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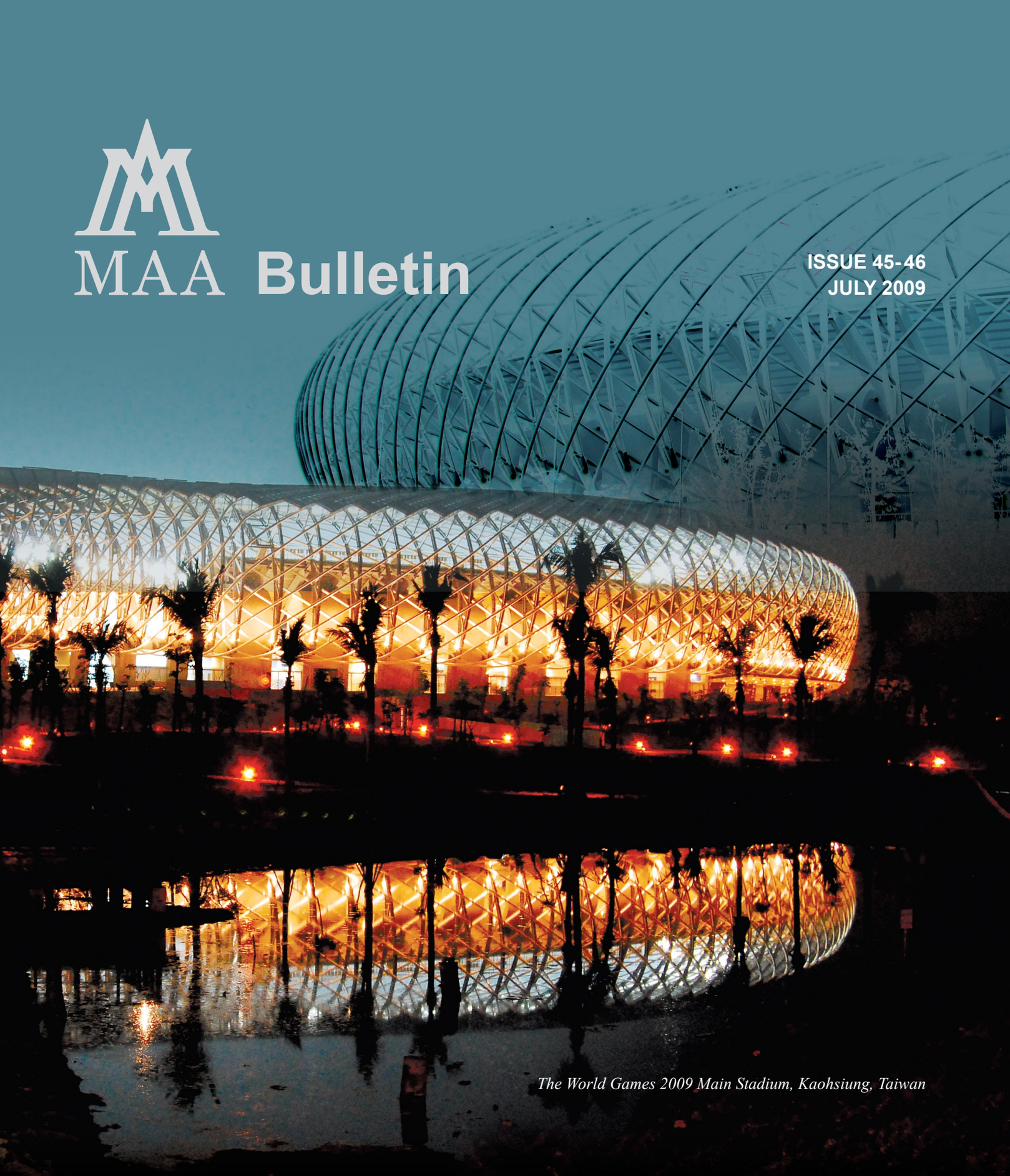

The World Games 2009 Main Stadium, Kaohsiung, Taiwan

亞新工程顧問（集團）公司
MAA Group Consulting Engineers
BANGKOK BEIJING HONG KONG KAOHSIUNG
PENANG SHANGHAI SINGAPORE TAIPEI

Integrated Solutions For Global Impact

MAA GROUP

MAA Bulletin

Issue 45-46 July 2009

Founded in 1975, **MAA** is a leading Asian engineering and consulting service provider in the East and Southeast Asian region focused in the areas of infrastructure, land resources, environment, buildings, and information technology.

To meet the global needs of both public and private clients, MAA has a full range of engineering capabilities to provide clients with integrated solutions - ranging from conceptual planning, general consultancy, engineering design to project management.

Today, MAA has 700 people with companies in the Greater China Region (Beijing, Hong Kong, Shanghai, Taiwan), Mekong Region (Bangkok), and Southeast Asia Region (Penang, Singapore), creating a close professional network in East/Southeast Asia.

MAA's goal is to establish engineering capability that will meet local needs. Along with the changes in social-economic environment over the years, MAA's business philosophy is to provide professional service that will become an asset to clients with long lasting benefits. **ASSET** represents five key components that underlies MAA's principles of professional service:

Advanced Technology
project **S**afety
client's **S**atisfaction
Economical Solution
Timely Completion

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CONTENTS

ISO 9001 and LAB CERTIFICATIONS

NATIONAL AWARDS

THE SECOND (2008) PUBLIC CONSTRUCTION SAFETY GOLDEN AWARDS BY COUNCIL OF LABOR AFFAIRS

On 12th November 2008, the Council of Labor Affairs of Taiwan held The Second (2008) Public Construction Safety Golden Awards ceremony during which two awards were presented to MAA Taiwan. The awarded projects are "Sinwei Bridge in Maolin National Scenic Area, Taiwan" and "Construction Supervision of the Interchange (Contract 564A & 564C) of National Freeway No. 1 for Lujhu Science Park, Taiwan".

The Public Construction Safety Golden Awards were created by the Council of Labor Affairs in 2007 with the mission of encouraging and ensuring the proper execution of health and safety standard for workers in public works construction sites. The award not only offers nationwide recognition, but also provides grants to the winners through the reduction of performance bonds of new projects. The Council of Labor Affairs hopes these mechanisms will further promote the attention of organizations and individuals to safety measures at construction sites nationwide.

SINWEI BRIDGE IN MAOLIN NATIONAL SCENIC AREA

MAA Taiwan was commissioned in 2002 by the National Expressway Engineering Bureau (NEEB) to design and provide construction supervision of the bridge that will link Provincial Highway No. 27 & 28 at Da-jin Village and Sinwei Village in Maolin National Scenic Area, Kaohsiung County. The Maolin National Scenic Area, established in October 2001, is a long and narrow scenic area that encompasses many major unique features of Taiwan mountains, precipices, waterfalls, natural hot springs, rivers and forests. It also encompasses several Purple Butterfly valleys, where every winter as many as 600,000 Euploeini butterflies take shelter in. It is one of only two mass wintering sites known in the world. To reflect the famous "Purple Butterfly Valleys" in the Maolin National Scenic Area, MAA specifically designed the bridge as a double-arch bridge (with a span of 145 meter) to reflect the image of Euploeini purple butterfly. The total length of the two-way link is 2,320 meter long, in which the bridge section is 1,735 meter in length. Additional passageways are designed for walking and bicycles. The total construction cost is NTD1,790,000,000. The construction began on 15 August 2006 and is schedule for opening in April 2009. The contractor of the project is Fortune Construction Corporation (榮金營造工程股份有限公司).

Sinwei Bridge in Maolin National Scenic Area receives The Second Public Construction Safety Golden Awards

Sinwei Bridge during construction

MAA is awarded for the following outstanding achievements:

1. Planning and design stage construction safety measures

- **Action:** Usage of Advanced shoring construction method for prestressed box girder bridge structure.
  Result: Reduction of impact by Laonong River on construction process and schedule, and the increase of construction safety.

- **Action:** Prefabrication of Arch bridge structures and hoisting from ground level.
  Result: Reduction of high elevation construction risk.

- **Action:** Evaluation of tide season information of Laonong River.
  Result: Avoidance of interruption of construction schedule due to high tide seasons and increase in construction safety.

