

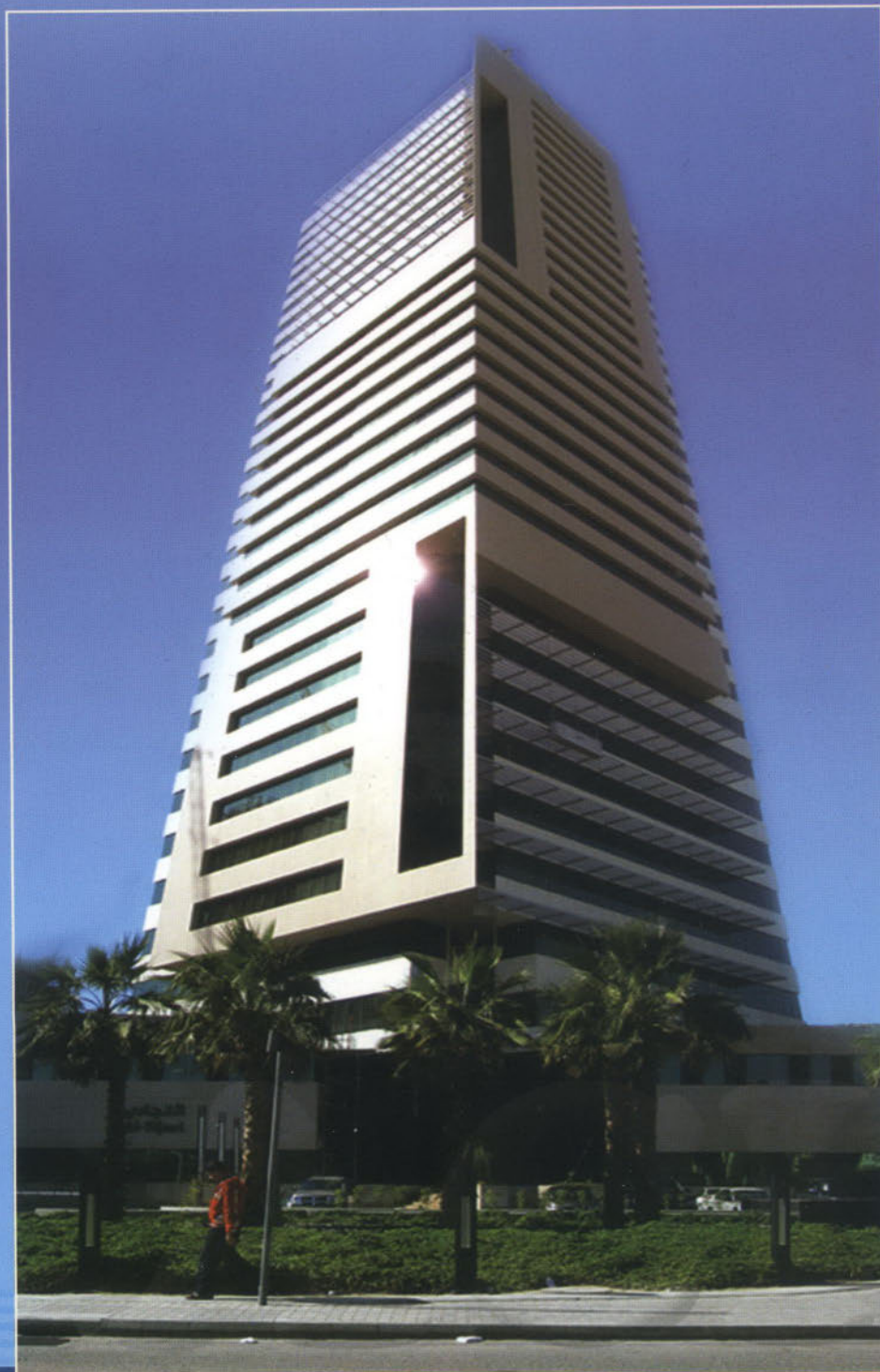


KUWAIT CHAPTER

CONCRETE NEWS

Volume 11 - No. 1

June '08 - November '08



PUBLISHED BY
American Concrete Institute
Kuwait Chapter

www.aci.kuwait.org

E-mail: info@aci.kuwait.org

CONCRETE NEWS

Concrete News is published periodically by ACI-Kuwait Chapter for information sharing, prolific exchange of technical knowledge among members, and enhancement of the Chapter's position within the engineering community.



CONCRETE NEWS

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Kuwait Chapter



Dr. Hasan Kamal

From the President's Desk

Serving the Construction Industry

The construction industry is currently expanding in Kuwait and the Gulf Region. Kuwait is one of the leading and advanced countries in the region with great interest in education and development. Our duty as engineers is to direct and advise the engineers and decision makers through codes, standards, specifications and technical regulations toward advancement of this industry. The technical awareness must be increased to the level that reaches the expected advancement in the industry via further technical education, research and development.

The mission of the ACI-KC is to develop, distribute and share technical knowledge and information, and to infuse discipline among practicing engineers. To achieve our mission this year, several activities are arranged to expose our engineers to the latest technologies related to the concrete industry and also to encourage direct contacts for discussion and debate. Involvement of the young engineers in the ACI-KC activities is highly promoted.

