Weighing Instrument	Mass	Class E2 1mg–20Kg, Class F1 1g–1000g, Class M1 1Kg–20Kg	±0.006mg to ±30 mg, ±0.1mg to ±5mg, ±30mg to ±1g	OIML R 76
C.	FORCE and TORQUE				
9.	Calibration of Torque Tool	Torque	[illegible]	0.085%	ISO 6789
10.	Calibration of Force Measuring Instrument	Force	10kN–3000kN	0.08%	ASTM E74
D.	TEMPERATURE				
11.	Calibration of Thermometer	Temperature	[illegible]	[illegible]	ASTM E77
12.	Calibration of RTD Sensor				Manufacturer's Manual
13.	Calibration of Thermocouple Sensor				EURAMET CG-08
14.	Calibration of Temperature Recorder				Manufacturer's Manual
15.	Calibration of Temperature Indicators				EURAMET CG-11
16.	Calibration of Infrared Thermometer	Temperature	[illegible]	±0.02°C	Manufacturer's Manual
17.	Calibration of Temperature Block Calibrator	Temperature	[illegible]	±0.2°C	EURAMET CG-13
E.	PRESSURE				
18.	Calibration of Pressure Gauge	Pressure	0–70MPa	[illegible]	BS EN 837, DKD R-6 1
19.	Calibration of Vacuum Gauge				

Page 1

P.o Box : 3437 - Riyadh 11271
Tel : 011 4520000 - Fax : 011 4569913

SAC DECLARES THAT
Engineering Systems Technology
Calibration Laboratory-Riyadh

تشهد اللجنة السعودية للإعتماد بأن
مختبر مؤسسة تقنية الأنظمة الهندسية للمعايرة - الرياض

HAS BEEN ACCREDITED TO CARRY OUT THE TESTS MENTIONED IN THE ACCOMPANYING LIST ACCORDING TO LABORATORY ACCREDITATION REGULATIONS AND ACCORDING TO SASO/ISO 17025 FOR THE PERIOD FROM 02/10/2013 TO 09/09/2015

تم إعتماده لأداء الاختبارات المذكورة في القائمة المرفقة مع هذه الشهادة، وفقاً للائحة إعتماد المختبرات والمواصفة القياسية السعودية أيزو ١٧٠٢٥ وهذه الشهادة سارية المفعول للفترة من ١٤٣٤/١١/٢٦هـ حتى ١٤٣٦/١١/٢٥هـ

Certificate No : 75N \1434
رقم الشهادة : ٧٥ع/١٤٣٤

Date of Issue: 02/10/2013
تاريخ الإصدار: ١٤٣٤/١١/٢٦هـ

رئيس اللجنة
Chairman of (SAC)
سعد بن عثمان القصبي
Saad O. Alkasabi

3. Sales

Roughness Profiler

Engtech offer you a professional and highly specialized range of survey products designed to meet the most demanding survey applications. The modular design of the system enables complete scalability for future growth and can be installed in a wide variety of vehicles due to its limited requirement of computer hardware.

Applications:

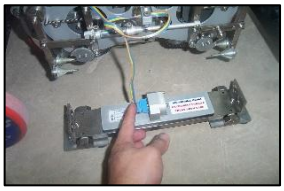
- Network and project level road and asset collection surveys,
- Routine pavement monitoring surveys,
- Roadside inventory and asset management,
- Road geometry and mapping surveys, contractor quality control,
- Road safety assessment and Airport runway maintenance.

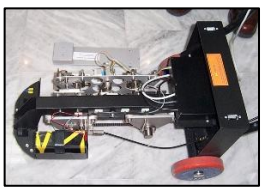



Walking Roughness Profiler

The Walking Profiler G2 is the second generation of ARRB's successful WP. It is a precision instrument designed to efficiently collect surface profile data. These data can be used to accurately assess the characteristics and quality of any continuous paved surface. Typically, the surface profile is used to generate a number of internationally recognized roughness, ride quality and pavement maintenance indices.