2. Safety regulations for working under hazardous condition

Safety measures in the high-risk site condition are based on various risk assessments made:

- Risk assessment of pillar foundations
- Risk assessment on advanced shoring box girder method
- Risk assessment on steel arch bridge
- Risk assessment on advanced shoring box girder in situ.

3. Highlights during the health and safety measures execution

- Usage of water level monitoring equipment for safety control of Laonong River
- Hoisting process of eversion-type steel arch bridges (37m high)
- Usage of statistical analysis to reduce frequent safety control defects
- Implementation of 5S Safety Management (Structure, Systematize, Sanitize, Standardize, Self-discipline)

Members of the MAA's project team who contributed to the successful completion of the project are: Site Manager Kuo-Hsiung Chen (陳國雄), Wen-Fu Wu (吳文甫), Wen-Yung Hwang (黃文勇), Tzu-Lien Huang (黃姿連), Shang-Tzong Kuo (郭賢宗).

CONSTRUCTION SUPERVISION OF THE INTERCHANGE (CONTRACT 564A & 564C) OF NATIONAL FREEWAY NO. 1 FOR LUJHU SCIENCE PARK

Lujhu Science Park, with a total area of 1,409 acres, is situated between Lujhu, Gangshan and Yung-an Townships of Kaohsiung County. The park is expecting to be the home to many hi-tech firms, which can result up to 50,000 people working in the area. To reduce traffic time, lower transportation cost and strengthen traffic efficiency, the Government decided to build a new interchange that combines the existing Lujhu and Gang-Shan interchanges on National Highway No.1 and access roads that connect to the Lujhu Science Park. The project includes a new interchange that is built in a four-leaf clover form , widening of the main line of the highway, build new access roads, ramps and ring roads, and landscaping. The project will complete the network of traffic flow in the area, which will thereby increase capacity to meet the traffic needs up to 2027, reduce traffic jams, connect transportation flow of all major townships and Lujhu Science Park, increase recreational activities in the areas, and provide sufficient drainage and flood control systems.

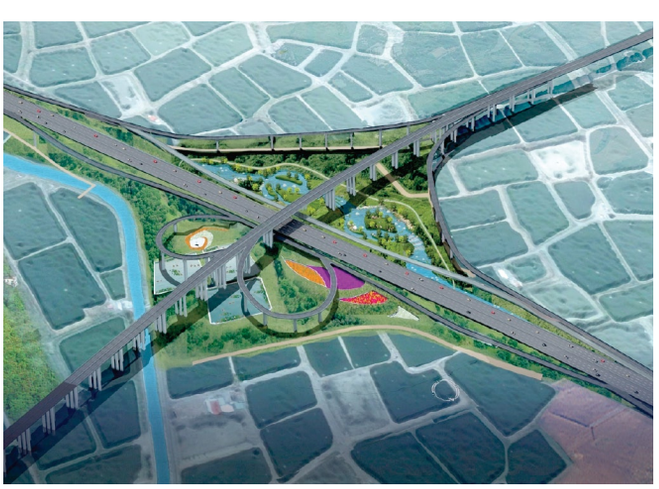
During construction, several innovative methods were used to reduce cost, increase quality, and meet the existing flood problem and traffic diversion challenges. Specifically,

MAA's Chairman Emeritus Dr. Za-Lee Moh receives award during The Second Public Construction Safety Golden Award Ceremony

Prefabricated Vertical Drains and Preload method were used to reduce future settlement; existing semi-pool fish farms were collectively rented to reduce the land acquisition costs; excavated soil from piling was reused as backfill for embankments to reduce soil-outsourcing cost; farms, ecological friendly farm roads and flood prevention pools were relocated to the inside of interchanges areas to achieve flood prevention measures as well as landscape aesthetics.

MAA was commissioned by the Taiwan Area National Freeway Bureau, MOTC in 2007 to carry out construction supervision of the project. MAA successfully provided the services to meet the five objectives of functionality, safety, environmental friendly, aesthetic, and strength. In recognition of the construction supervision efforts to the achievements, MAA won two major nationwide awards: Second (2008) Public Construction Safety Golden Awards and The Ninth (2008) Public Construction Golden Achievement Award. The contractor to the project is Kung Sing Engineering Corporation. Special mentioning is made to MAA team for the outstanding achievements; they are: Site Manager Tsung-Wen Hsieh (謝聰文); engineers Sue-Wei Chang(張書偉), Jui-Lung Wang (王瑞隆), Hung-Sheng Lee (李虹昇), Kung-Hsien Hwang (黃孔賢), Jia-Qian Li (李佳倩), Hsiang-Chin Wang (王湘欽), Tsung-Lin Li (李宗霖).

More information on the award and the projects awarded can be found in the government website: *http://www.cla.gov.tw/*



National Highway No. 1 for Lujhu Science Park

THE NINTH (2008) PUBLIC CONSTRUCTION GOLDEN ACHIEVEMENT AWARD

MAA Taiwan President Mr. Chien-I Hsu receives award during The Ninth Public Construction Golden Achievement Award Ceremony

On 24th December 2008, Public Construction Commission of the Executive Yuan of Taiwan held The Ninth (2008) Public Construction Golden Award ceremony. MAA Taiwan received the Construction Supervision Golden Award for "the Interchange (contract 564A & 564C of National Highway No. 1 for Lujhu Science Park." (See page 2 for project description) The mission of the Public Construction Golden Achievement Award is to strengthen public construction quality, improve the living and working environment, and encourage positive competitive culture in Taiwan by presenting Golden Achievement Award in Construction, Design and Quality to projects completed by organizations and individuals. It is anticipated that through this annual award ceremony, the civil engineering industry will continue to improve in the quality control procedure, culture and internationalization. For the 2008 Ninth (2008) Public Golden Achievement Award, a total of 30,000 number of projects were nominated of which only 23 were awarded.

MAA's project won the Ninth (2008) Public Golden Achievement Award for construction supervision due to carrying out innovative solutions for cost reduction and landscaping, overcoming existing challenges, and adopting comprehensive considerations during construction.

Innovation

1. Creation of ecologically friendly wetland environment while meeting the requirement of flood prevention measures.

The Ninth Public Construction Golden Achievement Award Ceremony

2. Collective rental of existing fish farms inside the eastern ring road to reduce land acquisition cost and backfilling costs. Addition of lotus flowers, water caltrop pond, windmills, waterwheels, wood path and stucco washing trails as landscaping schemes.
3. Usage of inner interchange spaces as flood prevention pools with adequate farm roads for pedestrian access.

Challenges

1. The challenge of maintaining the safety of the existing traffic flow during the widening of the main lane of Sun Yat-Sen Freeway.
2. The challenge of maintaining safety in the government classified Class D Dangerous Construction Site. Safety measures are of special concerns for the construction of elevated viaducts that crosses the existing operated Sun Yat-Sen Freeway.
3. The challenge of preventing the frequent flood that occurs in the low terrain site area which includes numerous fish farms. During rainy and typhoon seasons, adequate drainage mechanisms is needed.

Comprehensive Solutions

1. Reduction of traffic disruption by using elevated steel beams for access road construction.
2. Prevention of future settlement, prefabricated vertical drains and preloading methods were used during the abutment construction.
3. Reduction of land acquisition cost by rental of full fish pool farms and acquisition of semi-fish pool farms.
4. Reduction of soil purchase for non-road embankments by reusage of excavated soil during piling.

Touching Events

1. On 17th July 2008, Typhoon Kameiji passed through Taiwan, carrying abundant rainfall to the site, which resulted in major flooding in Gangshan and Lujhu area. Landlords were slow in taking actions to pump the flood water which resulted in the loss of fish and aqua products. To ensure no further damage, the construction supervision and contractor team took immediate actions by installing 30 large pumpers for 24 hours a day to reduce flooding. The team even wade across flood waters to deliver canned food to trapped residents. Due to the immediate actions, damage was minimized and construction was able to resume immediately after the heavy rain stopped.
2. The construction supervision team voluntarily assisted to clear the weeds that grew along the neighboring roads, clean the drainage ditches and repair access roads to the fish-pool farms.

