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AJCE

NEWS LETTER

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FIDIC Member Association

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AJCE
ASSOCIATION OF JAPANESE CONSULTING ENGINEERS
(FIDIC Member Association)

About AJCE

The Association of Japanese Consulting Engineers (AJCE) was established in 1974, and was approved by the Science and Technology agency of Japan (currently, Ministry of Education, Culture, Sports, Science and Technology) as a legal entity in 1977. Representing Japanese consulting engineers, AJCE is a member of the International Federation of Consulting Engineers (FIDIC).

AJCE strives to enhance the status and competence of private consulting engineers (CEs) who are independent and impartial of manufacturers, contractors and others. By doing so, AJCE contributes towards the advancement of science and technology, development of industry, sustainable considerations in built-environment, as well as the enhancement of human safety and welfare.

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Designed by Miho Yamato, CTI Engineering Co., Ltd.

Role of AJCE for Consulting Engineering Industry in Japan

Konomu UCHIMURA
President, AJCE
CTI Engineering Co., Ltd

40th Anniversary of AJCE

I was elected as the new president of AJCE in May 2014.

AJCE was established in 1974 and was approved as a member association of FIDIC at the general assembly meeting held in Cape Town in the same year. In the succeeding years, especially 1991 FIDIC Tokyo conference as a trigger, AJCE has been exerting effort for strengthening its structure as well as to increase its members. Further, AJCE has taken active role of Consulting Engineer as a FIDIC member association representing Japan. It includes nomination of FIDIC executive committee member, serving and contributing as FIDIC committee members, etc.

AJCE celebrated its 40th Anniversary in 2014 by inviting FIDIC president, Pablo Bueno for the commemorable event. We will exert our effort for raising the social status of Consulting Engineers and expanding our industry in domestic and overseas market in cooperation with FIDIC and member associations.

Current State of Consulting Engineering Industry in Japan

Consulting industry in Japan started in 1945 after World War to cope with the demand for reconstruction of the nation. Since 1960, Consulting Engineering industry has contributed for the development of infrastructure in Japan for about 30 years when Japan was in high-growth period.

However construction investment in Japan decreased continuously after the peak in early 1990's and its current state is about a half of the peak. The main reasons of the downturn are economic stagnation and increase in social security payment for aging population in Japan. Despite of the limited budget, we have been taking a continuous reconstruction measures for recovering from disaster caused by the Great East Japan Earthquake in 2011. Further, we need to invest for mitigation against natural disasters that may be caused by earthquake, typhoon and volcano eruption. In addition, maintenance and renewal of decrepit infrastructure that was constructed rapidly in the last 50 years is a big issue. An encouraging news for our industry is to hold 2020 Olympic and Paralympic Games in Tokyo.

Leading edge technology of Consulting Engineers is necessary for the development of higher-quality infrastructure under the limited natural resources. In this respect, selection of Consultant by QBS is the most effective measures for securing high-quality infrastructure. Together with FIDIC support, AJCE will further exert its efforts for the dissemination of QBS in Japan.

Quality, Integrity, Sustainability

These three concepts are the core principles enforced by FIDIC. Government and private sector in Japan have been promoting international business practice. We aim at exporting high-quality and sustainable infrastructure based on fare competition linked to the FIDIC condition of contracts.

Similarly in domestic projects, new role of Consulting Engineer is expected for the development of infrastructure that is based on fare competition, responding to changing social needs. In Japan, harmonization of human resources, technology and legal framework between domestic and oversea services are becoming increasingly important issue. Existence value of FIDIC and AJCE lies on this point.

FIDIC 2014 Conference in Rio de Janeiro

The FIDIC Conference 2014 was held in Rio de Janeiro, Brazil as the first conference in South America. About 700 people from more than 70 countries and territories have participated including 36 participants from Japan. The main theme of the conference was "Innovative Infrastructure Solutions". About 1 billion people in the world don't have access to the benefit of basic human needs such as safe drinking water and electric light.

We, consulting engineers are mandated to offer sustainable and innovative solutions under limited financial condition in which measures from financing to application of cutting edge technology in construction and operation are integrated in the solutions while considering environmental impact.

On the other hand, a new perspective in the development of infrastructure is expected from advanced countries in Europe, Japan, etc. In such complicated and diversified society, role of consulting engineers is to provide "Innovative Infrastructure Solutions" as highlighted in Rio Conference.

Young Professional Exchange Program

In the recent FIDIC conferences, active role of young professionals and women engineers is drawing attention. Young Professionals Exchange Programme (YPEP) was established in 1996 by following the Memorandum of Understanding between AJCE and CA (Consult Australia) to further promote cooperation and mutual understanding between Japanese and Australian young consulting engineers. Last year, 6 Australian young engineers visited Japan to have training in AJCE member firms under YPEP 2014. In the past 19 years, more than 140 young professionals from both countries attended this programme. I have no doubt that this young power will add a new page to build firm international network and contribute significantly in the progress of Consulting Engineering industry.

Japanese Development Cooperation in a New Era

—Key Features of New Charter and Way Forward—

Izumi OHNO
Professor
National Graduate Institute for Policy Studies (GRIPS)

On February 10 2015, the Japanese Government adopted the new Charter for Development Cooperation. In March 2014, H.E. Mr. Fumio Kishida, Minister of Foreign Affairs, announced his intention to revise the 2003 ODA Charter in his policy speech. Subsequently, the Ministry of Foreign Affairs convened the Advisory Panel to Review the ODA Charter (chaired by Dr. Taizo Yakushiji, Professor Emeritus of Keio University), which submitted its recommendations to the Minister of Foreign Affairs in June 2014. Based on the recommendations, the Ministry conducted the drafting work and organized public hearings and stakeholder consultations in parallel.

This is the third charter, following the first ODA Charter introduced in 1992 and the second one revised in 2003. The first ODA Charter was formulated at the time when Japan became the top donor. This was an effort to articulate Japan's philosophy of international cooperation to the world—mindful of the strong criticism the country faced at the Gulf War in 1991 ("passive checkout diplomacy"). The second ODA Charter was formulated at the time when Japan faced the austere budget and sharp decline of popular support to ODA (primarily due to the stagnated domestic economy). Meanwhile, the international community showed solidarity to increase ODA toward achieving the Millennium Development Goas (MDGs) by 2015. Thus, it was considered necessary for Japan to reaffirm its determination to international contribution and enhance aid effectiveness both domestically and internationally. Moreover, in response to broadening development agenda, the 2003 Charter made specific reference to human security and Japan's contribution to peace building.

Then, what are the key features of Japan's new Development Cooperation Charter and what are the drivers for this latest revision?

Key Features of the New Charter for Development Cooperation

I would like to note five features of the new Development Cooperation. First, it has been renamed from the "ODA" Charter. The name "Development Cooperation Charter" is considered more suitable because it is not just developed countries but also diverse actors (such as businesses, NGOs, local governments) that cooperate toward achieving inclusive, sustainable, and resilient development—by utilizing respective strengths (finance, technologies, ideas and field experiences, etc.). While ODA remains a core resource as the government's budget, it will increasingly play a catalytic role in mobilizing resources and expertizes of the various actors mentioned above.

Second, the new charter refers to "national interests" for the first time. It clarifies the objective of Japan's development cooperation to contribute more proactively to the peace, stability and prosperity of the international community, with the expected consequence of ensuring Japan's national interests. Clearly, it is governed by the higher strategies of the Abe administration—such as the National Security Strategy (December 2013) and the Japan Revitalization Strategy (June 2013, revised in June 2014).

Third, the new charter keeps Japan's basic philosophy of development cooperation in three ways: (i) contribution to creating a peaceful and prosperous world by non-military means in concert with the international community; (ii) promotion of human security and fundamental

human rights; and (iii) support to the self-help efforts of developing countries through dialogue and joint work. In doing so, Japan will strive to achieve high-quality growth and take a human-centered approach. It will also respect universal values and strengthen the support to the rule of the law. There are essential elements of the post-2015 development agenda, as well.

Fourth, the new charter expands the scope of Japan's development cooperation in several ways. For one thing, the target of ODA provision has been broadened to include middle-income countries as well as low-income countries. This is because there exist deep-rooted poverty and rising inequality in middle-income countries and also these countries often need to strengthen industrial competitiveness to overcome "middle-income traps". For the other, while Asia will continue to be an important destination of Japan's ODA, Japan will step up its engagement in the other regions such as Africa, Middle East and Latin America. Moreover, with the growing significance of disaster relief as well as humanitarian and reconstruction assistance for post-conflict countries, Japan will not uniformly rule out extending the cooperation to the military personnel of the partner countries—as long as the support activities are directed to humanitarian purposes.

Fifth, the new charter emphasizes sharpening the strategic focus of development cooperation and strengthening collaboration with a broad range of actors. Specifically, Japan will tap the knowledge and technologies accumulated by businesses, citizens, universities and local governments to maximize development effectiveness. For example, the Japanese business sector excels in environmental technologies for producing clean water and recycling wastes. Local governments have rich expertizes and knowledge of overcoming pollution and urbanization problems that Japan experienced during its rapid economic growth period after World War II. The new charter acknowledges the importance of mobilizing these know-how and technologies accumulated within Japan and using development cooperation to help solving the challenges faced by developing countries today.

Key Factors behind the Formulation of the New Charter

The landscape of international development has changed markedly, with the acceleration of global integration, global power shift, and the shaping of the post-2015 development framework. There is a shared perception that Japan and the rest of the world are entering a new era.

The 2003 ODA Charter was drafted in an age when ODA (public fund) from developed countries were the primary sources of contributing to socio-economic development of developing countries. Today, however, private-sector money that is 2.5 times as large as ODA flows into developing countries. This means that ODA is no longer the sole source of contributions to these countries. In addition, rapidly growing emerging economies (such as China, India, and Brazil) are increasing their presence as donors. The recent announcement of the establishment of the Asia Infrastructure Investment Bank (AIIB) and the BRICS Bank are symbolic examples of this trend.

The domestic environment has changed, too. In Japan, particularly since the global financial crisis triggered by Lehman Brother's bankruptcy in 2008, there have been more cases in which not only large corporations but also small and medium enterprises (SME) advance into overseas markets for themselves and establish local production operations. Japan is entering a new age of internationalization. Moreover, following the Great East Japan Earthquake of 2011, the Japanese government, companies and individuals jointly participated in relief and reconstruction activities for the affected areas. This experience of collaboration between the public and private sectors and within the private sector must be harnessed for development cooperation abroad.

Way Forward—Recommendations for Network-Based Cooperation

Increasing global integration has blurred the lines between overseas and domestic activities. Moreover, the expansion of corporate activities into emerging economies and developing countries has broadened the interface between development cooperation and business activity. On another front, it is encouraging to witness the growth of human resources and organizational networks built in Asia through Japan's long-standing ODA and economic cooperation. Building on a relationship of trust that has been

established over decades of cooperation with Japan, Asian development partners are increasingly becoming players of a new era of development cooperation.