In the last 11 years, we achieved our goals through different activities and strategies such as arranging scientific seminars, international conferences and Diwaniya to serve as a venue to discuss wide range of technical problems, technical guides related to the special characteristics of buildings and requirements in Kuwait, periodical newsletter, training courses, field trips, social events, and annual awards programs in recognition of individuals and distinguished projects in Kuwait.

The committees of the chapter have started their activities for this year. All our individual and organizational members are highly encouraged to effectively participate in the ACI-KC activities. Your technical contribution, support, participation and advice are essential to achieve our goals. We are ready to consider any comment, suggestion or idea in mind. Therefore, let us all work together toward a productive and progressive year.

About ACI-Kuwait Chapter

The three main bodies of the Chapter are its
Directors, Committees, Members.

Board of Directors

Members of the Board of Directors are elected by the Members of the Chapter after being nominated by the Nomination Committee. There are nine members of the Board of Directors:

Board of Directors 2008 - 2009

President:	Dr. Hasan Kamal
Vice President:	Ms. Hayfaa Al- Mudhaf
Past President:	Mr. Ahmad A. Al-Jihayem
Director:	Dr. Naji Al-Mutairi
Director:	Mr. A.W. Rumani
Director:	Dr. Khaldoun Rahal
Director:	Mrs. Ebtisam Al-Kazemi
Director:	Dr. Saud Al-Otaibi
Director:	Mr. Mansour Rao

The terms of office of the President and the Vice - President cover a maximum of one year. The Directors are elected every year to serve a three-year term.

The Membership Committees aim to perform these tasks as follows:

• Recruiting new member individuals and organizations.	Chairperson	Mrs. Hana Hashem
• Issuing and renewing membership certificates.	Co-Chair	Mr. Mohamad Harb
• Publishing and updating chapter directory of membership.	Member	Mr. Mohamed Adel El Amir
• Facilitating communication among members and communicating to the Board of Directors and other established student chapter.	Member	Mr. Reynaldo C. Muyaide
	Member	Mr. A.W. Rumani
	Member	Mr. Mohamad Adel El-Amir

The Technical Committee's main activities cover the following:

• Identifying technical topics of interest to Chapter Members and recommendations to the Chapter for seminars, short courses and workshop on the topics.	Chairperson	D. Moetaz El-Hawary
• Reviewing and submitting to Chapter members of ACI International committee reports of relevance to Kuwait	Co-Chair	Dr. Khaldoun Rahal
• Reviewing proposed revision of ACI Standards and submitting reviewed comments to the Chapter's Board of Directors for submission to ACI International.	Member	Mr. Mohamad Harb
• Promoting local research and testing programs to resolve technical issues of importance for durable concrete construction in Kuwait.	Member	Dr. Hasan Kamal
	Member	Dr. Mohamed Hafez Mathana
	Member	Mr. A.W. Rumani



Kuwait Chapter

The Publication Committee has for its main activities as follows:

- | | | |
|---|-------------|--------------------------|
| <ul style="list-style-type: none">• Publishing the periodic newsletter to inform of Chapter activities and provide general information of use to Chapter membership.• Printing and distributing copies of technical reports to Chapter members, as well as to interested individuals and concerned bodies.• Preparing meeting reports and Chapter news for submission for publication in the Concrete International Magazine. | Chairperson | Dr. Saud Al-Otaibi |
| | Co-Chair | Ms. Hayfaa Al-Mudhaf |
| | Member | Mr. A.W. Rumani |
| | Member | Dr. Mohamed Hafz Mathana |
| | Member | Mr. Ahmed Abdel Rahman |

The Social Committee works on the main activities as follows:

- | | | |
|---|-------------|----------------------------|
| <ul style="list-style-type: none">• Organizing annual recreational activities for Chapter members.• Organizing representation of the Chapter at selected national events.• Organizing field trips to major construction projects. | Chairperson | Ms. Dana Drobiova |
| | Co-Chair | Mr. Mohamad Harb |
| | Member | Dr. Mohammed Hafez Mathana |
| | Member | Ms. Hana Hashem |
| | Member | Mr. Ahmed Abdel Rahman |

The Nominating Committee members are elected every year:

- | | | |
|--|-------------|-------------------------|
| <ul style="list-style-type: none">• The nominating committee selects individuals who have the interest and the willingness to serve, as well as those possessed of leadership qualities for selection to the Board of Directors and Chapter offices. The committee submits their names before the annual general selection by Chapter members. | Chairperson | Mr. Ahmed A. Al-Jihayem |
| | Member | Mr. Waleed Barakat |
| | Member | Ms. Suad Al-Bahar |
| | Member | Dr. M. Naseer Haque |

ACI - Key to success



**ACI
Kuwait
Chapter
Wants You**

You already know the benefits of the American Concrete Institute International membership, but have you considered the benefits of belonging to your local ACI chapter? The local Kuwait Chapter functions as a distribution center on latest information and ideas. You'll find professionals with ready answers to local concrete problems you encounter everyday.