THE WORLD GAMES 2009, KAOHSIUNG, TAIWAN

The World Games Stadium Main 2009

In June 2004 Kaohsiung, the second largest city in Taiwan was awarded by the International World Games Association (IWGA) the right to host the 2009 World Games from 16th - 26th July, 2009. IWGA, comprising of 32 International Sports Federations around the world, holds World Games every four years since 1981. The ninth 2009 World Games is the first and largest international comprehensive sports event in Taiwan. Similarly it is the first time The World Games is to be hosted in a Chinese area. The event will bring more than 3000 athletes around the globe to Kaohsiung and it is anticipated more than 40,000 people will watch the games live in the venue.

The World Games Stadium Main 2009

Among the many venues to be provided for the games, the main stadium for opening and closing ceremony is the most important one. Kaohsiung Municipal Government (KMG) authorized by the National Council on Physical Fitness and Sports is responsible for planning and construction of the main stadium. MAA was selected as the project manager of the project for preparing architectural program, conceptual design, tender documents and handling tender process for design-and-build contract.

After detailed study and comprehensive consultation, the final program of the main stadium is a roofed competition venue having a standard 400m track and football field with 40,000 permanent seats and spare space for additional 15,000 temporary seats to be furnished for big events. International tender for the design-and-build contract was announced in August 2005 and was awarded to world renowned Japanese architect Toyo Ito in early December 2005. The unique architecture stadium has an open top spiral structure with curved bracing and buttresses that reflects the dynamics of a flowing river. In addition in meeting the functions and facilities requirements stipulated by international sports competition event, the main stadium also fulfilled the latest criteria of Green Building's energy saving, forestation, and water conservation. Specifically, in view of conserving light power, the rooftop is installed with the first of its kind in the world a photovoltaic system of solar panels that generates one million kWh of electricity annually. Construction was completed in January 2009 in preparation for the 2009 World Games to be opened in July 2009.

The site of the main stadium is part of the proposed National Sports Park, which will accommodate the National Athletes Training Center, Kaohsiung Branch of National Athletes University and a recreational park for neighboring community. MAA is also the planner of the Park.

21st CENTURY GEOTECHNICAL ENGINEER

2009 CROSS STRAIT SEMINAR ON GEOTECHNICS KEYNOTE SPEECH

In memory of Dr. Dunstan D.S. Chen's contribution in geotechnical society, the Sino-Geotechnics Research and Development Foundation of Taiwan invited Dr. Za-Chieh Moh as the first speaker of Dr. Chen's Memorial Lecture on 14th April 2009 during the 2009 Cross-strait Geotechnical Conference in Taichung City. Instead of the usual lectures on technical issues, Dr. Moh's lecture,"The 21st Century's Geotechnical Engineer," highlighted the attributes a geotechnical engineer needs in order to face the challenges in the new millennium. Around 50 Key geotechnical leaders from China attended the 3-day conference. Below is the abstract of the lecture.

2009 Cross Strait Seminar participants

MAA Group Chairman, Dr. Za-Chieh Moh and Panelists

Keynote Speech by Dr. Za-Chieh Moh

"21st Century Geotechnical Engineer"

Abstract:

In reflection to the changing behaviors of civil engineers and engineers in the last 50 years, geotechnical engineers today faces many challenges in today's fast-paced changing world. This paper discusses the various attributes needed by a geotechnical engineer to meet society's demands in the new millennium. Attributes include communication, management and leadership skills; and international exposure, multi-disciplinary skills, and crisis awareness. Positive attitude and ethical practice in the profession are the basic necessity to attain the attributes. Civil and geotechnical engineering education and continual reforms in the industry laws and practices play a vital role in nurturing such needs.

摘 要

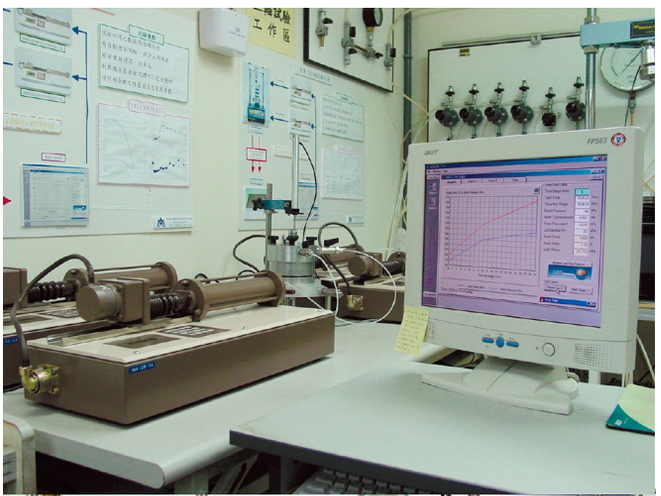
本文由回顧五十年來土木工程及工程師的演變，進而討論二十一世紀土木以及大地工程師應具備的條件，包括溝通、管理與領導的能力；國際化、多元化及危機意識的遠見。要達到這些條件，正面的心態和倫理的遵守是必要的元素。土木和大地工程師的教育及養成必須隨著社會對專業工程師的要求而加以改革。

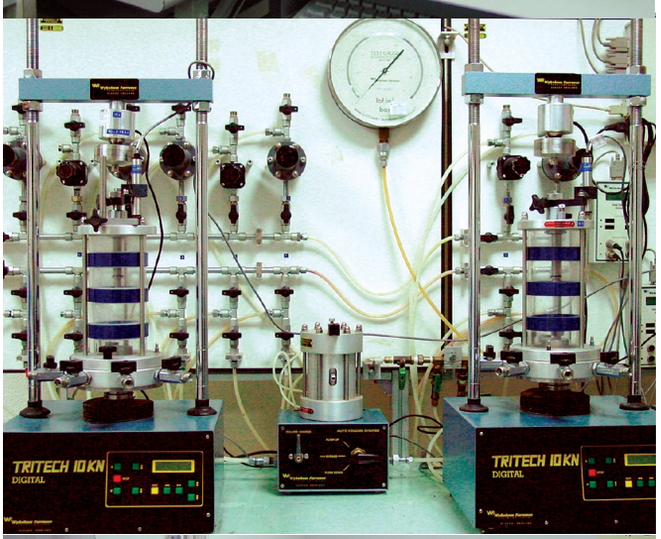
MAA LABORATORY

As part of the mission of MAA to provide leading design services to both private and public clients, MAA has continued to ensure the quality of testing results made by MAA Laboratory. MAA Laboratory, founded in 1975, has been operated under ISO9001 in 2000 and has received the approval of Chinese National Laboratory Accreditation (CNLA) in 2002. In December 2008 MAA Lab is the accredited laboratory on civil engineering testing area approved by Taiwan Accreditation Foundation (TAF). Over the past 34 years, MAA Lab has expanded its scale gradually, of which today comprises of ISO17025 certified engineers and technicians; and high-tech equipments. ISO17025 "specifies the general requirements for the competence to carry out tests and/or calibrations, including sampling. It covers testing and calibration performed using standard methods, non-standard methods, and laboratory-developed methods." (Source: *www.iso.org*)

MAA Lab is equipped to provide Simulation of soil behavior tests such as Constant Rate of Strain test (CRS) and Earth Pressure at Rest Consolidation (undrained, triaxial compression/extension) tests. Other testing items include General Identification test, Compaction test, California Bearing Ratio (CBR) test, Unconfined Compression test, Direct Shear test, Trixial Compression test, One-dimensional Consolidation test, and Triaxial Permeability test.

TAF Certificate





MAA Laboratory equipments

DONATIONS TO VICTIMS OF SICHUAN EARTHQUAKE

On 12th May 2008, China experienced the devastating Great Sichuan Earthquake (also known as Wenchuan earthquake) in Sichuan province at a 8.0 richter scale magnitude, killing 69,227 and injuring as many as 374,176. To date, 18,222 are still missing. The earthquake, lasted as long as 3 minutes, left 4.8 million people homeless and caused tremors as far as Beijing, Shanghai, Taiwan, Hong Kong and India. The epicenter was 80 kilometers northwest of the capital of Sichuan, Chengdu, with a depth of 19 kilmeters. It is the most devastating earthquake in China since the 1976 Tangshan earthquake. Aftershocks continued as long as several months later at magnitudes greater than 6. Due to the quick relief actions in China and openness of the media, foreign nations and organizations were quickly able to provide disaster relief efforts immediately. Schools, highways, towns, buildings, were all severely damaged causing difficulties for quick relief operations. Central Government of China committed to spend up to 1 trillion yuan to rebuild the damaged areas in the next 3 years. As part of the immediate responses to the relief efforts to China, MAA Taiwan, MAA Shanghai and many of the staff have collectively put in donations of NT 500,000 and RMB 60,000 to the Red Cross Society of Taiwan and Shanghai to support the rescue actions.