As business activities in emerging economies and developing countries expand and mature, the 'localization' of Japanese companies will become critically important. For business to thrive, partnerships forged with local networks of human resources and organizations built through ODA will prove indispensable.

In this new era of cooperation, Japan should leverage the strengths it possesses through network-based cooperation. The networks I refer to here are multifaceted ones that encompass partnerships with the private sector; the network of people and organizations built up throughout Asia by Japanese ODA; and the Asian network that has been mobilized for the development partnership between Asia and Africa. The network can extend further to include local governments in Japan that support SME development, NGOs, and other relevant actors, making them key players in a new era of development cooperation too. Embarking on such an endeavor would elevate Japan's development cooperation and place it squarely at the center of the country's basic national policy and at the same time sharpen its strategic focus in the current context of globalization.

Attendance at Nhat Tan Bridge Opening Ceremony

Yasuji NAGAYA
Vice-President, AJCE
President, Chodai Co., Ltd.

Early in the New Year of 2015, in Hanoi, Vietnam, a road that connects the Noi Bai International Airport and Hanoi city has completed. At the same time, the opening ceremony of Nhat Tan Bridge, a continuous cable-stayed bridge having 5 main towers, was held. I participated in the ceremony as the firm representative, responsible for design and construction management. I would like to share my experience with readers on what impressed me at the opening ceremony.

In the past, I have attended several other opening ceremonies.

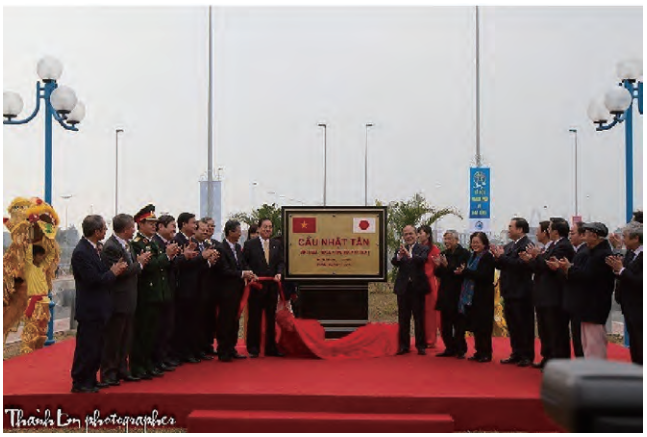
At every ceremony, I know well about our vocation in charge of planning, design, and construction works that expresses joy and peace of mind. Best of all is that all hardship and effort turn into joy in this ceremonial moment. In particular, joy of local residents make this event uniquely meaningful.

For more than an hour before the opening ceremony, many people started gathering around the venue and stay in the ceremony until tape cutting. Then after the tape-cut, with great glee, they took commemorative photos on the bridge in their own way while enjoying the sceneries from the bridge.

Five years ago, I attended the previous opening ceremony of Can Tho Bridge in Vietnam. I still remember that the bridge was crowded with many people and bikes until midnight. Everyone seemed happy and full of joy. Such kind of moment makes me feel that I am really proud of myself in engaging a job in infrastructure development.

In another previous opening ceremony, the island crosslink in the Ehime Prefecture, Japan, it seemed that all people in the subject island came and attended.
It is no doubt that crossing a river or the sea by ships is time consuming as people often wait for a boat even more than an hour. Before the Can Tho Bridge was built, boat operation was highly influenced by weather. Sometime it was too dangerous to commute by boats to school. Further, some patients may not be able to go to the hospital at time of emergency. Therefore, infrastructure development is said to be extremely important for securing safe living against any physical condition.

Poverty is said to be one of the causes of many conflicts. Developing infrastructure like a road is important to reduce the gap between rich and poor. Road enables inland transportation and easily delivers crops harvested in deep mountains. Products that can not carry and sell can be carried and sold by construction of a road.



Moreover, consumption of marine products can be increased by extending market from seacoast to the inland areas such as mountainous region by which it will increase revenue as well. From the viewpoint of poverty alleviation, infrastructure development such as extending roads, seems a bit inconsequential in developing countries, however, I believe that it will reduce the gap between rich and poor.

As the consequence of the development, it will eventually contribute to the world peace.
As can be seen from the context of this article, by attending opening ceremony and witnessing the joy of local residents as one of the persons concerned, I feel happiness. Further, I consider that development and construction of safe and robust infrastructure are important mission for engineers. After all, I believe that keeping the spirit of this thought for all the time is the most important matter for consulting engineers.

FIDIC Disaster Management Guide and Some Considerations from Viewpoint of Sediment Disaster

Toshio KURASHIGE
International Activities Committee, AJCE
Nihon Suido Consultants Co.,Ltd.

1. Introduction

In Japan, generally called the country of beauty, from the time of the Yayoi period, started around the B.C. 3rd century, the country has been built with growing rice, and it seems that the history has been dependent on the benefit of an alluvial plain along river. I remember what a certain famous novelist introduced in his essay. He said the French who visited Japan in 1868, when Samurai Era just finished, murmured as follows: “Unlike France, Japan was given the country of a rich crop from God, and was not suffered by great difficulties, either, yet has developed like today. Isn't God unfair?" To be sure, it is right.

However, once it became heavy rain on the other hand, the alluvial plain was washed by the flood, and has repeatedly received serious flood damage. Especially in the origin part which forms a steep valley, the debris flood has affected the communities along a stream even into destructive manner frequently. This report shows the feature of Disaster Management Guide which FIDIC published last year and some subjects in application for sediment disaster.

2. Issue of FIDIC Disaster Management Guide

In the FIDIC 2014 Rio Conference last year, FIDIC issued the guidebook on disaster management for the first time as far as I know. After entering in the 21st century, there occurred devastating tsunami in Indonesia in 2004, the fierce hurricane "Katrina" in the U.S. in 2005, the violent earthquake in New Zealand in 2011, catastrophic earthquake and tsunami by "Great East Japan Earthquake" in 2011, and a furious typhoon "Haiyan" in the Philippines in 2013, etc. in succession. Those successive serious disasters finally encouraged FIDIC to publish this guidebook. Although it seems to differ from the images of the publication which has been tackled so far by FIDIC, the engineer in connection with disaster prevention may feel this natural.

This "FIDIC Disaster Management Guide" shows the fundamental direction of the role which consulting engineers and its association should play in preparing for disasters and in the aftermath of a disaster. Accordingly it has not taken the form of the detailed manual. The contents of the guide consist of four "Rs" as the core roles for disaster management. They are the "Risk Reduction" "Readiness - Pre-Disaster Preparedness" "Response - DM Issues during the Event and in the Immediate Aftermath" and the "Recovery".

3. Subjects on Application of the Guide to Sediment Disaster

Since the Guide is targeting any type of disaster, its contents are naturally led to covering quite general issues at most. In a different view, the Guide requires the help from professional engineers for their proper advises according to the type and nature of the disaster. An engineer will apply the Guide flexibly with full use of the technology backed by their experience, when facing at the disaster as a partner of the management authority. I would like to see some subjects on application of this Guide from a viewpoint of the consultant in this paper based on the feature of sediment disaster in recent years in Japan, which disaster my firm has been long devoting to.

In this Guide, engineers and member associations have to prepare elaborately by themselves, and commit themselves to cooperating closely with clients at a disaster in advance to it, while participation of engineers during and after disaster has to be recognized indispensable. Further, the disaster management authorities should fully understand the significant

role of engineers. On the other hand, engineers participate positively even in a planning phase on risk mitigation to place emphasis on making concept of resilience as a critical policy of disaster management.

(1) Preparation by Engineers Themselves

For engineers, their own preparation should cover relevant training, strengthening of the response and recovery capacity in their company, and making a necessary agreement with clients like priority agreement, liability limiting agreement and so on. The whole community is placed under the extremely unusual situation at disaster. Especially in the case of sediment disaster, since the damage may unfortunately happen to involve loss of human lives, the stress of the persons concerned devoting to disaster management is definitely great and sometimes stifles their feeling as well. Furthermore, there is a difficulty for engineers to make a calm and right decision and following act based on their long experience within a limited time, for which they cannot seem to carry out sufficient technical analysis like computational simulation etc. In this aspect, the Guide recommends member associations to take a leading role on training. Moreover, in the consultancy firm, BCP and safe reservation of the personnel is inevitable in addition to the importance of maintenance of in-company infrastructures, such as the IT environment, a communications network, and an alternative office building. Those issues could be vital especially when volunteer activities or cooperative work based on a disaster agreement can be aimed at. Those should be carefully elaborated from now on especially in hazardous country like Japan.

(2) Commitment on Involvement of Disaster Management to Client

The commitment on involvement of disaster management to clients is officially done with a disaster agreement. In that case, the Guide recommends talking with a client about such clause as liability limitation for engineers' legal responsibility. Especially in the case of sediment disaster, site problem quite often arises in a real situation. It seems to be the future subject that engineers would be granted immunity from liability like entering into a private land within the range required for investigation or cutting down an interfering tree for recovery at a declared emergency. Moreover, although each sediment disaster happens locally, however, in the case of heavy rain, disaster frequently arises simultaneously in many places, and the management work becomes broad-based naturally. Therefore, the framework which guarantees sufficient information sharing beforehand is also needed among consultants involved in the disaster agreement.

(3) Planning of Disaster Management

In the country where a disaster occurs frequently like Japan, almost any of local and central governments have developed disaster management plans including the facilities planning for damage prevention or warning and evacuation system. As for warning and evacuation system for sediment disaster, however, hazardous situations would be understandable like "This valley has a high possibility of debris flood occurrence!". But there left insufficient lead-time for residents to evacuate because sediment disaster suddenly occurs in a quite short time and has the comparatively so complicated mechanism that risk forecast cannot be done with a scientific reliability. In Japan, introduction of a warning and evacuation system or even a land use control is imposed to the local governments for their high-risk area legally by Sediment Disasters Prevention Act revised last year. And in order to make effective risk mitigation of a sediment disaster, it is important to sustain the expected function of the present facilities in a long run, resist from complete destruction even at receiving an unexpected scale of disaster exceeding the design criteria, or demonstrate fixed effects for the damage alleviation even if it happens to break down. And when a disaster occurs, it is required to assess the scale and feature promptly and to harness it in the restoration. Adding to that, periodical aerial survey or fine geographical feature analysis are desired as a pre-disaster preparation. With further look at recent sediment disaster, there happened debris flood which crossed across a valley boundary and reached an adjacent flood stream, or found surprising examples where debris flood occurred at the valley in spite of not fully developed.

Those facts would encourage us to place the border of risk in the far more distance.