Fill out coupon below and fax it to **2428148**. Complete details on ACI Chapter affiliation will follow immediately.

Send the fax to ACI Kuwait Chapter

Name: _____

Company: _____

Fax or Address: _____

The opinions expressed in Concrete News are those of the authors and do not necessarily reflect the views of ACI-Kuwait Chapter.

Spotlight

In the Spotlight

Born in 1952, Mansoor Rao graduated from the prestigious NED Government Engineering College (upgraded as Engineering University) in Karachi, Pakistan. He launched his career with the largest Private Consulting Firm of Pakistan M/s Engineering Consultant as Junior Design Engineer, and within years positioned as Chief Engineer (Structural Design), and stayed with the company for about 18 years. In 1993, he came to Kuwait and joined one of the top Consulting Offices M/S Gulf Consult and served this office for the last 15 years. At present, he holds the position of Associate/Chief Structural Engineer.



Mansoor Rao

Work Experience:

Mansoor Rao has thirty-three years of professional experience in structural design of multistoried complexes, commercial, educational, residential, recreational, hotels, hospitals and office buildings, terminal buildings and hangers, industrial project (Sugar Mills, Textile Mills, glass factories, rubble waste plants), silos, bridges and culverts, runways and taxiways, sewerage and water treatment plants, etc.

- American Concrete Institute – Kuwait Chapter
- American Institute of Steel Construction

Family:

Mansoor Rao has five Children – Kashif, Atif, Sadaf, Sana and Moiz and five grandchildren.

Hobbies:

Reading and Walking

Education:

Bachelor of Engineering (Civil) 1975 from NED Government Engineering College, Karachi-Pakistan.

Membership in Professional Organizations.

- Kuwait Society of Engineers, Kuwait
- Institute of Engineers, Pakistan
- Pakistan Engineering Council, Pakistan
- American Concrete Institute – International, USA
- American Concrete Institute – Kuwait Chapter

Annual Award

Keeping up with the American Concrete Institute Kuwait Chapter tradition, the Annual Award Banquet was held on 21 May 2008. The event was held under the patronage of His Excellency, Engineer Mousa H. Al Sarraf, Minister of Public Works (MPW) and Minister of Municipality at Al-Babtain Central Library for Arabic Poetry and was attended by a large number of colleagues from various disciplines of the building industry along with the ACI members. The award of achievement, presented by ACI-KC to an individual in recognition of his outstanding contribution to the Engineering Community in Kuwait, was given to Mr. Ghazi Fahed Al-Nafesi for his services and achievements for more than 40 years and his visionary leadership and contribution to the development of high

quality projects. The Award of Excellence presented to a local outstanding project, was given to Al- Dhow Tower project for being a state-of-the-art signature concrete building. The award was given to Injazzat Company; the Owner and Developer of the project, Dar Al-Jazera Consultants; the Architect and Structural designer and Ahmadiyah, the Contractor and Concrete Supplier. Socials and dinner concluded the ceremonies.



His Excellency Engineer Mousa H. Al Sarraf, Minister of Public Works (MPW) and Minister of Municipality



s Ceremonies



Annual Awards Ceremonies Tour

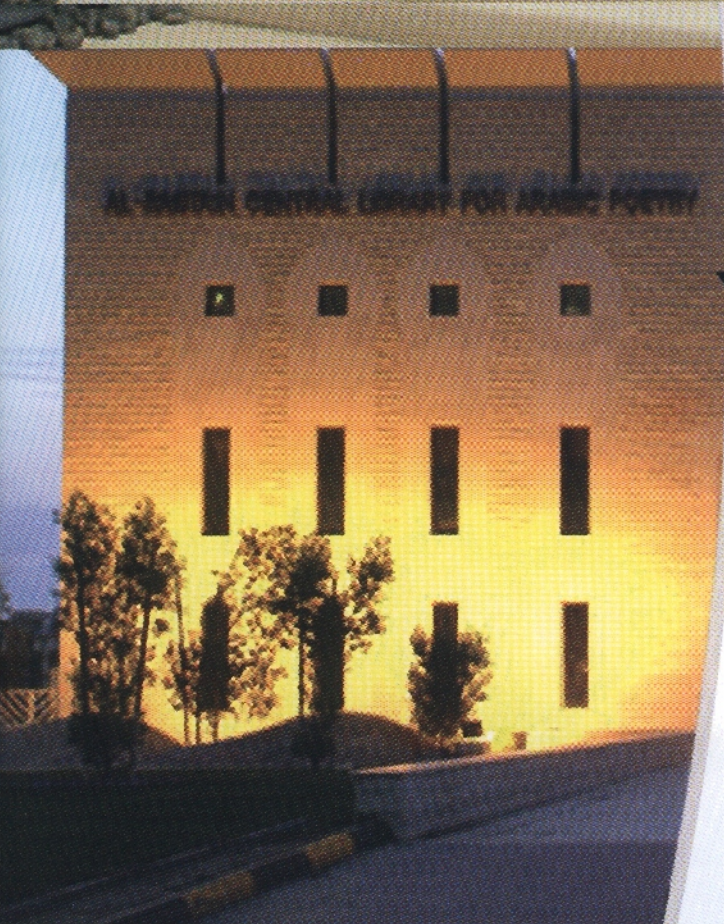
The participants were treated to a tour of the ceremonies venue at the Al-Babtain Library of Arabic Poetry. Their eyes feasted on a huge fantastic poetry collection. They had the chance to be entertained in the amazing world of the arts, particularly in the poetry genre in addition to the latest state-of-the-art facilities and information technology.