Source: www.wikipedia.org

荣 誉 证 书

人道救助 爱心关怀

为感谢您对红十字人道救助事业的支持，特授此证纪念。

上海市红十字会

会长

SHANGHAI RED CROSS
HUMANITARIAN AID AND RELIEF FUND
CERTIFICATE OF APPRECIATION
HUMANITARIAN AID AND RELIEF
LOVE AND CARE

IT IS TO ACKNOWLEDGE FOR YOUR CONTRIBUTIONS AND SUPPORT FOR THE RED CROSS SERVICES AND HUMANITARIAN AID AND RELIEF

SHANGHAI RED CROSS
PRESIDENT Xie Li jian

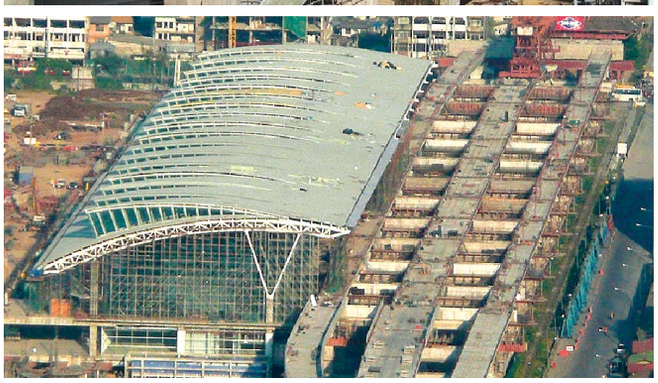
Projects-1st May 2008 to 30th April 2009

BTS EXTENSION, SUKHUMVIT LINE SECTION 1 PROJECT

Bangkok Mass Transit System (BTS) or Skytrain is the only elevated metro system in Bangkok, Thailand, operated by Bangkok Mass Transit System Public Company Limited (BTSC) - a concession granted by the Bangkok Metropolitan Administration (BMA). In order to reduce traffic congestions and provide adequate transportation means to the residents of Samrong and Onnut, BMA approved the construction of the BTS Sukhumvit Route Extension Section 1 (Onnut - Samrong extension from Sukhumvit 85 to the suburban Bangkok located at Sukhumvit 107). The total length of the elevated extension is approximately 5.25 km, including 5 elevated stations. Project Value is Baht 3,873 million. Started in January 2007, the project is due for completion in June 2009. MAA Thailand and PB were engaged to provide design review and construction supervision.

BTS Extension, Sukhumvit Line Section 1

THE SUVARNABHUMI AIRPORT RAIL LINK AND CITY AIR TERMINAL PROJECT, BANGKOK, THAILAND



The Airport Link line

For the convenience of air passengers to and from Bangkok, the Thailand Government decided to provide an express railway service connecting downtown Bangkok City Air Terminal in Makkasan area and the new Suvarnabhumi International Airport. The link will be approximately 28 km long (mostly elevated) with 8 stations and have a maximum design speed of 160kph. The railway corridor will include commuter services due to the many residential areas along the railway alignment. Express journeys will take 15 minutes and commuter trips will take 27 minutes. Construction started in 2005 with a total construction cost of 195 million Baht. In April 2009, the State Railway of Thailand (SRT) commissioned PB Asia, Porry Infra and MAA Thailand to provide:

- Safety and Reliability Engineering support to perform reliability analysis and assessments for the certification fo the train systems and related processes in accordance with international codes and standards.
- Review and assessment of reliability analysis assumptions and completeness.
- Assess design and operational compliance with SRT requirements through participation in the various engineering processes.

The project is currently is expected to be in operation at the end of 2009.

Details of the Airport Link:

The Airport Rail Link (ARL) is composed of both commuter service (SA City Line) and express service (SA Express). The SA Express service will operate between the City Air Terminal at Makkasan/Asoke Station, and Suvarnabhumi Airport, with no intermediate stops and traveling time is less than 15 minutes. The SA City Line will operate between Phaya Thai (the interchange station with existing BTS) and Suvarnabhumi Airport, with intermediate stops at 6 other stations including the City Air Terminal with travel time less than 30 minutes. The rail track will be elevated for most of its route with short at-grade and underground sections at Suvarnabhumi Airport. The Rail Link station at Suvarnabhumi Airport is underground between the two short-term car parks, projecting partially beneath the main terminal building.

Stabling tracks, workshop equipment and an operations and maintenance facilities are at the Depot to be located at Khlongton.

The New City Air Terminal will connect with Makkasan/ Asoke Station which will include airport passenger check in and waiting facilities and airport related systems e.g. check-in facilities, baggage handling systems.

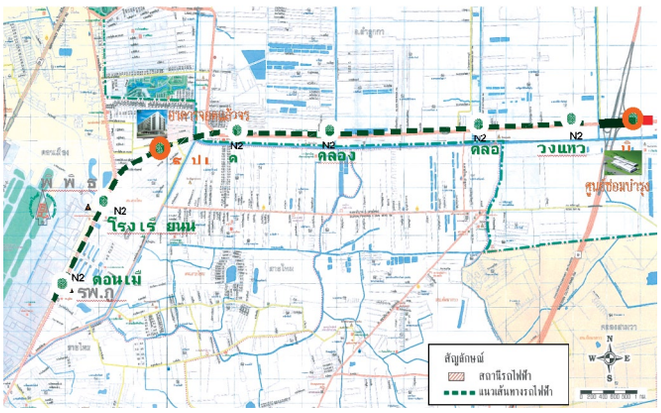
A new station will be developed beneath the Suvarnabhumi Passenger Terminal Complex. The basic subterranean box and approach ramps for the station have been constructed by the airport authority.

EXTENSION OF MRT DARK GREEN LINE, SAPHABMAI-LAMLIKKA KLONG 4

The project involves preparation of the MRT Dark Green Line extension from Saphanmai, Bangkok to Lamlukka Klong 4, Pathum Thani. The total length of the project is 13.75 km of which most are elevated structure with 7 elevated stations. Other MRT associated facilities include a depot and an Operation Control Center. MAATH joined Team Consulting Engineering and Management Co., Ltd. and PB Asia Co., Ltd. to provide consulting services including:

- Review related studies and conducted feasibility study
- Environmental impact assessment
- Preliminary design and detailed design
- Preparation of technical specifications and tender documents

The project service started in November 2008 and is anticipated to end in May 2009.



The Extension of MRT Dark Green Line

The MRT Dark Green Line Station

MOTORWAY NO. ROUTE 81 BANG YAI – KANCHANABURI PROJECT, THAILAND

MAA Thailand was commissioned to design of 4-6 traffic lanes inter-city motorway to improve the flow of traffic and land access to Nonthaburi, Nakhon Pathom and Kanchanaburi provinces of Thailand. The motorway is 120 km. at-grade with 6 interchanges, inter-city motorway facilities, toll collection system, control buildings, services area and rest area facilities. Construction is estimated to be completed in May 2009.

Motorway No. Route 81 Bang Yai

NOVENA HOSPITAL AT IRRAWADDY ROAD, SINGAPORE

Novena Hospital

The project site is bounded by the Ministry of Home Affairs (MHA) New Phoenix Park Complex on the north-side, Irrawaddy Road on the east and southeast-side and low-rise residential housing and church buildings on the west-side. Due to the existence of North-South MRT tunnels running underneath the Irrawaddy Road, a large portion of the site area along the South-eastern boundary must be located within the Railway Protection Zone which has certain restrictions to construction activities as specified by the Land Transport Authority (LTA). The geological condition of the site is quite complicated. The erratic bedding and various decomposition of Granite found over the site area require competent geotechnical inputs for the foundation / excavation design. MAA Singapore provided geotechnical engineering services consisting of field supervision, laboratory testing and analysis work with regard to the foundation system and excavation work of the proposed development including assessment of construction effect on existing MRT tunnels. The project service started in July 2008 and completed December 2008.