4. Conclusions

In our country, the mudflow has been feared as

a "Mountain Tsunami" from ancient times. When landslide and steep slope failure are also taken into consideration with debris flood in Japan, it is said that a sediment disaster reaches the number exceeding 1,000 affairs every year. Since Japan has been suffered from catastrophic debris flood of Izu-Oshima the year before last and Hiroshima last year, and hit by the dreadful volcanic eruption of Mt. Ontake last year, Sediment Disasters Prevention Act was revised at the end of last year. By this law, while releasing a dangerous area and making the warning and evacuation system permeate, a duty will be imposed upon the local governments so that land use may also be restricted if needed. However, since a sediment disaster is also getting furious depending on an increase of the rainfall intensity accompanied by global warming, I would like to really expect that the ways of risk reduction will be discussed and improved further.

AJCE Activity 2014

January

AJCE New Year Celebration Party



February

2nd Contract Administrator Seminar for the Overseas Construction Project



July

40th Anniversary Special Seminar
【see page 18】




October

Young Professionals Exchange Programme 2014
【see page 28】



November

2nd Contract Administrator Training Workshop for the Overseas Construction Project
【see page 43】



CE Promotion in University
【see page 27】





September

40th Anniversary Celebration Party 【see page 22】

FIDIC 2014 Rio de Janeiro Conference Innovative infrastructure Solutions

FIDIC Conference

December

AJCE-Cup Futsal Game 【see page 26】

Interdisciplinary Seminar 2014 【see page 45】

FIDIC Conference Reporting Seminar

AJCE Activity 2014

Meeting the World's Demand for Infrastructure

Pablo BUENO
FIDIC President

As FIDIC joins with AJCE in celebrating its 40th Anniversary, the world economy slowly emerges from the Global Financial Crisis. The demand for infrastructure remains strong however – a key ingredient for economic growth.

The role of the consulting engineer therefore takes on even greater significance, as governments, clients, and society demand more sustainable and innovative solutions. Higher quality and integrity are of greater importance in today's market. It is therefore clearly necessary to invest more time in thinking before doing; identifying optimum solutions, before detailed design and construction commences. Only this will ensure a reduction in overall costs and minimised risks, to achieve successful outcomes.

It is also clear that the professional advice invested up front can have the greatest impact on life-cycle costs for a project. Yet such advice represents only a fraction of the overall investment cost. The best decision a client can make, is selecting the right consultant to provide the highest quality advice. Such a prudent investment will pay for itself many times over. Selection based on quality is therefore paramount.

Quality, Integrity, Sustainability

These were the core principles adopted by FIDIC in 1913. These are the same core principles reinforced at the Centenary event of FIDIC in 2013.

Over 40 years of honourable service to the Japanese market, AJCE rightly celebrates its anniversary. But, perhaps it is time to review the business model in order to capture more broadly, the international standards and practices developed by FIDIC, to enhance the voice of the industry, and provide more integrated and higher quality services to clients and to society.

FIDIC has developed sophisticated tools and guidelines, designed to assist consultants and clients to make informed decisions on identifying the most appropriate project in which to invest, with quality, integrity, and sustainability. Such tools include Project Sustainability Management, published in 2013; the FIDIC Integrity Management system, launched in 2011; and QBS (Quality Based Selection of consultants), also released in 2013.

The Global Market

The consulting engineering industry has become truly global, with many consulting firms now operating internationally, working across multiple borders, sharing valuable resources in order to provide the best services to clients. The need for standardisation takes on greater significance in the pursuit of excellence and cost efficiencies, with more companies now operating in international markets. Often, the availability of projects through development agencies such as JICA can assist in gaining experience. But other opportunities also exist. Collaboration between national firms and international firms also offer valuable experience. Consulting Engineering Firms are not always treated fairly. In this sense, FIDIC guidelines and standard Conditions of

Contract offer useful tools for balanced and reasonable treatment in the market place.

A Strong Voice for the Industry

FIDIC speaks for the global industry. AJCE speaks for the industry in Japan. Together, they explore opportunities to strengthen that voice in order to support the objectives of Governments and society, and share with them international best practice. Together they pursue an improved Quality of Life for everyone.

I congratulate AJCE on its significant achievements and, on behalf of FIDIC, offer full support in identifying ways to integrate services for greater efficiency and higher quality. A priority therefore is the assessment of tools available to help make informed decisions and find better solutions to the challenges facing Japan and its member firms. I am confident that, together, the industry will continue to flourish, and value added to the services made available to clients, and to society. The future does indeed look bright, and the consulting industry can be proud of its role in enhancing Quality of Life.

Once again, my warmest congratulations to AJCE on this special occasion.

AJCE Activity 2014

AJCE 40th Year Commemorative Undertaking-Summary

Masafumi MIYAMOTO
Chairman, Committee for the 40th Year Commemorative Undertaking
President, TEC International

In order to celebrate 40th anniversary of AJCE, the following events have been held.

Courtesy Visit of FIDIC President to Ministry of Land, Infrastructure, Transport and Tourism (MLIT)
Date & time: 8th July, 2014, 14:30 - 15:00
Venue: Ministry of Land, Infrastructure, Transport and Tourism

FIDIC President, Mr. Pablo Bueno arrived in Tokyo on 7th July a day before the courtesy visit. On 8th, together with Mr. Konomu Uchimura, AJCE president, Noriaki Hirose, immediate past president and Yoshi Yamashita, secretary general of AJCE, Mr. Bueno visited Mr. Toru Shimizu, Deputy Director-General for Engineering Affairs, the Minister of Land, Infrastructure, Transport and Tourism (MLIT). Mr. Shimizu explained about Japanese government's policy on promotion of infrastructure projects in oversea market and Quality Assurance Act for Public Works projects amended in the last national legislature. He also mentioned that important role of FIDIC contract documents for overseas construction projects is well recognized among concerned parties. Further, he stressed that closer cooperation with AJCE, the member association of FIDIC representing Japanese CE industry, should be enhanced. In response to Mr. Shimizu, Mr. Bueno stressed fairness and impartiality of FIDIC contract documents. He also explained that Cost Based Selection (CBS) of consultants is prohibited in Europe under the new 2014 EU Public Procurement Directive and Quality Based Selection (QBS) of consultants has come into wide use.

Mr. P. Bueno (left), Mr. T. Shimizu (right)

FIDIC-AJCE Informal Networking
Date & time: 9th July, 2014, 11:30 - 13:00
Venue: Grand-Arc Hanzomon Hotel
Informal gathering between FIDIC President Mr. Bueno and AJCE EC members and concerned persons was held. In the meeting, AJCE President Mr. Konomu Uchimura introduced activities of AJCE and current state of consulting engineering industry in Japan. Following Mr. Uchimura, FIDIC President Mr. Bueno introduced FIDIC policy and actions that are considered relevant to AJCE

activities. Opinions were exchanged on matters such as procurement of consulting services and resolution of unilateral project contracts.

AJCE 40th Anniversary Seminar on "Role of Consulting Engineer"
Date & time: 9th July, 2014, 13:30 - 17:30
Venue: Grand-Arc Hanzomon Hotel
Detail of the seminar is reported in AJCE 40th Year Commemorative Undertakings.

AJCE 40th Anniversary Ceremony
Date & time: 9th July, 2014, 18:00 - 20:00
Venue: Grand-Arc Hanzomon Hotel
Detail of the ceremony is reported in AJCE 40th Year Commemorative Undertakings.

Support for Dispatching Young Engineers to International Conferences
As a part of AJCE 40th Year Commemorative Undertakings, AJCE supported 5 young engineers for attending FIDIC Rio de Janeiro Annual Conference.
All of the young engineers attended the Rio conference made presentation at FIDIC Conference Reporting seminar held in Tokyo on the 6th November, 2014.

Commemoration Publication for AJCE 40th Anniversary
A publication containing 40 years records of AJCE activities on consulting engineering industry in Japan and our future prospects, mission and role were published as of January 1st, 2015. About 400 copies were distributed to members, clients, and related associations both in Japan and overseas.

AJCE Activity 2014

AJCE 40th Anniversary Special Seminar Report
Mission of Consulting Engineers

Takeya ISOBE
Vice-Chair, Professional development committee,AJCE
General Manager, international Business Division, CTI Engineering Co., Ltd.

Date & Time: Wed. July 9, 2014, 1:30 to 5:30 p.m.
Venue: Grand-Arc Hanzomon Hotel, Room Hikari-no-ma
Number of participants: Approx. 140

An outline of the speeches is as follows:

1. "Forty-year History of AJCE and Prospects of Consulting Engineers"

Presented by Konomu Uchimura, President, AJCE
The speech was composed of three parts: 40-year history of AJCE, the activities of AJCE, and the prospects of consulting engineers.

Mr. Konomu Uchimura, President, AJCE

AJCE, organized by members of The Institution of Professional Engineers, Japan, was established and became a member of FIDIC in 1974. Since then, the number of corporate members has increased and the organization has grown larger. In 1991, we hosted FIDIC Tokyo Conference under the theme of "Harmonization between Man and Environment — Role of Consulting Engineers." Prior to the Tokyo Conference, we planned for 1987 FIDIC Kyoto Conference; however, it was canceled due to the rapid appreciation of the yen. Since its establishment, three members of AJCE, namely Mr. Takeo Morimura, Mr. Yumio Ishii, and Mr. Akihiko Hirotani, served as members of the FIDIC Executive Committee. In 1997, we held a QBS seminar on "Selection of Consultants Based on Competence" by inviting William Lewis, past President of FIDIC. With this as a turning point, the Ministry of Land, Infrastructure, Transport and Tourism of Japan introduced a proposal competition in 2000. In 2004, we held the 30th anniversary symposium. In 2012, AJCE changed to a public service entity due to the government's reform on public organizations. Unlike other associations in Japan, AJCE possesses a unique characteristics of having lawyer members.

FIDIC's basic philosophy is composed of three elements: Quality, Integrity, and Sustainability. To achieve our goal based on this basic philosophy of FIDIC, we have to integrate activities inside and outside of Japan, nurture attractive consultants who can seamlessly work both at home and abroad, develop human resources with comprehensive management capabilities, and prepare a working environment in which young, senior, or female engineers can exhibit their individual abilities. The roles of the "Engineers' Association," as well as individuals, companies, universities, and purchasers, are important to attain this goal. As there is a variety

of consultant-related organizations in Japan, it has been difficult for one body to promote representative activities on behalf of the other Japanese organizations. In order to strengthen the ability to communicate inside and outside of Japan, we have to join forces with Japan's consulting engineers (CEs). We will further endeavor to establish a new CE association representing the CE industry in Japan in the near future.

Finally, we would like to express our sincere gratitude to those who opened the door to the world for the Japanese consulting engineers and contributed for 40 years to AJCE's development. We will pioneer a new path in the next generations to come.

■ **"The Strategic Role of Consulting Engineers"**
Presented by Mr. Pablo Bueno, President, FIDIC

Mr. Pablo Bueno, President, FIDIC

Mr. Pablo Bueno presented the philosophy and an outline of the activities of FIDIC, and then stressed the importance of selecting consultant engineers by their quality and technology (Qualifications-Based Selection, or QBS). The philosophy of FIDIC is to build a sustainable world. At present, 1.5 million professional engineers and sixty thousand companies from more than 100 countries are participating in FIDIC. It has issued a number of publications such as the FIDIC Conditions of Contract, known as the FIDIC Rainbow Collection, and about 40,000 copies of it have been issued every year. FDIC has also made a major contribution to the settlement of contract disputes worldwide.