It was truly a notable unforgettable experience.



The guest/visitors inside the
Al-Babtain Library of Arabic Poetry





Annual Award

Award of Achievement 2007-2008

Mr. Ghazi Fahad Al-Nafisi

Over 40 Years of Visionary
Leadership and Contribution to Development



ACI – Kuwait Chapter presents the Award of Achievement to an individual in recognition of his/her outstanding contribution in the field of concrete in the State of Kuwait.

This year 2007-2008, Mr. Ghazi Fahad Al-Nafisi was selected as the recipient of the award because of his over 40 years of visionary leadership and contribution to development.

Mr. Ghazi Fahad Al-Nafisi born in Kuwait on 22 November 1941, graduated from Victoria High-School in Cairo 1962; was granted a Diploma of Aeronautical Engineering from Chelsea College University of London, 1965.

Professional Career:

- 1967 – 1976 Chairman & General Manager – Kuwait Aviation Fueling Company .
- 1972 – 1973 KAFCO airport pipeline (He saved KFCO millions by taking early initiative and acting as a general contractor)
- 1971 – 1976 Board Member – Kuwait National Petroleum Co.
- 1974 to Date Salhia-K.S. Chairman and Managing Director, Co-founder of Salhia Real Estate.Co.



s Ceremonies



What Makes Him Special ?

- Visionary : At a very early age, he founded one of the most successful shareholding development companies.
- Is personally involved with his projects.
- Every project, a "living being" to be cared for until its maturity is his major philosophy.
- Established a Culture of Quality in projects which is evident in Salhia's properties.
- Invested in Quality
- Has Strong People-Management & Skills
- Has Business Leadership & Entrepreneurial spirit.
- "Development is the hard way of making money in real estate, but it is the most gratifying, because it is challenging, and has a lasting legacy."



Business Leadership

- Vice Chairman (Co-Founder/Member) – Independent Petroleum Group s.a.k
- Chairman – Kuwait Hotels Owners Association
- Vice Chairman – Azzad Catering & Services Co.
- Chairman – Gulf Investment Company – Bahrain
- Chairman & Managing Director – National Investment Company – Kuwait



Annual Awards Ceremonies

Award of Excellence 2007-2008

AL DHOW TOWER

A State-of-the-Art & Signature Concrete Building

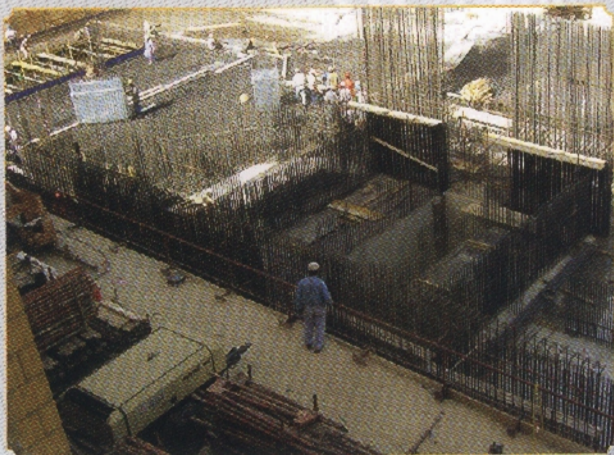
ACI - Kuwait Chapter presents the award of excellence to a project in recognition of its outstanding work in concrete construction and practices within Kuwait.

The Award of Excellence, year 2007-2008 was presented to Al-Dhow Tower Project, located in downtown Kuwait.

Dhow Tower innovative design is a Landmark Concept through these three components. Structural & service core, slazed triangular front view element, and protection skin with horizontal treatment. In addition, using simple irregular rhythm from one façade to another has created iconic views from all sides of the building.

It should be mentioned here that the name of the tower (Dhow) refers to a type of large-sized ships, manufactured locally from wood. It is also a symbol of the extension work of the past generation and present generations, adding that Dhow Tower is a sophisticated building but it meets reasonably economical standard.





The tower construction, which lasted for 18 months and was designed with an artistic style reflects the rich heritage of Kuwait. It was of modern appearance and offers a wide range across the glass surfaces of Kuwait City and beaches. It features residential units and open spaces allowing a great degree of flexibility and convenience. It carries 33 floors in addition to the ground floor and a basement. The total actual built-up area is around 24,129 sq. meters.

The Award was presented to :

- Owner : Injazzat Real state Development Company
- Co-recipients are:
- Ahmadiyah Contracting & Trading Co. as Main Contractor & Concrete Supplier .