TAIPEI MRT CIRCULAR LINE FIRST PHASE DETAILED DESIGN DF113 LOT

Taipei MRT Circular Line First Phase Detailed Design DF113 Lot

The purpose of the Taipei MRT Circular Line is to connect the populated districts of Taipei County, which will enhance commercial activities and easier travel of residents and business activities to and from Taipei City. The line stretches across Wenshan, Xindian, Zhonghe, Banqiao, Xinzhuang, Wugu, Luzhou, Sanchong, Shilin, and Neihu districts. It will also connect with 11 MRT lines which will further complete the planned MRT network for Taipei City and Taipei County. Specifically, the first phase of the Taipei MRT Circular Line travels through Xindian, Zhonghe, Banqiao and Xinzhuang districts, connecting with existing MRT lines Xindian Line, Zhonghe Line, Banqiao Line, Xinzhuang Line, planned Airport Line, Wandashulin Line, and Ankeng Line. Phase 1 Lot DF113 starts at the end of Y14 station, runs along Pan-Hsin Road, Hsiang-Ming Avenue, New-Station Road, Wen-Hwa Road, crosses over the Par-Li expressway viaduct, Ming-Sheng Road, Tar-Hang River, Si-Yuan Road, and ends at Wu-Kon Road. The total length is about 6.4 km of elevated viaducts with five elevated stations and three land development area. MAA Taiwan was engaged by the Department of Rapid Transit System at the end of 2008 to provide planning and design of the viaduct, stations, joint development buildings, land development, civil works, landscaping as well as the detailed design of 5 handicap facilities improvement in the existing Taipei Main Station.

REDESIGN AND RECONSTRUCTION PROJECT OF COUNTY ROAD 11(B) 4K+365, TAITUNG BRIDGE

Taitung bridge

The 43 years-old Taitung bridge, located at the west of Taitung City on Country Road 11(B), is part of the major traffic artery connecting Country Roads 9, 11 and Fu-Gang Port in Taiwan. With a width of 7.5 m, the total length of the bridge is 491 m with a 113 m east ramp and 200 m west ramp. For safety reasons, the Directorate General of Highways of the Ministry of Transportation and Communications decided to rebuild the bridge by the end of year 2010. The proposed redesign of Taitung Bridge is a ten span, 720 m in length, and 13-m in width bridge. The shortest span of the bridge is 40 m and the longest span of the bridge is 110 m. The new design will have a two-way lane for vehicles and a two-way lane for motorcycles and bicycles. Steel box girder will be adopted to shorten the construction period. MAA Taiwan was engaged by the client in early 2009 to provide the redesign of the bridge.

MATSU INTERIOR COMERCIAL HARBOR PROJECT IN LIENCHIANG COUNTY

Matsu Interior Comercial Harbor Project

The Project - Phase I of Fu-Auo Wharf Matsu Harbor is to construct a six-pier jetty at a length of 760 m, a reclamation land, a waterway and dredging berth, and related works for wharf facilities, etc. The total construction cost is about NT$100 million.

MAA Taiwan is engaged by the Client to provide design and construction management services, including the planning, design, construction, supervision, operation, maintenance, etc. to ensure the progress and quality of the project. The project started in December 2008 and is expected to be completed in November 2011.

2008 BASIC DATA INVESTIGATION AND VISUAL INSPECTION OF TOWNSHIP BRIDGES OF YILAN COUNTY

Visual Inspection of Township Bridges of Yilan County

In 2001, the Ministry of Transportation and Communications (MOTC) of Taiwan established the Taiwan Bridge Management System to monitor the conditions of all bridges throughout the island. The system combines GIS, GPS and internet to provide easy access, data retrieval and analysis, and search capabilities for both central and city governments to manage the conditions of the bridges in their jurisdiction. Through the analysis of collected bridge data, the government can determine the priority of maintenance, control the limited budget, and assure the safety and function of the bridges. According to MOTC request, Yilan County Government is to carry out fundamental data investigation and visual inspection of bridges in the county every 2 years. This work helps the government keep updated data of the bridges' conditions, and be ready to take the necessary steps for insuring longevity and safety of the bridges. MAA Taiwan was commissioned by the Yilan county Government in July 2008 to conduct basic data investigation and visual inspection of township bridges in the county.

SUPERVISION WORK ON LAND ACQUISITION OF BEITOU SHILIN TECHNOLOGY PARK

Beitou Shilin Technology Park

Located on the border of Shilin and Beitou districts of Taipei City, the"Beitou Shilin Technology Park," replaced the formally planned "Taipei Media & Culture Park," which was one of the many projects under the 1995 Executive Yuan's policy to create Taiwan as an "Asia-Pacific Operation Center." The site is surrounded by many hospitals and research facilities in the neighborhood area, including the Taipei Veteran General Hospital, National Taipei College of Nursing, Hsin Kong Hospital, Yang Ming Hospital, Cheng Hsin Rehabilitation Medical Center and Koo Foundation Sun Yat-Sen Cancer Center. In view of the readily available medical resources in the area, Taipei City Government repositioned the site as an information technology and biotechnology development center. The site area is approximately 194.29 ha. covering land on both sides of the Shuang River. MAA Taiwan was commissioned by the Public Works Department of Taipei City Government in February 2009 to provide construction supervision services for the overall land development and specified building facilities.

Beitou Shilin Technology Park

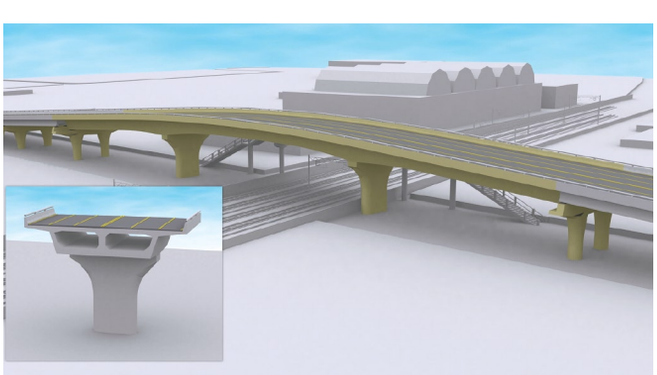
NATIONAL CONFERENCE AND EXHIBITION CENTER CONSTRUCTION PROJECT

National Conference and Exhibition Center

In March 2009, MAA Taiwan was engaged by Taiwan Power Company to provide Project and Construction Management services for the National Conference and Exhibition Center in Nankang district. The 2,350 booths exhibition center will be an addition to the existing Nankang Conference and Exhibition Center to achieve the targeted 5,000 booths exhibition area. The center will occupy a 3.6 hectares area with a total of 153,310 square meter floor area. The new center will house 7 exhibition halls, provide 1,400 parking spaces, and connect a 80 m skywalk to the existing Nankang Conference and Exhibition Center. The project is anticipated to be completed in 2017.

RECONSTRUCTION OF FLYOVER BRIDGE AT CH. 2K+884(ZUHU) AT PROVINCIAL HIGHWAY 28

TheZu-Hu Flyover, located in Kaohsiung County, overpasses Taiwan Railway and links the Lujhu and Hu Nei countryside. It is the major flyover between Provincial Highway and Lujhu interchange of Sun Yat-Sen Freeway. The existing flyover, constructed in 1985 is 15 m wide and 390 m long. Due to the deficiency in capacity and the deterioration of the bridge structure, a reconstruction the flyover bridge is needed. The Directorate General of Highways of MOTC commissioned MAA Taiwan to carry out the detailed design for reconstruction of the flyover in March 2009 with an anticipated completion date at the end of 2010.



The Zu-Hu Flyover Bridge

PROFESSIONAL ACTIVITIES

- ***Professional Activities***
- ***Professional Awards/Honors***
- ***Professional Registration***
- ***International Meetings***
- ***Technical Publications***

► Professional Activities

LECTURES & SPEECHES

1) Dr. Za-Lee Moh, Chairman Emeritus of Moh and Associates, Inc. was invited by Project Management Division of the Department of Construction Engineering, National Taiwan University of Science and Technology to deliver a lecture on "Taiwan Consulting Company and Its Overseas Market" on 5th August, 2008.

2) During the 2009 Annual Conference of Chinese Institute of Civil & Hydraulic Engineering, Dr. Za-Lee Moh was invited to make a speech on "Railroad Administrator Mr. Heng Moh and Taiwan Railway" at the Special Session of Taiwan Civil Culture Assets & Distinguished Contributors on 6th November 2008 in National Cheng Kung University, Tainan, Taiwan.