FIDIC recommends the selection of CEs based on their quality and technology (QBS). The EU's Public Procurement Directive issued in 2014 stipulates that intellectual services such as design work shall not be procured only by price competition (Article 35), and only selection based on quality shall be permitted (Article 67). It shall be evaluated that the environment surrounding CEs is moving in the right direction. Consulting engineers are responsible for the entire life cycle of a project from planning to construction and operation. In particular, their involvement in the planning phase of a project is essential. Although the planning and design cost accounts for a small percentage of the life cycle cost of a project, it has a significant effect on its success. For example, taking The Paris Métro construction as an example, the more you spend on geological analysis in the construction cost, the more the construction cost itself was reduced. To reduce the cost and risk and make the project successful, the amount of investment in consulting before construction should be increased. As the international market is huge, we should do a lot of things as consulting engineers.

■ **"JICA's Approach with Consulting Engineers toward Development"**
Presented by Mr. Toshiyuki Kuroyanagi, Vice-president, Japan International Cooperation Agency (JICA)
Mr. Kuroyanagi introduced an outline of current Official Development Assistance (ODA) and importance of collaboration between CEs and JICA.

Mr. Toshiyuki Kuroyanagi, Vice-President, JICA

Self-supporting effort of aid-recipient countries and human security are prerequisites that have not

changed for the last 60 years in international cooperation and assistance. On the other hand, "diversity," "change in ODA role," and "competition" have changed substantially. "Diversity" includes giving assistance to emerging countries and expanding disciplines not only to cover technical assistance but also research assistance to handle global-scale issues, as well as forming close relationships with private companies. As for "change in ODA role," the initial 20 years of ODA aimed at contributing to the world in the post-war reconstruction period. And after the JICA was established in 1974 and issued its three-fold ODA plan in 1978, the objective of ODA has been contributing to the world as a mature nation since 1994. "Competition" reflects the emerging power of China and South Korea; however, we can keep our good position through the united effort of all the sectors in Japan.

JICA introduced the FIDIC Red Book MDB 2010 Edition as JICA's standard bidding document. We are also preparing to apply the FIDIC Yellow Book to plant-related provisions. A balanced selection of QBS, selection based on quality/technology, and QCBS (Quality and Cost Based Selection), selection based on quality/technology and cost, is important. I quite agree with FIDIC's QBS-oriented stance.

As an effort toward the development of young human resources, we have organized study sessions for both young CEs and young JICA staff. To my surprise, even a university student who majored in engineering does not know about the overseas development CEs. We have to make efforts to broaden the range of potential CEs. Projects in developing countries require a variety of capabilities, so it is important to nurture engineers with diversified characters. We will continue to set up opportunities, such as study sessions, where young CEs and our staff can interact. We would like to have a good partnership with CEs, rather than having a vertical relationship.

■ **"Recent Trend in International Development and Development Cooperation of Japan in New Era"**

Presented by Professor Izumi Ohno, National Graduate Institute for Policy Studies (GRIPS)

Prof. Ohno presented an overview of recent international development assistance and involvement of Japan in the new era, and described the roles that Japan should play and

Prof. Izumi Ohno, GRIPS

ways to participate in and contribute to international development assistance.

In the era of globalization, the environment surrounding international development is changing. Developed countries have assisted developing countries, in ways focusing on international public interest, such as poverty eradication. In recent years, due to the participation of private investment and emerging donor countries, the aspect of development has also become important. The private sector plays a pivotal role to balance development and business. Diversity, complexity, and widespread assistance has transformed developing countries into economic growth centers.

Japan has been involved in international development assistance, both as a recipient and a donor country, unlike Western nations. Based on this experience, Japan has emphasized self-help to developing countries. Japan has assisted mainly Asian countries in the development of economic infrastructure so far, with a view to creating synergistic effects among investment, trade, and aid. Japan is able to share the same interest with the partner country from the viewpoint of a development site to perform the task. This is the advantage that Japan already has.

In recent years, some East Asian nations like China and South Korea have emerged as donors, though they used to be recipients. In this new era, a wide range of private sectors, including small and medium-sized enterprises, will

participate in this activities. Besides, Japan will be able to build a network of human resources and organizations in cooperation with emerging Asian donors, and this will also become an advantage for it.

Since the 2000s, donor countries involved in international development assistance have actively been reconsidering their development policies. Most of those countries are strengthening the relationship between aid and the domestic growth strategy and security of the country, with a view to balancing international growth gains and national interests. Japan has also started to review the Official Development Assistance Charter and held meetings to exchange views.

Finally, Prof. Ohno introduced cases in which Asian experts were mobilized to Zambia, new initiatives making use of the experience of local government in infrastructure development. She underlined the important keywords of "strategy" and "cooperation" that are linked to activate money, human resources and knowledge.

■ **"MLIT Initiatives to Promote Overseas Development of Infrastructure System"**

Presented by Mr. Toru Shimizu, Deputy Director-General of Foreign Affairs, Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Mr. Shimizu introduced the current situation of overseas infrastructure development, support measures taken by the national government, and implementation of projects for disaster prevention, sewer systems, roads, and maps.

Mr. Toru Shimizu, Vice Director-General, MLIT,

General contractors from Japan received overseas orders worth more than 1 trillion yen in 1983. In 2013, in spite of the changes in social circumstances, they received overseas orders amounting to around 1.6 trillion yen, and 70% of these orders were from Asian countries. As the government's concrete measures to support overseas infrastructure development, we introduce Japanese companies and technology that are considering expanding overseas to partner countries. In addition, we help domestic companies to mitigate various business risks, in areas including contract procedures for overseas expansion, safety management of the site, and quality control. In this context, MLIT has been conducting various seminars on road, urban development, risk management, and construction supervision, etc. to share its technical experience with governments of foreign countries such as Myanmar, India, Indonesia, Cambodia, Vietnam, and other Asian countries.

Specifically, in the disaster-prevention area, we are conducting overseas aid by making the best use of our experience of the Great East Japan Earthquake and Tsunami Disaster. Japan helped the Turkish government to manage its disaster-prevention infrastructure and reconstruction and recovery measures.

We provided dam management solutions to Vietnam. We sent emergency assistance when the Philippines was hit by a typhoon and supported its recovery plan. When flooding devastated Thailand, we dispatched vehicle-mounted pumps. In Indonesia, we gave technical assistance in the area of natural dam management against landslides. As such, Japan's technical assistance has achieved magnificent results in saving a lot of lives and assets. In the field of sewer systems, many local governments are trying to contribute to foreign countries in cooperation with the private sector, by providing their maintenance know-how. In the road-related sector, we have proposed holding proposed-type seminars to introduce technologies developed by private companies, transportation management systems that use GPS technology, and technology of recycling paving material. In the field of maps, GSI is promoting a project utilizing crustal deformation information for disaster prevention.
Now we are also promoting a global mapping Project.

AJCE Activity 2014

AJCE 40th Anniversary Ceremony

Koichiro HARU
Vice-Chair, Policy and Planning Committee, AJCE
Managing Director, Nihon Suido Consultants Co., Ltd.

Following the 40th Anniversary Seminar, the celebration ceremony was held at Grand-Arc Hanzomon.

The ceremony was a grand event worthy of the anniversary with 120 participants, including distinguished guests such as Mr. Pablo Bueno, FIDIC president, Mr. Hideo Tokuyama, Vice-Minister for Engineering Affairs of MLIT, Mr. Sotaro Ito, Deputy Director-General of MEXT, and Mr. Toshiyuki Kuroyanagi, Vice-President of JICA, and AJCE members including former presidents of AJCE.

(1) Opening Remarks by Mr. Konomu Uchimura, President of AJCE

The president of AJCE first expressed his deep appreciation to the distinguished guests and attendees, and then looked back on the 40-year history of AJCE, and stated his general policy towards the future. "For Japanese engineers, in the 1960s, several attempts were made to become a FIDIC member, however due to various obstacles and barriers it was in 1975 when AJCE finally became a member association. At that time, they didn't have such convenient tools as e-mail, and also traveling abroad was restricted, therefore we can imagine the hardships of our predecessors. For Japanese consulting engineers, gaining the FIDIC membership was the first step towards contributing to the world. Based on such efforts, we can now celebrate our 40th anniversary. I would like to take this time to applaud our predecessors for their tremendous efforts."

"In the seminar, FIDIC president Bueno said that we have to learn from the lessons of the world because what happens in the world may happen in Japan."

"Mr. Kuroyanagi and Prof. Ohno made speeches on general policies for Japanese ODA, expressing that some development policies and contents should be changed and improved."

"Mr. Shimizu of MLIT showed some projects carried out by MLIT. I had an honest impression that MLIT has changed, because in the past it was impossible to hold seminars in collaboration with MLIT. Under the recent Government policies, however, we have had significant support from MLIT, which is appreciated from the bottom of my heart."

"Through the whole seminar, I fully became conscious that the consulting industry is facing a turning point in terms of oversea businesses. AJCE needs to understand our standing point and make way for progress in the future, and as the president of AJCE, I myself would like to make a great effort on this matter.

(2) Congratulatory Address by Mr. Pablo Bueno, President of FIDIC

Beginning with Japanese "Konbanwa", President Bueno drew loud laughter from participants saying "I have to translate Spanish to English in my head, and then Mr. Yamashita translates it to Japanese. We will see what comes out of this."

"After this intensive afternoon of very interesting discussions, I would like to congratulate you all in more relaxing way."Forty years is a long time, but during that time this association has been able to grow and come together to build a foundation of its stand and the greater support to its members.
We FIDIC encourage and support even stronger voice of the Japanese consulting industry."
"We know there are other sister associations of your association, and the closer you are to all of them, the stronger you will be in representing the consulting engineering industry of Japan."

"A few months ago this year, I was visiting a country in Africa: I was in Mozambique. And in the airport of South Africa, I saw an African proverb which says 'If you want to go fast, go alone, but if you go far, go together."

"FIDIC has come far in its hundred years, and we are pleased to come with the Association of Japanese Consulting Engineers as a strong supporter for these forty years. The industry needs to be proud of its achievements and regularly demonstrates its value to society and our quality of life."

"As I say congratulations on your forty years anniversary, I would ask you all to remember these words: I hope we all go far and I look forward to us going together."

"We will continue discussing all the issues we have been discussing this afternoon, and many other problems common to our consulting engineering industry at the end of September in Rio de Janeiro, and I hope that I will be able to see you."

Finally the President closed his remarks with Japanese 'Omedeto Gozaimasu'.

(3) Congratulatory Address by Mr. Hideo Tokuyama, Vice-Minister for Engineering Affairs of MLIT

"Congratulations on the 40th anniversary of AJCE. Actually I just assumed my new post yesterday; therefore this is my first work as the Vice-Minister."