Technical Activities

Symposium

Promoting the dissemination of information and encouraging continuous education are the main components of the ACI- Kuwait Chapter mission. The chapter participated in sponsoring the First Symposium of Concrete in Kuwait, which was held in Sheraton Hotel on the 21st and 22nd of October 2008. The event was organized by Bubiyan Ready Mix and Index companies.

The president of the ACI-KC, Dr. Hasan Kamal delivered the ACI-KC opening speech, and Dr. Moetaz El-Hawary, chairperson of the Technical Committee, presented a seminar entitled "ACI Kuwait Chapter's Technical Reports" where he talked about the chapter's technical activities with emphasis on the technical guides.

ACI-KC Director Dr. Kaldoun Rahal presented a seminar entitled Concrete with Future Emphasizing Sustainability of the Concrete Industry and the Use of a More "Green" Concrete.

On the second day of the activity, Dr. Moetaz participated in presenting a workshop entitled "Hot Weather Concreting: Materials and Special Considerations".

The successful event has attracted a large number of engineers and was highly appraised by the attendees.







Kuwait Chapter

Benefactors.....Sponsors.....Friends.....

Your support and your willingness to share knowledge are highly appreciated



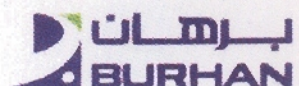
فوق العصور للاستشارات الهندسية
Futouh Al-Azfoor Consultant Engineers
Architects, Engineers & Planners



AL-BAHAR & BARDAWIL
specialities w.l.l.



شركة اسمنت الكويت
KUWAIT CEMENT COMPANY





Kuwait Chapter

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TRADING & CONTRACTING CO.
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doka
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ALGHANIM SPECIALITIES CO. W.L.L.



الأميرة للصناعة الحماة

HIGH SLANT
PRECAST FACTORY

Al-Taneeb Trading Co.