HANOI UNIVERSITY OF CIVIL ENGINEERING SYMPOSIUM

Co-organized by the National Hanoi University of Civil Engineering, the Pan Asia Corporation of Taiwan, and Moh and Associates, Inc. An one-day seminar on "Implementation of Infrastructure Projects in Developing Country – Taiwan's Experience" was held in Hanoi, Vietnam on 7th August 2008. More than 100 participants from government agencies, universities and the construction industry attended the seminar. MAA contributed three lectures as shown below:

MAA delegates Dr. Za-Chieh Moh, Mr. Richard Moh, Mr. Ben Lin, Mr. Li-Ming Chou

1. "Design Considerations of Land Transport Projects in Taiwan"
   – by Dr. Za-Chieh Moh, Chairman of MAA Group

2. "Planning and Design of Common Duct"
   – by Mr. Li-Ming Chou, Project Manager of MAA Civil and Water Resources Engineering department

3. "The Construction of Infrastructure Project on Soft Ground – Case Studies"
   – by Mr.Pen-Chi (Ben) Lin, Project Manager of MAACorporate Development Center

CROSS-STRAITS ADVANCED FORUM ON RAIL TRANSPORTATION SYSTEM CONSTRUCTION AND ENVIRONMENT ENGINEERING

From 4th to 7th November 2008, a four-day "Cross-Straits Advanced Forum on Rail Transportation System Construction and Environment Engineering" was held in Hangzhou City, China. Engineers from China, Taiwan and Hong Kong submitted sixty-six technical papers on all aspects of rapid rail transit system planning, design and research issues including technical standards, codes and regulations, construction safety, risk management, etc. More than 200 delegates participated in the forum. The event was organized by the Underground Construction Branch of Zhejiang Association of Construction Industries and fifteen other professional and academic organizations. MAA contributed 4 technical papers and 1 special invited lecture:

1. "Case Study and Comparison of Bidding Methods for Rail Transit Projects"
   – by Dr. Z.C. Moh (invited lecture)

2. "Risk Management for Construction of Metro Systems" – by Dr. Richard N. Hwang, Mr. P.J.Wu, and Mr. H.T. Chen

3. "MRT Risk and Safety Management for Civil Construction" – by Mr. S.W. Duann, Mr. H. Jim, and Mr. X.R. Yang

4. "Risk Management Information Platform for Underground Construction" – by Mr. J.M. Hsu, Mr. Y.F. Lai, Mr. T.C. Su and Mr. H. Ju

5. "Application of Shock Transmission Units – Case Study in Taipei MRT System"
   – by S.M. Kang, Y.H. Huang and H. Ju

MAA representatives at the Cross-Straits Advanced Forum on Rail Transportation System Construction and Environment Engineering (Dr. Za-Chieh Moh, Mdm. Ying-Gu Lei, Dr. Richard Hwang, Mr. Ting-Chiun Su, Mr. Szu-Ming Kang

CROSS-STRAIT TUNNEL DISCUSSION

A one-day special session was held in Hong Kong on 3rd June 2008 to discuss the feasibility and potential of construction of an undersea tunnel crossing the Taiwan Strait to connect mainland China and Taiwan island. Three possible routes were discussed. The Special Session, organized by Professor Hsia-Yang Fang of Leigh University, was held in conjunction with the 9th International Symposium on Environmental Geotechnology and Sustainable Development, which was organized by the University of Hong Kong and Hong Kong University of Science and Technology. More than 20 papers were presented at the Special Session. Dr. Za-Chieh Moh was invited to chair the Panel Discussions.

SEMINAR SPONSORSHIP/CO-SPONSORSHIP

- Letter of Appreciation from Chinese Society of Structural Engineering for MAA's co-sponsorship of ***The 9th National Conference on Structural Engineering.***

- Letter of Appreciation from National Taiwan University of Science and Technology for MAA's co-sponsorship of the ***2008 International Workshop on Advanced Technologies for Infrastructure Engineering.***

Professional Awards / Honors

FIRST FEIAP ENGINEER OF THE YEAR AWARD

On the occasion of the 30th anniversary of its establishment, the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) inaugurated the FEIAP Engineer of the Year Award. Dr. Za-Chieh Moh, Chairman of the MAA Group and Chairman of the Chinese Taipei APEC Engineer Monitoring Committee was elected as the first recipient of the 2008 Award in recognition of his contribution to academic development and engineering practice in the FEIAP region. At present, the FEIAP has 18 members representing engineering institutions in their respective country economy. The award ceremony was held in Bangkok, Thailand on 25th November 2008 after the 16th General Assembly meeting of the Federation.

Attendees at the FEIAP Engineer of the Year Award Ceremony

CHUNG-YUAN CHRISTIAN UNIVERSITY OUTSTANDING ALUMNI AWARD

MAA Taiwan's President, Mr. Chieh-I Hsu, was honorably selected as the outstanding alumni of Chung Yuan Christian University in 2008. Chung Yuan Christian University (CYCU) was founded in 1955 and is a renowned comprehensive university in northern Taiwan with reputation in both teaching and research. In the area of Essential Science Indicators (ESI) research ranking, it is ranked #1 in the field of engineering among all private universities and #5 among all universities in Taiwan.

APPOINTMENT OF ADJUNCT PROFESSOR IN ZHEJIANG UNIVERSITY, HANGZHOU, CHINA

Dr. Chung-Tien Chin, Senior Vice President of MAA and President of Southeast Asia Geotechnical Society (SEAGS), was given a Letter of Appointment by Zhejiang University for an adjunct professor position in the College of Geotechnical Engineering on 19th November 2008. Zhejiang University is one of the oldest and most prestigious universities in China. Established in 1897 as Qiushi Academy, the school is also referred to as ZJU or Zheda. Located approximately 112 miles (180 kilometers) southwest of Shanghai in the city of Hangzhou, Zhejiang Province, Zhejiang University is one of the China's leading research universities. Both its undergraduate and graduate programs and faculty are consistently ranked as among the best in China.

LETTER OF APPRECIATIONS

- Project ***Construction Management for Maitreya Monastery*** received a Letter of Appreciation from The Maitreya Monastery in January 2009 for outstanding consulting services on design integration, diagram review, process management, engineering interface coordination, contractor evaluation and quality management; contributions to the outstanding services is credited to Project Manager Mr. Hung-Chan Chang (張鴻展) and electrical & mechanical engineer Mr. Chang-Long Yang (楊昌隆).


感謝狀

貴公司承攬本院「天恩彌勒佛院新建工程」之專案管理工作，包括設計整合、圖說審查、進度管理、工程界面協調、廠商評估、簡報會議、品質管理及缺失改善建議等多項工作。

承蒙 貴公司顧問團隊，盡力指導與協助，俾使工程進展順利，其中尤以感謝 張經理鴻展主持專案管理經理及 楊顧問昌隆擔任機電副所長職務，盡職負責、積極智導、協調各方、表現優異，特以此文表達高度肯定與致謝。

此致

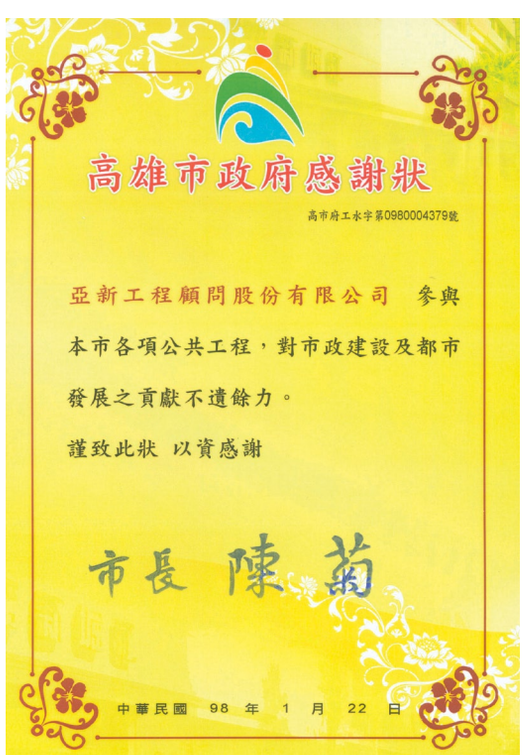
亞新工程顧問股份有限公司

天恩彌勒佛院 院長 汪慈光

中華民國 二十一日

Letter of Appreciation from Maitreya Monastery

- MAA received a ***Letter of Appreciation from Kaohsiung City Government*** in January 2009 in recognition for MAA's contribution to the municipal infrastructure and city development of Kaohsiung City.