"The environment surrounding infrastructure development in Japan is facing a big turning point. In the recent decade, public works were treated as wastes; however, with many casualties due to unfortunate disasters and aging infrastructures, the policy for infrastructure development has significantly changed. 'Bill for Ensuring the Quality of Public Works' was revised and the national budget of MLIT reached rock bottom for the first time in 13 years. We should carry out the necessary projects."

"Especially the top propriety is the maintenance of aged infrastructures. Next July, the mandatory inspection for 700,000 bridges and 10,000 tunnels will begin. This will be a hard work; however a new maintenance industry, which is huge and stable, is going to be born. We should not hollow the domestic construction industry. I am expecting the industry to progress expansively."

"In addition, infrastructure export is set forth as an important measure in the Government's growth strategy. This is not easy to achieve, but we should make an effort to grow this industry not only for the domestic markets but also for exporting our technologies to overseas. Regarding infrastructure maintenance, after struggling to create and stabilize the domestic industry, we can expect the large potential in overseas markets. "

"I would like to develop the domestic and

overseas market in cooperation with you, and move ahead in the same direction as yours towards a brighter future."

(4) Toast by Mr. Toshiyuki Kuroyanagi, Vice-President of JICA

"It has been 60 years since Japan started its ODA program, and 40 years since JICA was established. JICA's history has been supported by AJCE and its members. I would like to work hard with you to make the world better."

He made a toast with Japanese "Kanpai!", and added Spanish "Salud!" for the FIDIC President.

(5) AJCE 40th Anniversary Ceremonial Award

The distinguished 28 members of AJCE were honored for their long contribution to the association. Mr. Kumagaya Tadateru, AJCE Board Member, called the names and President Uchimura offered a testimonial to Mr. Kurosawa as a representative. After the speech of Mr. Kurosawa, ceremonial photographs were taken.

(6) Introduction of Past Presidents of AJCE

As representatives of the past presidents, Mr. Masao Umeda, Mr. Yumio Ishii, Mr. Akihiko Hirotani, Mr.Noriaki Hirose , and Mr. Konomu Uchimura were introduced.

(7) Slideshow of AJCE History

The Slideshow of AJCE's forty-year history was presented with collection of precious photographs from the beginning to the present of AJCE.

(8) Closing Remarks by Mr. Yasuji Nagaya, Vice-President of AJCE

Closing remarks were made by Vice-President Nagaya, and finally the grand ceremony came to a close.

Activities of Young Professionals (YP) in 2014

Sumihiro SAWABE
Vice-Chair, YPSC
Chodai Co., Ltd.

Saori TAKAGI
YPSC
Kokusai Kogyo Co., Ltd.

Takuya YAGAMI
YPSC
CTI Engineering Co., Ltd
YPSC: Young Professional Sub-Committee

1. Site visit for YPs

On 9th September 2014, site visits in Ariake Water Reproduction Center of Tokyo Metropolitan Government and Tokyo international Forum were held by Young Professional Sub-Committee (YPSC). This is an activity of the YPs for the purpose of understanding project objectives, background, design concepts, operation & maintenance and future improvement.

Ariake Water Reproduction Center has started its operation in September, 1995. Unique characteristic of this facility is to introduce the A2O method into the sewerage treatment system which removes nitrogen and phosphorus effectively by passing an aversion tank, anoxic cistern, and aerobic cistern sequentially. During the site visit, there were various questions about the sewerage treatment method and the structure of facilities from participants, and a lively discussion about them followed.

Tokyo International Forum, approximately 15 years old since its opening in 1997, is under graded repair work now, and the P. T. Morimura & Associates, Ltd., one of member companies of AJCE, carried out the repair plan. A characteristic of this repair is to change illumination to LED, which earns a large saving in the electricity consumption. In addition, solar water heater and solar panel are equipped on the roof top in the design stage. It is a building in consideration of environment. For the participants, it was a valuable experience to visit the roofs, backstage and facility room locating underground, which are usually not admitted to visitors.

2. 5th "YAKAI" Social Networking Event

After site visit, a social networking event called as "YAKAI" was held by YPSC. About 20 YPs from several companies participated who enjoyed exchange of communication among them. This event provided an opportunity to disseminate activities of YPs.

3. 2nd & 3rd AJCE – Cup Futsal Games

AJCE-Cup Futsal Games 2014 were favorably convened twice. The first one was held in May and the second was in November. These games were realized by a huge success in the First Game in 2013 which was held for enhancing activities of AJCE members, YPs in particular.

The Second Game in May 2014 was overwhelmed by approximately 80 players in 10 teams, which recorded one of the largest number of participants in the past YPSC events. The Third Game in November 2014 gathered as much as 60 people in 8 teams.

In the competition, 8 teams were divided into 2 leagues. Each team was ranked according to the results of winning or losing in the round-robin tournament of 6mins' match in the respective league. Then, teams of the same rank in two leagues competed in the final tournament. Champion team was awarded "AJCE CUP".

Though the games started at 7 p.m. after work, players showed quick and energetic performances despite of work-related stress.

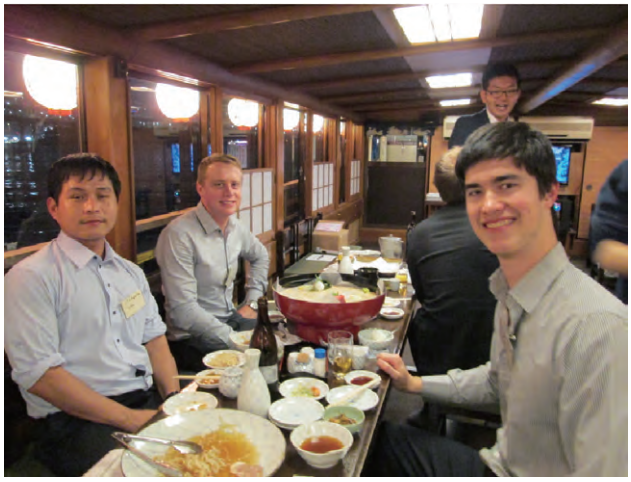
After the tournament, players moved to a beer drinking pub to celebrate winners. All the players of AJCE member firms agreed to hold futsal games on regular basis. Achieving these meaningful successes, AJCE-Cup Futsal Game will continue.

4. YPEP & Young Summit

YPEP (Young Professionals Exchange Program) was established in 1996 between AJCE and CA (Consult Australia). Since 1996, over 140 YPs (Young Professionals) participated in the program. The past trainees of YPEP are now taking major roles in the activity of YPSC.

In October 2014, 6 YPs from Australia had training in AJCE host firms for 3 weeks.

On 29th Oct, YPSC organized a dinner cruise on Yakata-Bune (houseboat) for the first time. Main purpose of this dinner cruise was to let all the trainees experience a taste of Japanese culture on the Yakata-Bune. It started with a seasonal cuisine which brought a friendly atmosphere between Australian and Japanese YPs. During 2 hours of the cruise, all YPs enjoyed the beautiful night view of Odaiba (Tokyo Bay Waterfront) from the top deck of the Yakata-Bune while enjoying various Japanese food and Sake (Japanese rice wine).



On 31st Oct, Young summit was held in Tokyo, in which all trainees presented their fruitful experience and findings in the 3 weeks of training. After presentations, round table discussions by trainees, mentors and YPSC members were carried out by dividing

participants into 6 groups. In the round table program, following 2 topics were discussed:

1. Difference in work environment between Japan and Australia,
2. Difference in social life between Japan and Australia.

Based on the outcomes from the discussion on the first topic, common subject in almost every young summit, following difference was drawn between Japan and Australia:

- Status of government officials and engineers
Employer-consultant hierarchy condition is strong in Japan. However, it is rather equal in Australia,
- Work load and working hours
In general, Japanese CEs have heavier work load and long working hours,
- Changing workplace and career.

It is common practice to change working place for career build-up in Australia, young professionals in Particular.

There were opinions that Japanese firm should consider Australian practice to improve working environment.

In the second topic, following differences were acknowledged and shared among participants:

- 'Nomikai' (drinking get-together) after work and 'Omiyage' (souvenir) culture is common in Japan
- Australian frequently have BBQ with family and friends in the weekend.
- Many multinational networks exist in Australia

It seemed that Australian spend more time with family and friends than Japanese which would reflect difference in working environment.

5. CE Promotion in University

YPSC has been conducting lectures on CE and CE industry and role of CEs to University students since 2010 to advocate CE profession.

On 26th November, 2014, 5 YPSC members presented issues on CE industry which are considered relevant to about 80 students in a class room.

YPSC aims at the following objectives through the lectures:

1. To disseminate works of CE among university students and faculties,
2. To inform students that works of CE is contributing greatly in economic and social development while keeping sustainable environment in the world
3. To inform students that profession of CE is indeed rewarding and enjoyable. They are welcomed to join in such a challenging profession.

Closing Remark

The first field tour was realized last year as a part of promoting YPSC activities. In this year, a seminar on famous satellite "Hayabusa" ,which collected samples from a small star in solar system, Itokawa" and returned to the earth by overcoming difficulties. A person in charge of the development of Hayabusa will be invited as a special speaker. These activities bring us precious opportunities to reaffirm the joy of working as consulting engineers. Finally we would like to thank senior consulting engineers for invaluable support and encouragement to YPSC and appreciate their continuous advice and understanding.

AJCE Activity 2014

Report on 2014 Young Professionals Exchange Program

Takeya ISOBE
Vice-chairman, Professional Development Committee, AJCE
Executive Manager, International Business Division,
CTI Engineering Co., Ltd.

AJCE has been holding the Young Professionals Exchange Program (YPEP) since 1996, as one of the major activities where young consulting engineers from Australia and Japan can interact with each other. I would like to report on the outcome of YPEP 2014, which was conducted by hosting six young CEs as trainees from Australia.

This year, the visit-training was scheduled from October 14 to 31, for about three weeks in total. On the first day, October 14, six Australian trainees and their mentors from the Japanese host companies got together in meeting room of Chodai Co., Ltd. and the orientation was held. The trainees and mentors from host companies had already been communicating via e-mail since May in order to deepen their mutual understanding. The trainees were asked to read a book called "Japan As It Is" before they came to Japan. The orientation started with a self-introduction in Japanese by all the trainees. As we had enough time to spare, chair of the orientation encouraged the participants to start a free-discussion session. I was a little bit worried about whether this attempt would be successful, but my fear ended up being groundless. Every trainee participated in the discussion in an active and lively way. I expected that the pre-visit training for several months might have a great effect on this training program and make it a very significant one.

Welcome Party

Orientation

On October 15, the training program at each host company started. Thanks to the good outcome of the pre-visit training, it seems that the contents of the training program were very substantial and fruitful. Some of the trainees went on for the training to the areas affected by the 2011 Great East Japan Earthquake and Tsunami disaster, as well as local cities such as Hiroshima and Osaka. I suppose they were able to learn a lot by visiting the local and rural areas and subject fields in Japan, rather than staying in a big international city like Tokyo.