شركة الطيب التجارية



كويتي تيك
K-UBANI TEK CONSULTANTS الهندسة والاستشارات الهندسية



DEH



Bubiyan
Ready-Mix



بوبيان
للخرسانة الجاهزة



Muba Mix
DIGITALLY LOADED

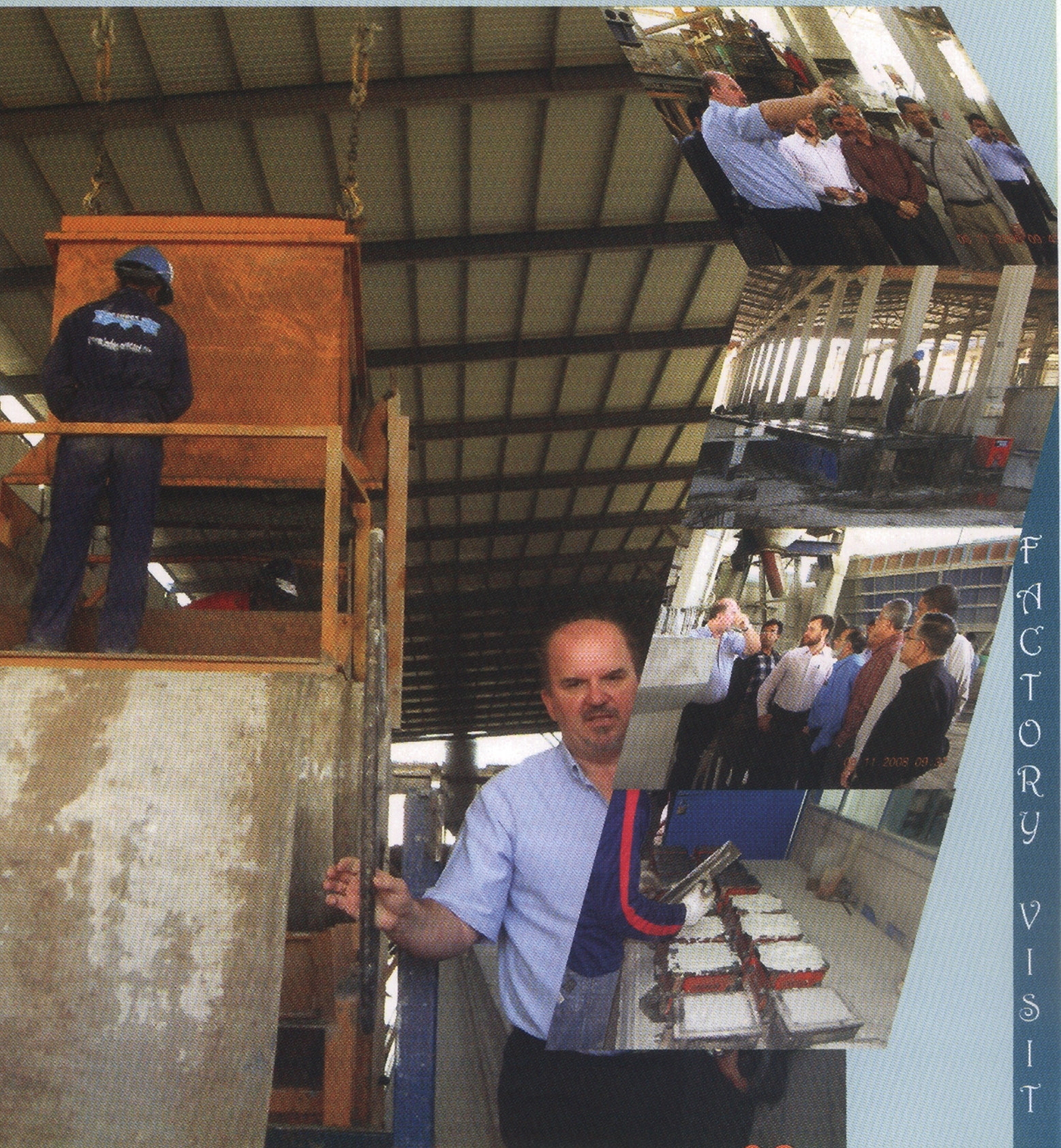


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Social Activities

Site Visit

The Social Committee of ACI- Kuwait Chapter arranged a visit to Index factory for precast and GRC at Mina Abdulla on Saturday, 8th November, 2008. On behalf of Index factory, Mr. Philip L. Filipovski, the Deputy General Manager welcomed the ACI members and gave a brief introduction about the factory. Then, he talked about the structural and architectural elements produced in the company. It was followed by a guided tour of the factory, where all the activities involved in production of precast double T, hollow core pre-stressed slabs and the cladding panels were explained, including the machine used for cable tensioning. The visitors were also taken to the laboratory where cube tests for all the concrete batches are performed to ensure quality control. During the visit, the members asked questions to understand the process fully. The ACI-KW extended many thanks to Mr. Filipovski and the factory management for this visit.



F A C T O R Y V I S I T

“The first Ring Road (FRR) Project Utilizes Concrete Tension Piles to Resist Groundwater Uplift Forces”

Mohamed Adel, Site Engineer - Geotechnical/Structural, PB Kuwait adel@pbworld.com
Sameh A. Hatem, Assistant Section Engineer - Geotechnical, PB Kuwait hatem@pbworld.com
Khalid F. Husein, Section Engineer - Geotechnical, PB Kuwait husein@pbworld.com

A simple drive on the First Ring Road (FRR) and through downtown today will make you realize that the downtown area is finally getting a state-of-the-art facelift. The Ministry of Public Works (MPW) has budgeted mega dinars for the completion of the FRR in the next few years which in turn will put to rest the downtown traffic problems once and for all. Downtown traffic problems were referred to as a perennial problem.

Project Background and History

It is a well known fact that the FRR is one of the major arteries in the Kuwait City. It was planned in the early 1980's as a vital route to serve downtown Kuwait City area. The Southern Section of the FRR was completed about a decade ago. The Northern Section, which extends from Jahra Gate Roundabout to Dasman and Maqwa Street, is scheduled to be completed in the next 6 years. Currently, Parsons Brinkerhoff International (PBI) and Gulf Consult (GC) are teaming up together in the design of the completion of the FRR. The project is divided into 3 main packages or contracts. The plan below shows the extent and location of each package.

The two teams are also supervising the construction of package which started back in April, 2005, a little more than two years ago.



General plan showing Construction Contract Packages for Northern Section of First Ring Road

Project Description

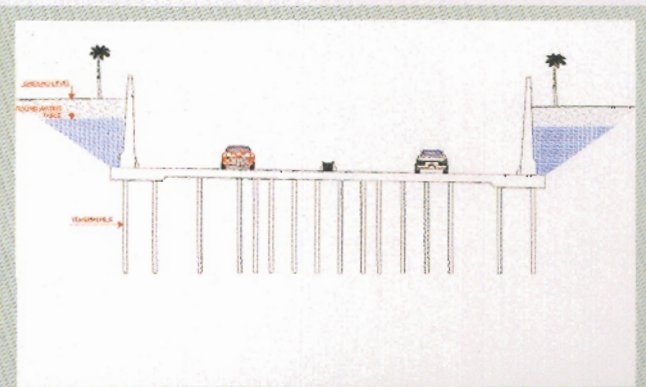
The proposed project consists of approximately 1,535m of road on bridges, 440m of road on ramps and 2,330m of road in troughs together with works associated to local roads and junctions.

It involves extensive excavation, dewatering, temporary excavation support, tension piles and concrete works. There are three main elevated bridges and several bridges on troughs and underpasses, several pedestrian bridges, and utility crossings.

Diversions and stopping of existing services and utilities, road and footpath surfacing, road lighting, road signs, road markings, noise barriers, traffic signaling, surface water drainage and associated works are also included in the project.