Roughometer

- The Roughometer III is a cost-effective, easy to install, portable device which provides objective and repeatable roughness results.
- The Roughometer III is a World Bank Class 3 roughness measurement device, which actually exceeds the specifications of the category.
- provide objective data for true evaluation of the roughness level of the road,
- objectively compare and analyze which roads are in need of repair,
- Monitoring roughness deterioration trends.

Ground Penetrating RADAR

- The Penetradar Integrated Radar Inspection Iris (IRIS) is an automated radar based system for non-destructive inspection of highways and bridge deck pavement solving the problem of radar data interpretation and ease of use
- The IRIS consists of Penetradar ground penetrating radar technology.

Deflectometer

- The Falling weight deflectometer FWD deflection data, together with other data, are used in the management of Network Maintenance Contracts
- The HWD can properly introduce anticipated load/deflection measurements on even heavy pavements such as airfields and very thick highway pavements.
- The wider loading range also provides the consultant with a load deflection instrument appropriate for both roads and airfields as required

Friction Meter

- The Runway Friction Meter (Mu-Meter) is a surface friction measuring and reporting system for testing airport runways, taxiways and road surfaces.
- The equipment consists of a small three-wheeled trailer incorporating electronic measuring systems, which operate in conjunction with a computer carried in the chosen towing vehicle.

Nuclear Gauge

- Portable surface meter designed to make rapid nondestructive determinations of density and moisture in soils, embankments, sub-base, base, asphaltic, concrete, and other construction materials with a density range of 70-170 pounds per cubic foot (PCF), or 1.12 – 2.72 kg/l, and a moisture range of 0 – 45 PCF or 0. 0.72 kg/l.

Traffic Counter

- Portable Advanced Data Recorder (ADR) is one of the most advanced,
- Simple-to-operate instruments for counting, classification and monitoring of traffic.
- It is completely self-contained, and includes all display and keypad facilities for configuring, data collection and live monitoring.

Various Material Testing Apparatus

EngTech provide range of laboratory equipment including Soil, Aggregate, Concrete, asphalt and Superpave equipment.




Maintenance

EngTech is to provide Repair, Maintenance and Set up laboratory for asphalt, soil and concrete machine and instrument, it all 100% Guaranteed services, as per the standard requirements for ASTM and AASHTO. We also provide technical services across Saudi Arabia at very reasonable Rates.

Why choose us?

- Fast and reliable, quality service
- Professional Conduct
- Highly Trained and Experienced Technicians/Engineers
- Obligation-Free Quotation Service
- Fully Insured

4. Certification

شهادة اعتماد
Accreditation Certificate

المركز السعودي للاعتماد
Saudi Accreditation Center

يشهد المركز السعودي للاعتماد(SAAC) بأن
Saudi Accreditation Center (SAAC) Declare that

Gulf House Lab For Construction Materials

العنوان: الرياض
المجال : التشييد والبناء

مختبر دارة الخليج لمواد البناء
Address: Riyadh
Scope : Construction

قد حقق متطلبات المركز السعودي للاعتماد (SAAC) وتم اعتماده وفقاً لمتطلبات المواصفة القياسية
آيزو/ آي إي سي **17025 : (2017)** (المتطلبات العامة لكفاءة مختبرات الفحص والمعايرة) وذلك في المجال الملحق بهذه الشهادة
Has met the Requirements of Saudi Accreditation Center (SAAC) and has been accredited in compliance with ISO/IEC **17025:(2017)** (General requirements for the competence of testing and calibration laboratories) for the scope attached with this Certificate

هذه الوثيقة مرسلة من النظام الآلي ولا تحتاج إلى توقيع
للتحقق من صلاحيتها يرجى مسح رمز الاستجابة أسفل الصفحة

07/10/1446 : تاريخ الانتهاء / Expire Date

05/09/1443 :تاريخ الاصدار /Issue Date

N-T-00162

Certificate of the Saudi Accreditation Committee