高雄市政府感謝狀

高市府工水字第0980004379號

亞新工程顧問股份有限公司 參與本市各項公共工程，對市政建設及都市發展之貢獻不遺餘力。

謹致此狀 以資感謝

市長 陳菊

中華民國 98 年 1 月 22 日

Letter of Appreciation from Kaohsiung City Mayor, Ms. Chu Chen

Largest self-circular diaphragm wall in the world during construction.

Letter of Appreciation for Design Review of Kaohsiung MRT contract No.CR4

- Project ***Design Review of Kaohsiung MRT Contract No. CR4*** received a Letter of Appreciation from Kaohsiung Rapid Transit Corporation for MAA's outstanding performance on the project resulting in the successful completion on 14th September 2008. Of special mentioning, Kaohsiung MRT CR4 involved the largest self-circular diaphragm wall in the world during construction.

Professional Registration

PROJECT MANAGEMENT PROFESSIONAL (PMP) CERTIFICATION

MAA highly values the importance of project management in all the projects carried out by the group. Since the inception of Project Management Institution (PMI) chapter in Taiwan in 2003, MAA has encouraged engineers to obtain the certification. In the period between April 2008 to April 2009, MAA Taiwan's Vice President Mr. Richard Moh (莫仁維), project manager Mr. Ben Pen-Chi Lin (林本騏), environmental engineer Ms. Yang-Shiuan Lai (賴泱瑄), and construction management engineer Mr. Yu-Chi Lin (林育祺) successfully received the PMP certification.

ABOUT PMI (source: *www.pmi.org*):

"As the number of projects swell, the pool of credentialed talent is not keeping pace. In the Persian Gulf and China Sea regions alone — where entire cities are being built, seemingly overnight — a shortage of 6 million skilled project professionals is expected by 2013. Add to that the fact that, of the 20 million people participating in projects worldwide, just one million have professionally recognized formal training on how to best execute those projects. One thing becomes clear: The demand for skilled project managers is at a critically urgent level.
For nearly 40 years, PMI advocated on behalf of project professionals around the world. Project Management allows an individual to speak with one common language, no matter their industry, geography, or whether they manage projects, programs or portfolios. This common language steers organizations toward achieving repeatable, predictable results – critical when $12 trillion is being invested in infrastructure and capital projects worldwide over the next 12 months.

With more than one million members, credential holders, volunteers and trained project professionals worldwide, PMI advocates project, program and portfolio management that can enhance and accelerate organizational change - driving innovation, improving bottom line performance, and strengthening competitive advantage."

International Meetings

SIXTH ASIAN YOUNG GEOTECHNICAL ENGINEERS CONFERENCE (AYGEC) 2008

Mr. Yun-Hui Lai receives a Certicate of Appreciation Award

The Sixth AYGEC 2008 conference was held in Bangalore, India for the first time on 20th – 21st December 2008. The conference is jointly organized by Department of Civil Engineering of the Indian Institute of Science (IISc) and Karnataka Geotechnical Center (KGC) of Bangalore Chapter of Indian Geotechnical Society (IGS). This event was part of the centenary celebrations of the Indian Institute of Science, which is a premier research Institute in India. Furthermore, AYGEC 2008 was also a part of the celebrations of Diamond Jubilee of the Indian Geotechnical Society (IGS), an affiliate to the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). Through international conferences, ISSMGE had been the leader in the development of geotechnical engineering worldwide. In recent years, ISSMGE formed the Young Geotechnical Engineers' Conferences with the aim to encourage new generation of geotechnical engineers to carry out the mission and objectives of ISSMGE.

The 6th AYGEC 2008 brought together young geotechnical engineers (below 35 years) from government agencies, universities, research institutes, and companies in 10 Asian countries. Only invited keynote speakers and young geotechnical engineers from Asian countries nominated by the local Geotechnical Societies attended the conference. The theme of the conference was "Next generation Geotechnics," with 29 technical paper contributions (Bangladesh-2 papers, India-8 papers, Japan-2 papers, Korea-3 papers, Kazakhstan-3 papers, Malaysia -1 paper, Pakistan-2 papers, Srilanka-1 paper, Singapore-2, Taiwan– 3 papers, Thailand -2 papers). As part of the technical programme, the presentations made by the delegates were reviewed and two Best Paper awards and nine Certificate of Appreciation were awarded to the delegates. MAA Taiwan's Mr. Yun-Hui Lai, one of the three selected representatives from Taiwan, won a Certificate of Appreciation Awards for his paper titled "Construction of an MRT Station under a historical site." (Co-authored with D.T.C. Yao).

TECHNICAL PUBLICATIONS

Chang, J.F., Yao, D.T.C., and Hu, I.C. (2008), "*Application of Geophysical Techniques to Offshore Site Investigation in Southern Taiwan*," *Proceedings of the 3rd International Conference on Site Characterization*, 01 April, Taipei, pp. 813-818.

Chin, C.T., Chang, J.F., Hu, I.C., and Chen, J.R. (2008), "Geotechnical Site Characterization for Suvarnabhumi Airport," *Proceedings of the 3rd International Conference on Site Characterization*, 01 April, Taipei, pp. 17-30.

Chua, H.Y., Liu, K.K. and Chung, W.L. (2008), "Land Development Strategy for Taichung MRT Wujih Wenxin Beitun Line," *Proceedings of the Seminar on MRT Join Development and Promoting Private Sector Participation and Investment in Public Construction for Creating New Value,* Taipei, 13-14 December, pp. 299-312. (in Chinese)

Chua, H.Y., Liu, K.K. and Wun, D.S. (2008), "Taichung Metropolitan MRT Network Development Strategy and its Influence to the Surrounding Land development," *Proceedings of MRT Join Development and Promoting Private Sector Participation and Investment in Public Construction for Creating New Value,* Taipei, 13-14 December, pp. 281-298. (in Chinese)

Hsu, J.M., Lai, Y.F., Su, T.C. and Ju, Daniel H. (2008), "A GMIS System for Risk Management in Underground Constructions," *Proc. of the Cross-Strait Symposium on Rail Transportation and Environmental Engineering*, Hangzhou, China, 04-07 November, pp. 185-190. (in Chinese)

Huang, C.C., Lee, Y.L., Lee, Lee, J.F., Huang, T.M., Yu, W.H., Huang, C.H., Yu, C.J., Weng, S.C. and Hou, P.C. (2008), "*Characteristics of Landslides and Debris Flows in the Catchment of the Dahan River," 2008 Annual Workshop on River Basin Geology and Slope Land Hazard,* Taipei, 29 October, pp. 12-1~12-29. (in Chinese)

Huang, C.C., Lo, C.Y., Chang, M.H., Hsu, J.F. and Weng, S.C. (2008), "*Geological Hazards Mapping in Mountain Area (2007)," 2008 Annual Workshop on the Research of Disaster Reduction*, Taipei, 29 May 2008, pp. II7-1~II7-12. (in Chinese)

Huang, C.C., Tzen, S.M., Chen, S.L., Sung, Y.M., Wu, C.Y. and Lin, C.Y. (2008), "Applying Spatial Information Technology on Road Business Management," *2008 Annual Conference of Taiwan Geographic Information Society*, Taipei, 23 October 2008, C17A-64, pp. 1-12. (in Chinese)

Huang, Y.H., Kang, S.M., Chen, M.S. and Kao, C.C. (2008), "Design Consideration of the Bored Tunnel Lining Segments with Close Proximity Effect," *The Paper Assemblage of Bored Tunnel Construction Management and Close Proximity Construction Technique*, July, pp.140-151. (in Chinese)

Huang, Y.H., Kang, S.M. and Ju, Daniel H. (2008), "Application of Shock Transmission Unit for MRT System - Case Study of Taipei MRT System," *Proc. of the Cross Strait Advanced Forum on Rail Transportation System Construction and Environment Engineering, Hangzhou*, China, 04-07 November, pp.349-353. (in Chinese)

Hwang, R.N. and Moh, Z.C. (2008), "Evaluating Effectiveness of Buttresses and Cross Walls by Reference Envelopes," *Journal of Geo Engineering*, vol. 3, no. 1, April, pp. 1-11.