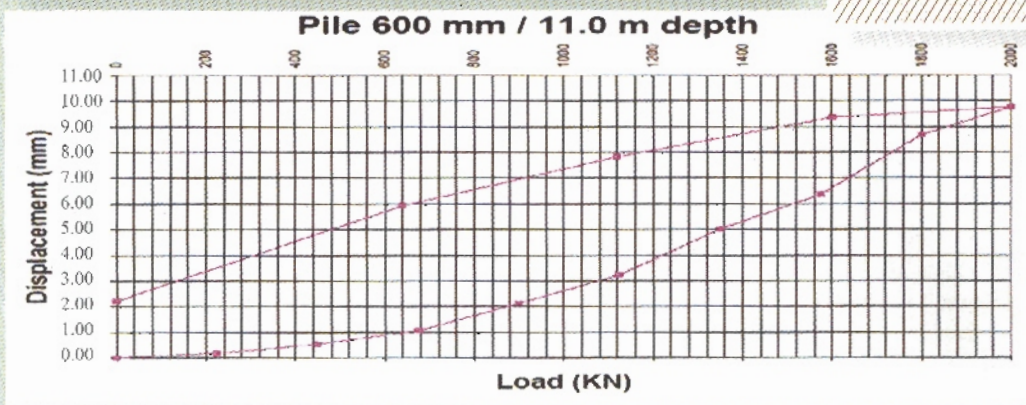
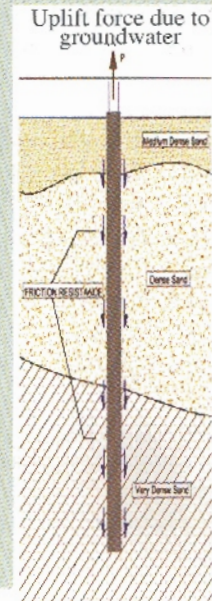
The Tension Pile Option

The decision of utilizing tension piles to anchor the proposed troughs and underpasses was made based on the findings and conclusions derived from the previous geotechnical subsurface investigations performed within the proposed project areas. The previous investigations and studies indicated that the groundwater levels fluctuate from 1 to 10 meters above the proposed trough and underpasses subgrade elevations. Therefore resisting the groundwater uplift forces was not only a major challenge in the design but also was a challenge from the constructability point of view. The tension pile option to anchor the troughs and underpasses was selected over other options such as increasing the dead weight of the proposed structures or raising the foundation depth options. The tension pile capacity comes from the side friction and weight of foundation when the load is tensile. The figure below illustrates how the structural loads was transferred from the foundation into the ground.



Design of Tension Piles

Considering the fact that the design of package I of the FRR project involves more than 2000 tension piles to anchor the proposed trough and underpasses, verifying the pile capacities of the tension piles in the field was imperative. The capacities were determined and verified in the field by conducting a series of pile load tests in the construction areas in addition to performing supplemental subsurface investigations within questionable areas to assure that there are no changes in the soil properties to consider in the analysis.



Following conducting additional subsurface investigations and pile load testing a number of piles of different diameters and lengths in the field, the design team selected drilled shafts of 600mm in diameter and a minimum of 11 in length below the proposed subgrade elevations as the most feasible and economical deep foundation type. Factors such as anticipated structural loads, cost, constructability of piles, type of traffic and accessibility to the construction areas, and impact to the environment around the site were major in selecting the drilled shafts as the deep foundation type.

Construction of Tension Piles

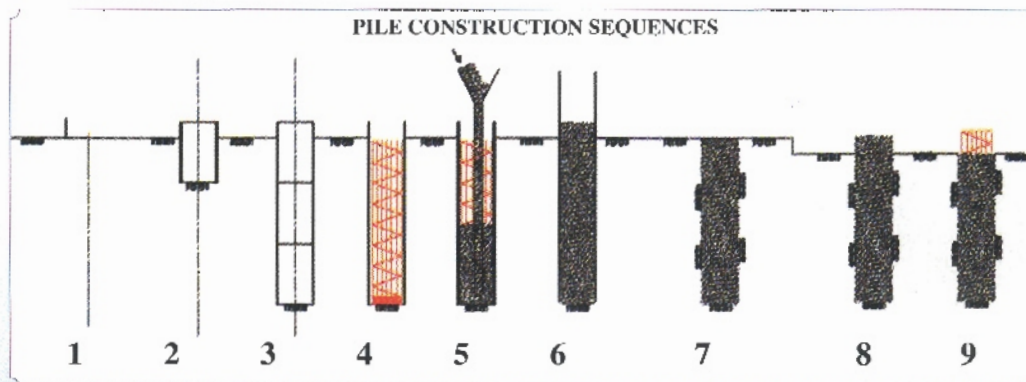


The pile installation is a major operation and extremely critical. The piles are structural elements. Jeopardizing the integrity of any element is the same as jeopardizing the integrity of the entire project. That can be costly, if not fatal as well.

The Figure below illustrates the tension pile construction procedures. They are as follows:

- **Step1:** Surveying the tension piles in accordance with the approved project plans;
- **Step2:** Installing the first unit of pile casing carefully to center the pile axis with casing centreline, then commence the drilling inside the casing;
- **Step3:** Connecting the other casing units to the first one and continue casing installation and drilling to reach the pile required depth;
- **Step4:** Inserting the steel reinforcement cage inside the installed casing;
- **Step5:** Inserting the tremie pipe inside the steel cage to pile bottom and start concrete casting;
- **Step6:** Following completing the concrete casting, the removal of the casing will take place;
- **Step7:** Constructioning complete piles;
- **Step8:** Exposing the pile head;
- **Step9:** Trimming the pile head to expose the required and anchorage length of pile reinforcement to connect the base slab.