On October 25 and 26, there was a tour to Kyoto and Nara. The trainees got on a Shinkansen (bullet) train, saw the traditional beauty of Japan, and slept on a futon (mattress made of cotton) in a tatami (rush mat) room of a traditional Japanese-style inn. All of the trainees were excited to have such an unusual and precious experience.

Yakatabune Cruise and Dinner

In the final week, there was a social gathering on a yakatabune, or houseboat. Every participant seemed to be pleased and very satisfied.

The trainees stayed at the home of an employee of the host company during the weekends of training program. They experienced and learned about the differences in business practices between Australia and Japan. I suppose it was a very meaningful experience for them to see the private life of a Japanese consulting engineer.

A training report and discussion event named "Young Summit" was held on the last day. The YP Subcommittee of the Professional Development Committee of AJCE organized this session. After the group discussion based on a specific theme, each group made a presentation. One trainee was assigned to each group. The presentations had many things in common. Although the trainees were accepted by different companies, the things they achieved in the training seemed to be similar.

Young Summit, Presentation

Young Summit, Discussion

After lively discussions, we held a Farewell Party where plenty of crabs were served. AJCE President Konomu Uchimura also joined this party and everybody enjoyed the final period of exchange.

I participated in YPEP for the first time. I had heard earlier that it was a good event, and I felt it was very meaningful training. I hope this program will help form good relationships and prospective human networks not only between the trainees and mentors of the host company, but also between both companies of Australia and Japan.

The 2014 Young Professionals Exchange Program successfully came to an end. Its success was entirely due to the support of the AJCE-member host companies and the cooperation of many employees in charge of training. In the future, I look forward to your further support for the development of YPEP.

Get-together

Young Summit, Oriental Consultants Co., Ltd.

AJCE Activity 2014

YPEP Japan 2014 – My Experience

Ki Johnston
Japanese Firm; Oriental Consultants Co., Ltd.
Australian Firm; Aurecon

Program introduction

I was hosted by the Japanese multi-discipline consultancy, Oriental Consultants, as part of the YPEP Japan 2014 program coordinated by AJCE and Consult Australia. I was part of the Transportation Engineering and Traffic Safety section in Oriental Consultants where Mr Otsubo was my Japanese mentor. Mr Otsubo went beyond his role as my mentor, organising my entire program and activities during my time at Oriental Consultants and making sure I felt comfortable for the length of the program.

Prior to arriving in Japan, Mr Otsubo and myself undertook several video conferences where we would discuss the pre-training program which included Japanese and English practice, differences in Japanese and Australian consultancies, general engineering differences, cultural differences and our career backgrounds. Mr Otsubo and Oriental Consultants went to extraordinary lengths to tailor the YPEP program around my experience. The dedication of all Oriental Consultants staff to help make the exchange program a once in a life time experience was very much appreciated.

During my three weeks at Oriental Consultants I developed technical skills through site visits, presentations, and review and discussion of standards and requirements. I was fortunate enough to have many cultural experiences including visits to world heritage areas and areas encompassing thousands of years of history. An overview of my technical and cultural experiences is discussed below.

Technical Experience

I gained technical experience through a variety of means including site visits, forums and review of technical documents.

Following my arrival in Japan I was fortunate enough to attend the Japan-OECD Policy Forum on Urban Development and Green Growth focusing on Transport Orientated Development (TOD) in Japan. The forum provided me an insight in to the Japanese approach to TOD particularly around the integration of private and public developments and transport facilities. I was particularly interested in the legislative requirements and mechanisms available to enable development of TODs including the land value capture system and the floor ratio system. Following the forum I was able to visit three sites within Tokyo where TODs have been successfully implemented including Marunouchi and Toranomon Hills. I was particularly interested in the integration of the traffic infrastructure within the Toranoman Hills development which included a road tunnel

Oriental Consultants organised a site visit to Tohoku region where I visited Rikuzentakata, Matsushima and Sendai. Tohoku Prefecture was devastated by The 2011 Great East Japan Earthquake and Tsunami. The impact to the region can still be witnessed after more than 4 years since this devastating event. I visited the seaside town of Rikuzentaka where the low-lying areas of the town were completely destroyed except for a few scattered buildings which provide a solemn reminder of the destruction. I

attended site with Oriental Consultant engineers who are helping with the reconstruction works. A ginormous earthworks program of 12 million cubic meters of cut to fill and over 3km of conveyer systems utilised to transport fill from two large mountain cut site has been undertaken as part of an ambitious approximately $1B three year construction period. The works being undertaken will raise the natural surface level by 5m and create an earth structure dike to protect the region against future tsunami events.

Part of the rebuild process also encompasses transport facilities. As part of my visit to the region I was able to inspect the new Bus Rapid Transit (BRT) system. This system replaced the railway which was severely damaged by the tsunami and earthquake event, however, utilises key sections of the alignment including tunnels. I was impressed with the bi-directional system and use of the existing infrastructure which minimised the cost and time to implement the 99km relinking key regions.

Site visits were also organised around the local Kanto region including Tokyo, Yokohama and Saitama. Together with the Social Planning and Policy section at Oriental Consultants I visited a Michinoeki in Tochigi. A Michinoeki literally means a road station and is a road side facility consisting of toilets, rest areas and shops selling local produce. The first Michinoeki was constructed more than 20 years ago and today more than 1000 exist throughout Japan. These facilities are somewhat similar to those in Australia such as large road stops, however, the notable difference is that they do not sell fuel and do not include multinational food outlets. The Japanese embrace the Michinoeki culture where I witnessed the busy facility. The Michinoeki which I visited also included a free foot onsen which was great. No facility like this exists in Australia and is a place which really provides great outcomes and experiences for visitors and the local community.
In Ibaraki Prefecture north east of Tokyo I visited a new bicycle facility which was installed adjacent to the local train station. The facility can accommodate 800 bicycles. 400 bicycles can be stored manually while an additional 400 bicycles can be stored automatically 24 hours per day using specially designed bicycle lifts and automatic systems. Storage is cheap at only $1.50 per day. The facility cost approximately $4 million to construct with the two bicycle lifts costing nearly half of the total capital cost. I found the facility extremely interesting as a similar facility has recently been constructed in Brisbane, Australia, however, the usage fee is much higher.

Tokyo contains some of the largest road infrastructure projects in the world. As part of the YPEP program I was fortunate enough to visit two significant operating projects; Aqua-Line and Ohashi Junction. The Aqualine is a multilane 10km tunnel and 5km bridge linking Tokyo to the Boso Peninsula underneath and over Tokyo Bay. The infrastructure is unique in that the tunnel rises out of the ocean and connects to a bridge structure. Also at this location is the 'Umihotaru' which provides rest and refreshment facilities as well as lookouts across Tokyo Bay on a manmade island. The infrastructure is an engineering marvel and cost over $11 billion in 1987. Ohashi Junction is a multi-level road structure connecting several Tokyo Metropolitan Expressway routes. The spiral structure includes extremely tight radii and high super-elevation which requires detailed line marking and signage to help mitigate road accidents. I was impressed with the large infrastructure and the engineering limits applied to ensure operational success in a restricted environment.

Apart from site visits I also developed an understanding of Japan's traffic safety standards and requirements following review of standards with Mr Ostubo. I identified and discussed the differences between Australia and Japan road safety standards including the use of Road Safety Audits (RSA). I believe this learning helped both Mr Otsubo and I further develop our skills in this field. I also participated in engineering presentations where I presented my key Australian project experience. This was reciprocated through Oriental Consultant presentations regarding traffic safety, particularly congestion mitigation and accident mitigation and traffic accident surveys.

Cultural Experience

Mr Otsubo, Oriental Consultants and YPEP at every opportunity ensured that I had a great experience in Japan. I was extremely lucky to be able to experience and participate in a wide variety of culture activities.

Together with traffic safety department I visited Enoshima and the Kamakura area, seeing shrines, temples and the famous Daibutsu 'Budda'. I tried the local beer and cuisine, Shirasu-don - raw white bait fish on rice. I tried Shabu Shabu at a very traditional and impressive Japanese restaurant at Kamakura, learnt new Japanese expressions "Ma Ma Ippai Douzo" and "Ma Ma Shacho Douzo" – please drink more and please drink more Mr President.

Mr Otsubo hosted me at his family home. I had the pleasure of meeting Mr Ostubo's family, where they let me experience Japanese living, although Mr Otsubo's family went out of their way to impress me with delicious food and lots of beer.

I experienced Izakaya, the Japanese pub, followed by Karaoke in Shinjuku. Luckily the beer helped my singing, or at least to forget the singing. I had the best ever tasting sushi in Sendai and experienced the famous Matsushima town. I went to the onsen where I experienced traditional the Japanese washing, soaking and hot spring social culture. I now wish these facilities were available in Australia.

I had the opportunity to visit Kyoto and Nara, where I saw 1000 year old relics as well as the great Golden Pavilion, Kiyomizu Temple overlooking Kyoto and the Nara Daibutsu. Kyoto and Nara really made me think about and embrace the Japanese culture which has been harmonised with modern Japan.

Following three weeks of embracing the Japanese culture, from eating rice morning, noon and night, to attending the Japanese workplace where people run for the door so as not to arrive 1 minute late, I was able to develop a greater understanding of the Japanese work culture, re-invigorate my Japanese language from high school and understand the Japanese way of life. It was a wonderful experience.

Summary

The YPEP Japan 2014 program allowed me to develop technically, professionally and culturally. It has allowed me to understand the Japanese way of life and working culture and highlighted the benefits which I can apply in Australia.

I am extremely appreciative to Mr Otsubo and Oriental Consultants for hosting me, and going above and beyond to make my time in Japan a once in a lifetime experience. Mr Otsubo and Oriental Consultants have demonstrated the politeness and generosity of Japan. I am thankful for all the time, effort and money which has been invested by Oriental Consultants and Mr Otsubo, and I hope that in the future myself and Aurecon have an opportunity to host an Oriental Consultant representative.

AJCE and the YPEP organisers have created a fantastic program. I thank them for their dedication and congratulate them on the success of the YPEP Japan 2014 program.

どうも　ありがとう　ございます

AJCE Activity 2014

My Experience with Chuo Kaihatsu Corporation, 2014

Trainee:David Dixon
Japanese Firm: Chuo Kaihatsu Corporation
Australian Firm:URS

During my stay with Chuo Kaihatsu Corporation (CKC) I was able to take part in many site visits to learn about their business and add to my technical knowledge. I was also able to learn more about Japanese culture, both in business, history and after hours. I also sampled a vast array of different foods and drinks.

Working life

With CKC I was able to learn about their business and current projects via site visits. This included observation of boreholes. The first borehole was being conducted to determine the liquefaction risk of a man-made embankment. At the second site, this borehole was being conducted to provide information for pile foundation design. I was also able to visit the Railway Technical Research Institute, in Hikari, Tokyo.