Hwang, R.N., Kao, C.C. and Chen, C.H. (2008), "Minimization of Settlements during Tunneling under Songshan Airport," *Sino-Geotechnics*, No. 118, December, pp. 5-18..

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Lin, C.D., Mao, S.S. and Ma, C.H. (2008), "Design summary of water supply pipelines in Guandu (from Datong pumping station to embankment of Yumen street)," *Proc. of the Conference of Trenchless Technology and Engineering Practice,* Taipei, Taiwan, 04 December, pp. 71-86. (in Chinese)

Liu, G.J. and Jwo, Frank C.S. (2008), "變更設計延宕進度、監造作業形同虛設、專案列管、北科大新建工程起死回生," *Journal of Construction News Record*, No. 311, December, pp. 34-40. (in Chinese)

Moh, Z.C. (2008), "Case Study and Comparison of Bidding Methods for Rail Transit Projects," *Proceeding Cross-Straits Advanced Technical Forum on Rapid Rail Transit Construction and Environment Engineering*, Hangzhou, China, pp. 7-16 (in Chinese)

PERSONNEL PROFILES

Mr. Shian-Tsair Sheu （許先才）

Mr. Shian-Tsair Sheu was promoted in April 2008 to Senior Engineer and is currently in the Kaohsiung Office. In 1988, Mr. Sheu worked for Taiwan Kumagai Co., Ltd and was involved in the construction surveying of Philip Building in Hsin-Chu Science Park. One year later, Mr. Sheu worked for Chun Long Construction Ltd. and was involved in the reconstruction on Tung Men Circle in Hsin-Chu City. Mr. Sheu graduated from Department of Civil Engineering in National Chiao-Tung University in 1990 and received a master degree in Civil Engineering from National Central University in 1992. He joined MAA in 1994 and has been involved in many works related to safety monitoring, geotechnical survey, deep excavation, shield tunnel construction, construction supervision and construction management. Projects include Taipei MRT, No.1 Highway Changhua-Yuanlin Section, Taipei 101 construction, Songshan Airport drainage development project, National Defense University and No.2 Building of National Cheng Kung University Hospital.

Mr. Ming-Hung Tseng（曾名宏）

Mr. Ming-Hung Tseng of the Civil & Water Resources Engineering Department was promoted to Senior Engineer in April 2008. Mr. Tseng received his bachelors degree in water resource and environmental engineering from Tamkang University in 1989. Prior to joining MAA, his major works undertaken in J&S Engineering Consultants, Co. included planning and design of Kuanyin-Hsinwou West Coast Expressway, design of County Road in Ilan, planning and design of Tungshin-Potzu East-West Expressway, design of Interchange of Tainan-Kuanmiao East-West expressway. At MAA, his major works include the planning and design of Wulai-Ilan Provincial Road No. 9, Common Duct System planning in Chiai, the design for Frontage Road under THSR Viaduct at Tainan High Speed Rail Sha-Luen Station, Common Duct System planning in Taipei, the design for Common Duct at Taipei Da-Do Road, Common Duct System Planning, design and B.O.T. project in Kaohsiung Multi-functional Commerce Trade Park, planning and design of Pou-Liou Access Road, and planning and design of Chiai Broadband Conduits. He is a registered member of The Chinese Association of Superintendents, China Road Federation, Construction Quality Management Engineer and has taken the Professional Procurement Personnel qualification training course.

Mr. Bor-Song Lin （林柏松）

Mr. Bor-Song Lin of Transportation Engineering Department was promoted to Senior Engineer in April 2008. Mr. Lin received his bachelors degree in civil engineering from Tamkang University in 1990 and master degree in engineering from University of Arlington, Texas in 1995. Prior to joining MAA, he worked for Li-Chin Consult Ltd., during which he carried out various road-widening projects including Tau No.110 widening project and Tai No.15 bridge design etc. Mr. Lin joined MAA in 1998, after which he has been involved in several major projects such as detailed design of Taipei, Taichung and Kaohsiung MRT system, and structural analysis on Fu-Shing N. Road Extension Tunnel and Hsinyi Bypass of the Taipei Connecting Highway.

Mr. Sz-Uei Jan （詹仕煒）

Mr. Sz-Uei Jan was promoted to Senior Engineer in April 2008. He graduated from Fu Jen Catholic University in 1995 in Landscape Architecture. He had worked for Nan Ya Plastics Corporation and New Frontier Engineering Consultants Co., Ltd. during college. After graduation, he had worked for OCE, Inc. and was responsible for Landscape planning, designing, supervision in base, planning of computer system and management of network.

Since joining MAA in 1999, he has been responsible for Landscape planning & design for all types of infrastructure projects. Examples include landscaping of Broadband Duct in Lienchiang County, Miaoli Station of Taiwan High Speed Rail, Highway No. 2-1 in Fongyuan City and Sinwei bridge in Maolin National Scenic Area etc. He is a registered member of Chinese Institute of Landscape Architecture. Mr. Jan was elected as MAA's Staff of the Year in 2004.

Mr. San-Yi Fang （方尚義）

Mr. San-Yi Fang was promoted to Senior Engineer of Project & Construction Management Department in April 2008. He received his bachelors degree in Architecture from Tamkang University in 1979. From the period of 1980 to 1990, his major works undertaken at BES Engineering Corporation include engineering for highrise building foundations and constructions, such as Taiwan Power company building, Exhibition building of World Trade International Trade building and Central Century building. From 1990 to 1999, his major works undertaken at Yi-Chen Engineering Corporation include many local housing buildings in Hsin Tian, Tao Yuan and HsinChu, and Ho-ping Harbor in Hwa Lian. Since joining MAA in 2001, he has carried out construction management for the Post 921 Chi-Chi earthquake rebuilding of 22 schools, National Defense University project management and NTU Underground Parking Lot Project Management, and project management and construction supervision for the renovation of military housing villages in HsinChu City.

Mr. Yung-Chieh Yang （楊詠傑）

Mr. Yung-Chieh Yang is currently the Group Leader of MAA's Human Resources Department. He received his bachelors degree in business administration from Tunghai University in 1999 and joined MAA in 2001. Mr. Yang received the qualification of internal auditor for ISO9001:2000 in 2003 and served as internal auditor in Quality Assurance Group in MAA. In 2007, Mr. Yang also received the qualification of Director Auditor for ISO9001:2000 and was promoted to Group Leader of Quality Assurance Group. In addition to maintaining quality management system, Mr. Yang was appointed as Quality Assurance Manager for Taipei MRT Circular Line First Phase Detailed Design DF113 Lot project.

Dr. Hsiao-Chou Chao （趙曉周）

Dr. Hsiao-Chou Chao was promoted to Senior Engineer of Geotechnical Engineering Department in April 2008. Dr. Chao received his bachelors degree in civil engineering from National Taiwan University in 1990, masters of science degree from Pennsylvania State University in 1997 and doctorate degree in civil engineering from Northwestern University in 2002. Dr. Chao worked for MAA before his pursual in doctorate program during which he worked for the Infrastructural Technology Institute of Northwestern University, at Evanston, IL as a Post-Doctoral research associate. His primary research focused on nondestructive evaluation for geotechnical infrastructures using conventional and a newly-developed guided wave approach, instrumentation and monitoring, digital signal processing, and structural soil dynamics related numerical methods. He had also been directly involved in several major industrial projects such as the nondestructive integrity evaluation for drilled shafts and retaining walls in the Central Artery/Tunnel Project, USA, the US NSF Founded research projects with regard to the nondestructive testing methods based on the experimental results from a number of NGES (National Geotechnical experimental site), and the field investigation of soil failure process. Since his rejoining with MAA in 2004, He has participated in the design of Taipei MRT Songshan Line Contract No.DG166, the risk management of Airport Rapid Transit Line Contract No. IATX03. Dr. Chao is an Associate Member of American Society of Civil Engineers (ASCE). To date, he has authored/co-authored over 15 published technical papers.

Integrated Solutions For Global Impact

MAA GROUP

http://www.maaconsultants.com

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