In conclusion, the FRR project is expected to be a downtown landmark when completed.
For more information, please visit the project website at www.frr.com





MEMBERSHIP APPLICATION

PHOTO

First Name Middle Name Surname

الاسم الأول الاسم الثاني اللقب

Employer/Organization Corporate Title

Address

Telephone No. Mobile/Pager No. Fax No. Email

Categories of Membership

Please check the category of membership you are applying for and provide the appropriate dues as described below:

- ☐ Organizational: KD 100/year ... (A firm, corporation, agency of government, society, etc.)
- ☐ Individual: KD 15/year ... (A person who is a member of ACI International)
- ☐ Affiliate: KD 15/year ... (A person who is not a member of ACI International)
- ☐ Student: KD 5/year ... (Full time student at an Educational Institution)

Member Profile Information (Please check only one box in each section)

- | | | |
|---|---|---|
| ☐ Officer, Top Management | ☐ Engineering Services | ☐ Testing Laboratory |
| ☐ Administrative, Operating Management | ☐ Contracting Services | ☐ Quality Control |
| ☐ Plant, Production & construction | ☐ Architectural Services | ☐ Research Services |
| ☐ Design Engineering Management | ☐ Management | ☐ Concrete Products |
| ☐ Architectural & Engineering Services | ☐ Design Engineer | ☐ Educator |
| ☐ Chemicals and Allied Products | ☐ Materials Engineer | ☐ Student |
| ☐ Construction Machinery & Equipment | ☐ Plant Engineer | ☐ Utility |
| ☐ Concrete Block & Brick | ☐ Research engineer | ☐ Architect |
| ☐ Ready-Mixed Concrete | ☐ Sale & Marketing | ☐ Government |
| ☐ Educational Institutions | ☐ Technical Specialist | ☐ Other (Please specify) |

Are you interested to join any ACI Chapter Committee? () YES () NO

Payment Method

Membership fees may be paid as follows:

- ☐ Cash
- ☐ Cheque (Payable to ACI-Kuwait Chapter)

Receipt No.

Cheque No.

- ☐ Money Transfer (Payable to ACI-Kuwait Chapter, Account No. 06655310 with The Gulf Bank)

Transaction No.

For ACI Kuwait Chapter use only.

Member No.

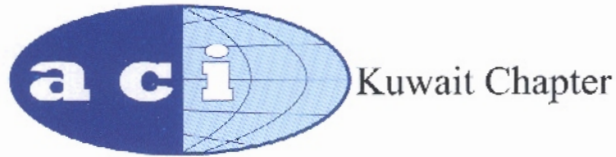
Date

Detailed Information Please Contact:

ACI Kuwait Chapter-P.O. Box 12608, Shamiah 71657

Tel: 2449071, 2448975 Ext: 312, Fax: 2428148, Email: info@aci-kuwait.org

www.aci-kuwait.org



ACI-INTERNATIONAL

The American Concrete Institute (ACI) is a nonprofit international organization that promotes improved technology, technical competence, design and construction related to concrete for the benefit of society.

OBJECTIVES OF THE ACI KUWAIT CHAPTER

The primary objective of the chapter is to further the chartered objective for which the American Concrete Institute was organized i.e., to further education and technical practice, scientific investigation and research by organizing the efforts of its members for a nonprofit, public service in gathering, correlating, and disseminating information for the improvement of the design, construction, manufacture, use and maintenance of concrete products and structures.

HOW THE CHAPTER FUNCTIONS

The ACI Kuwait Chapter is approved and authorized by the Board of Directors of ACI International to provide the means of furthering the chartered objectives of the Institute in the State of Kuwait. The chapter is managed by a local Board of Directors whose members constitute the Chapter officers. Chapter membership is open to all individuals and organizations with avid interest in any aspect of concrete technology. The chapter is operated through its committees which are made up of volunteers from the membership. Programs are developed by the committees to meet the needs of the Chapter members. The Chapter may hold several meetings each year and engage in activities that may include the following:

- Sponsoring educational seminars, short courses or workshops.
- Holding or sponsoring certification training courses and examinations.
- Publishing technical information and newsletters.
- Conducting awards, programs for local concrete structures.
- Holding of special social events.

CHAPTER MEMBERS' Activities

Attendance to seminars, short courses and workshops organized by the Chapter at reduced fees is encouraged. Free use of ACI publications, which are supplied to the Chapter by ACI International and are kept in the Chapter library offered. A forum for members to interact with colleagues and identify potential sources for cooperation in addressing specific technical problems is open to all chapter members.

HOW TO JOIN THE ACI - KUWAIT CHAPTER

To become a member of the Kuwait Chapter, please complete the attached membership application form. Different categories of membership are available. You will receive a copy of the Chapter Bylaws upon becoming a member. The work of the ACI Kuwait Chapter is a mutual effort, and success depends upon your active participation.



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