MLX01 Maglev Train

I also had the opportunity to take part in a sight visit to Izu Oshima Island, the largest of the Izu island chain. In October, 2013 Typhoon Wipha resulted in 827mm falling on the island over a period of 24 hours, with a sustained 520mm falling over a 6 hour period. This combined with the steep slopes of Mt Mihara, resulted in a large landslide to the town of Oshima. CKCs role is to monitor some of the existing slopes to be able to provide advanced warning to evacuate the town in the future.

CKC were also monitoring slope stability in a deep cutting in Chichi-bu, Saitama Prefecture. Here I took part in maintenance and inspection works for the sensors. CKC are also involved in the Tokyo 2020 Olympics. I was able to provide my experiences on the Tokyo train and subway network to help improve the English information for the games.

Cultural Experiences

I was able to enjoy some of the past times of the Japanese while here. I went to watch the

Yokohama F.Marinos

Yokohama F.Marinos take on Shimizu S-Pulse; Yokohama won 1-0.

I went hiking through the Japanese forest between Mt. Takao to Lake Sagami. I also enjoyed two typhoons, Phanfone and Vongfong, and experienced a magnitude 3 tremor. I also took a weekend trip to Kyoto and Nara to see the temples and shrines from the old capitol.

Acknowledgements
I am grateful to Chuo Kaihatsu Corporation for allowing me to enter their company for three weeks. I would also like to thank AJCE and Consult Australia for organizing the program, as well as URS, for allowing me to take part in the exchange.

The YPEP participants

AJCE Activity 2014

YPEP 2014 Summary

Daniel Leong-scott
Japanese Firm; Nihon Suido Consultants Co., Ltd.
Australian Firm; Parsons Brinckerhoff

INTRODUCTION

For YPEP 2014, I spent three weeks with Nihon Suido Consultants (Nissuicon), learning about their work and experiencing Japanese culture. In this time, I participated a wide range of professional, social and cultural activities with my hosts, who were very hospitable and friendly.

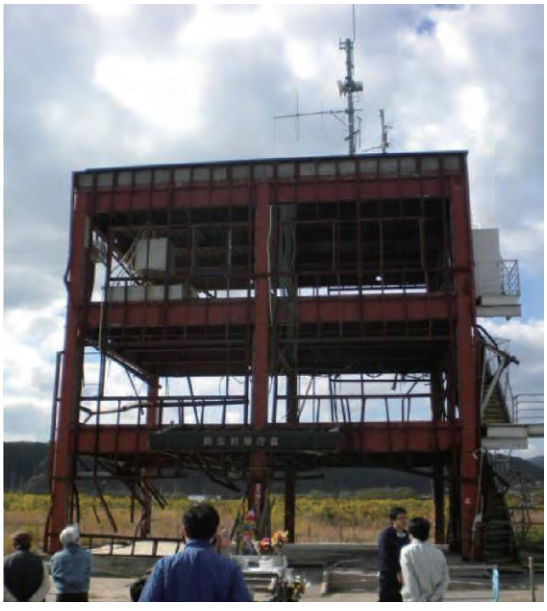
WORK EXPERIENCE

When I first arrived in Japan, I attended two orientations and welcome parties, one hosted by AJCE and one by Nissuicon, to meet all of the other YPEP participants and my hosts. I was given a presentation about Nissuicon's work, and had some lessons on Japanese business etiquette and the Japanese language, including how to write my name in Hiragana, Katakana and Kanji (Japanese characters).

The rest of the first week included meeting many more Nissuicon employees, giving presentations about my work in Australia, and learning about the Official Development Assistance (ODA) work that Nissuicon does in developing countries, particularly in South East Asia. I was shown an example of a project to replace a water treatment plant in Cambodia, which was very interesting as my company does not do any such work (to my knowledge).

Early in my second week, I went to Kawai Water Treatment Plant, a recently upgraded water purification facility in Yokohama. I was impressed by the efficiency of the plant, which used ceramic membrane filters, and the high-tech facilities, including tablet computers used for monitoring and maintenance.

I spent part of the second week working with the structural department and learning about their work. As a structural engineer myself, I was interested in the use of Finite Element Modelling (FEM) for the many of their projects, as I only use it occasionally for complex projects. It was also interesting to learn about earthquake design, and the emphasis on earthquake resistance in structures. Earthquake design is a significant consideration for Japanese structural engineers, due to Japan's define susceptibility to serious earthquakes, however it is not such a major concern in the work I have done.



In the second week, I went to Tohoku, the area affected by the 2011 earthquake and tsunami, to see the devastation and learn about the

recovery effort. It was confronting to see the wide open spaces which were once full of houses and the damaged remaining infrastructure. Particularly interesting was the government building in Minamisanriku which has been preserved in remembrance (see picture).

In the final week, I went on a site visit to a storm water pipeline in Kawasaki. This was a massive 6m diameter, 2km long underground pipe to provide emergency storage and transfer of storm water in the a major flood event. I had never before seen a pipeline project of such magnitude, and we were able to walk through the pipe which was an interesting experience.

In my time at Nissuicon, I also learned a lot about Japanese working culture, in particular the rigidity of the work day. Work begins at 9:30am and finishes at 5:30pm, with a one hour lunch break at 12:30pm. There is a chime that sounds at each of these times to alert the workers, who use time cards to clock in and clock out. Japanese people are known for working long hours and I found that this was the case at Nissuicon. It was common for my hosts to work more than 50 hours in a week, which is rare in Australia.

CULTURAL EXPERIENCE

As well as learning about the technical and professional side of work in Japan, I was also able to experience the social and cultural aspects. I went out for lunch and dinner with my hosts almost every day, and tried all kinds of Japanese food, including sushi, sashimi, udon, soba, ramen, nabemono, yakitori and taiyaki. I also tried lots of Japanese drinks, including Matcha (green tea) and Nihonshu (Japanese Sake). My hosts took me to Japanese restaurants and bars, including Izakaya and Karaoke bars. Through these experiences I learned about the social culture of the Japanese workplace. Japanese workers are normally good friends with their colleagues and often socialise outside of work.

On my first weekend in Japan, went to the Meiji Shrine, Yoyogi Park, Harajuku, and the Tokyo Metro Government office, which has an observatory at 200m from the ground. Meiji Shrine was a particular highlight as it was the first Shinto shrine I had been to, and I was amazed by the architecture and the scale. On the first weekend, I also spent a day in Yamanashi, west of Tokyo. Here I went grape picking, went to Mount Fuji and had a hot bath at an Onsen overlooking the city of Kofu.

On the second weekend, all of the YPEP participants went to Kyoto and Nara for guided tours around some of the many famous Buddhist temples and Shinto shrines. I particularly enjoyed Nijo Castle and Kinkaku-ji (the Golden Pavilion, pictured) in Kyoto, and Todai-ji in Nara. Nara was a fascinating place, full of deer who roam the parks and casually walk amongst the tourists. In Kyoto, we stayed in a Japanese Ryokan, and slept on futons on tatami (Bamboo mat) floors. While this was an interesting experience, it was very uncomfortable as the futons are very thin and the floors are hard.

I spent one of my final days in Tokyo doing a cultural experience tour with two of my hosts. In the morning, we went to a shrine in Hiro-o and wrote a Buddhist prayer in Kanji, using traditional brush calligraphy. Following this we went to two art museums in Roppongi, the Mori Art Museum and the Nezu Museum. The Nezu Museum featured an extensive Japanese garden filled with traditional sculptures and artefacts, which was stunning.

CONCLUSION

I have thoroughly enjoyed my experience in Japan. It has been fascinating to learn about Japanese work and culture. I have made many new friends and had the chance to experience so many different aspects of Japanese culture thanks to my hosts. I would particularly like to thank Mr. Riota Adachi for all of the work he put into hosting me. Domo arigato gozaimashita.

AJCE Activity 2014

3 Incredible Weeks with PCKK!

Trainee: Tim Powell
Japanese Firm: Pacific Consultants Co., Ltd.
Australian Firm: Parsons Brinckerhoff

The three weeks as part of the YPEP 2014 program in Japan have been one of the most hectic and enjoyable experiences of my short professional career. I was adopted by the Pacific Consulting Engineers (PCKK) Railroad Planning Section as their newest member and immersed in the nuances of Japanese Railway planning and design. My placement saw me working primarily with the Railroad Planning team with shorter stints in the Railway Bridge and Tunnel teams. The detailed program prepared for me combined learning sessions about railway design and after-hours sessions about "entertaining" which invariably involved copious amounts of draft beer, shochu, sake and headaches in the morning.

I was based in the Shinjuku office and spent time in the office and out on site visits. The first week was a whirlwind of social events including my first baseball game (Tigers v Giants!) and an introduction to Japanese Railways and their design. Particular emphasis was given to Shinkansen and Light Rail transport which seemed appropriate given my hometown Melbourne is the owner of the world's largest street tramway network.

My first weekend was spent on homestay at the Kawai residence in Chiba prefecture. I was warmly welcomed by the family and given an introduction to family life in Japan. It was a refreshing change from the hectic, fast-paced environment of Shinjuku. We had a dinner party on Saturday night complete with Japanese BBQ and sushi followed by a chance to explore Chiba on Sunday with an afternoon nap on Sunday to complete the relaxing weekend.

My second week focussed more on structural aspects associated with railway design. I was taught about Japanese cut and cover methods which were demonstrated by a visit to the new Shibuya Station for the Fukutoshin and Toyoko

lines. The focus shifted from tunnels to bridges later in the week as I was taught about railway bridge design in Japan. A highlight of this week was my visit to the Nexco Central Communication Plaza in Kawasaki to see highway operation in action.

The second weekend saw an amazing trip to Kyoto and Nara. We stayed in an authentic ryokan on tatami and futon which left me with a sore back for days. The group had traditional meals at the ryokan and were ferried around Kyoto and Nara. My personal highlights were Kiyomizudera and a fun night on Pontocho which involved some geisha/geiko/maiko (I never quite figured the classifications out)-spotting.

The final week revolved around the project that has fascinated me about Japan for a number of years; the Chuo Linear Shinkansen. Being a bit of a "tetsudo otaku", I have been keenly following advances in magnetic levitation technology. A trip to the Yamanashi Prefectural Maglev Exhibition Centre was the highlight of my trip as I was able to observe the Linear Shinkansen zoom by at a speed of 500 km/hr!

I have found the experience to participate in the YPEP to be very rewarding on both a personal and professional level and it has shown me

aspects of Japan that I wasn't able to see on two previous trips to Japan.

I would like to thank AJCE and Consult Australia for putting together this program. I would like to personally thank the staff at PCKK, in particular the Railroad Planning team for hosting me and putting up with my limited Japanese for 3 weeks. Special mentions go to Eiji Kawai and Takahito Shindou who tirelessly worked to ensure I have had an amazing time in Japan. I hope that the relationships I have forged with both Japanese and Australians can be maintained and that we stay in touch.

どうもありがとうございます！

AJCE Activity 2014

YPEP 2014 Report

Trainee: Thomas Meldrum
Japanese Firm: CTI Engineering Co., Ltd.
Australian Firm: AECOM

1. Introduction

I have just completed a three week exchange program in Japan. So how did it come to pass that an AECOM engineer used to working on site in the sleepy Queensland town of Gatton find himself in the high-pace, high-tech metropolis that is the Japanese capital? Basically, I saw an email come through from Consult Australia about an exchange program they were offering in partnership with Association of Japanese Consulting Engineers (ACJE). The program, called Young Professional Exchange Program (YPEP), has been running from 1996 and has provided a platform for young engineers from Australia and Japan to experience the culture and engineering techniques of the host nation. I put in an application, was fortunate enough to be accepted, and even more fortunate that AECOM assisted me to pursue this fantastic opportunity. I arrived in Tokyo just prior to Typhoon Vongfong, and settled into my apartment, which is a short walk away from the office.

2. Host company - CTI Engineering

My host firm is CTI Engineering, a Tokyo-based company who employ around 1350 employees across Japan. They work in similar fields as AECOM, and have a strong transport team. I presented to the company in the Tokyo, Sendai and Osaka offices about my work in Queensland on the Transport Network Reconstruction Program (TNRP), while Japanese engineers presented on a variety of topics. It is clear from early conversations with my Japanese colleagues that they face different engineering challenges to Australia, with numerous natural barriers such as mountains and rivers to overcome as well as unpredictable snow falls, earthquakes and typhoons.

Photo 1: Presenting in Tokyo

3. Site visits

I embarked on a trip to the Great East Japan Earthquake affected region of Tohoku which was devastated by the 2011 earthquakes and subsequent Tsunamis. I visited the city of Yamada which was almost completely submerged from the Tsunami and was on fire for three days after the earthquakes. Almost 1800 people lost their lives during the disaster. I visited the CMJV office which two design firms and three construction firms work in a joint venture which is a new business model in Japan. CMJV are responsible for raising the height of the town by cutting a mountain to use as fill material and also relocating houses to the newly flattened areas. There is also other civil infrastructure such as road, train station and drainage line reconstruction. I

also visited the town of Rikuzentakata where a sole 27 m tall pine tree survived the Tsunami out of a forest of 70,000 trees. I was also able to visits other pieces of engineering infrastructure such as the Ohashi Junction, Nexco Traffic Control Centre, a tunnel being constructed on the Hanshin Expressway and the Seto-Ohashi Bridges. I also visited the town of Kurashiki where a recent retrofit to this popular area has reduced barriers to people with a disability.

Photo 2: Inspecting earth moving escalator

4. Japanese working environment

On my first day at noon I was greeted by the sound of a chime to signal that it was lunch time, not long after the chime the lights were dimmed. At the end of the day (5pm) another chime would sound, although it was rare for my colleagues to be leaving the office unless it was on "no overwork day" (an initiative between a group of consultants to ensure their employees are not overworked). I was told that is not uncommon for people to still be in the office past 10 pm. My colleagues also enjoy spending time together outside of work hours from dinner to playing sports. This creates a strong bond between the teams and they also enjoy social activities such as welcoming me to the firm.

5. Home stays

I was very fortunate to have two home stays during my time in Japan.

The first stay was with the Tomoto family in Tokyo and we visited Senso Ji, the Edo-Tokyo Museum and Mt. Takao with its spectacular views of Tokyo and Yokahama. I learnt how to make kantan (easy) Sushi, which is the typical sushi roll found in Australia. The second stay was with the Teraoka family in the Nara prefecture, which is a rural area in Japan.

Photo 3: Jinrikisha ride with host family

6. Acknowledgements

I have to start off by thanking my mentor, Nakamura-san and my own personal translators Long-san and Teraoka-san. I would also like to thank my two host families, the Tomoto Family and the Teraoka Family for a wonderful experience. This would not have been possible without the support of CTI Engineering, AECOM, CA and AJCE and for that I am most grateful. My host firm and family have been most accommodating and, thankfully, their English is a lot better than my Japanese. It is Australia's turn to host young professionals from Japan next year and I hope that we can be as accommodating as my colleagues here have been to me.

AJCE Activity 2014

YPEP Program 2014

Trainee: Rachel Hackett
Japanese Firm: Chodai Co., Ltd.
Australian Firm: Aurecon

Introduction

During my participation in the Young Professionals Exchange Program (YPEP) 2014, I was fortunate to be placed with Chodai Co., Ltd. in the Social and Environment Team. This experience provided a fantastic opportunity to learn about environmental assessment and management projects and methods in Japan with a leading consultancy, as well as learning about the many social and cultural traditions.

Work Experience

Throughout my training program with Chodai I was able to work in both the Tokyo and Hiroshima branches.

Whilst in the Tokyo branch, I presented my research on the difference between the Japanese and Australian Environmental Impact Assessment (EIA) processes. There were also presentations and discussions between members regarding the fauna and flora survey methods used in both countries and conservation measures which are incorporated into design of projects.

I attended a site visit of a major highway project under construction in the Chiba prefecture near Tokyo, where I observed environmental measures which have been implemented into the highway design such as noise barriers and green belts.

During my week in the Hiroshima branch I was lucky enough to participate in two days of field surveys for a highway project in Shobura City (approximately 100km from Hiroshima). The field

surveys were for Japanese Giant Salamander and raptors such as the Mountain Hawk-eagle which are on the Minister of the Environment Red List in Japan. I am very happy to say that we found a Japanese Giant Salamander during the survey!

Attending Asa Zoo in Hiroshima after the field surveys was very beneficial to understand many

of Japan's native wildlife, and we also visited the salamander breeding program facility which helped in learning about this unique species.

During this valuable office and field work experience with Chodai, I have learnt a lot about Japanese survey methods, Japanese flora and fauna, project structure, and conservation measures.

Cultural Experience

Whilst spending three weeks in Japan, there were many opportunities to learn about aspects of Japanese culture including – traditions, religion, art, and food.

In Tokyo I visited Tsukiji Fish Market, Kachidoki Bridge Museum, Tokyo Tower, and many of the big shopping cities (Ikebukuro, Shinjuku, and Shibuya).

The AJCE organised weekend in Kyoto weekend with other YPEP participants was a great way to see many famous shrines and temples – my favourite was the Kinkaku-ji Temple (Golden Pavilion).

I discovered that Japan has a wide array of traditional and delicious food! Some of my

favourites include – Okonomiyaki, yakitori, Sanzoku-yaki, ramen, udon and katsu.
Sightseeing was also incorporated into the program in spare time to ensure learning of the Japanese culture and traditions.
I enjoyed a weekend in Osaka visiting Osaka Castle, Arima-onsen (Mt Rokko), and Harukas 300.

Whilst visiting Osaka for the weekend, I was invited to homestay with a Chodai members' family. This was a appreciated experience to learn about family living and customs in Japan.

My trip to Hiroshima included seeing many interesting sights, including – Kintai Bridge, Miyajima Island and Aquarium, Sanzoku, and Asa Zoo. I also had time to visit the Hiroshima Peace Museum and Atomic Bomb Dome Memorial which was a very sad but important experience.

Arigatou gozaimasu

Thank you to AJCE and Consult Australia for providing this amazing opportunity to explore a fascinating culture while expanding our technical knowledge and professional experience in Japan.

Thank you very much to my host company Chodai, and mentor Aya Asai, for planning a wonderful program of learning and experience. All Chodai members of the Hiroshima, Osaka and Tokyo branches taught me that Japanese people are very kind and generous, and I look forward to visiting my new friends again!

AJCE Activity 2014

2nd Contract Administrator Training Workshop for the Overseas Construction Project

Contract Administrator Training Subcommittee,
International Activity Committee

Date and Time: November 21, 2014 10:00-19:30
Venue: Room 3A, Nippon Koei Co., Ltd.
Number of Participants: 28

Introduction

The Overseas Construction Subcommittee for contract engineers was established in 2012 to improve the ability of engineers who work as a Contract Engineer/ Engineer on overseas projects.

This workshop was organized for targeting the persons who have over 3 years' experience on overseas project. The lecturer explained on the core clauses of contract management based on FIDIC Red Book MDB such as "Extension of Time" and "Additional Payment". The participants discussed case study by forming 5 groups based on the lecture and background of a case study.
Following the opening address by Mr. KURASHIGE, Chairman of International Activities Committee, the workshop entered into the program as described below.

Explanation of the Clauses in FIDIC Red Book MDB version 2010 (Mr. Akira SHIROYA)

Before going into the case study session, Mr. Shiroya made an explanation on key Points on "Contract" and "Contract Clauses" for facilitating discussion. Mr. Shiroya mentioned that comprehensive knowledge on contract management is essential for the project manager in pursing projects successfully. Mr. Shiroya explained importance of the contract and basic principles of understanding contracts applicable to both Common and Civil law countries such as Contra Proferentem, Quantum Meruit, and Time at Large. In addition, Mr. Shiroya presented the important principles that are keys for consultants/ engineers to process claims properly.

Finally, Mr. Shiroya focused on relevant clauses regarding "Extension of Time" and "Additional Payment" in FIDIC Red Book MDB version 2010.

Mr. Toshio KURASHIGE,
Nihon Suido Consultants
Chairman, International Activity Committee

Mr. Akira SHIROYA,
Nippon Koei Co., Ltd.
Chairman of the Subcommittee

Workshop: Group discussion on "Extension of Time" and "Additional Payment" with a case study (Mr. Masaru KAIDO)

Participants were formed into 5 groups (each 5-6 persons) for the discussion as outlined below:

1. Self-introduction
2. Outline of the case
3. Outline of the Technical Specification
4. Group discussion Part 1 & 2
   4-1. Outline of the issue
   4-2. Group discussion
   4-3. Presentation & Lecture
5. Group discussion Part 3 & 4
   5-1. Outline of the issue
   5-2. Group discussion
   5-3. Presentation & Lecture
6. Q&A

Mr. Masaru KAIDO, Adjudicator,
Principal of the Kaido & Associate
Member of the Subcommittee

In the group discussion, the Part 1 & 2 were allocated for Variation & Additional Payment, while the Part 3 & 4 were assigned for Delay, Disruption and Extension of Time.

Mr. Kaido stressed the importance of validation of the claim. Notice of a Claim should be issued within 28 days after becoming aware of an event that may lead to claims or the validation of the claim shall be expired.

Q&A at the group discussion.

1. The information on arbitration is closed.
2. There are no limit for submitting Notices and Claims.

Group Discussion

Closing Address

In closing address, Mr. Akira SHIROYA announced that the subcommittee will continuously hold the workshop to provide chances to improve practical skill of project managers and contract engineers in charge of overseas projects.

Remarks

This was the 2rd workshop by the Subcommittee. It was observed that level and depth of discussion grew as the workshop advanced.

AJCE Activity 2014

Interdisciplinary Seminar 2014 "Innovation and Business Model – Road to Success"

Hiroshi TANAKA
AJCE Executive Committee Member
Chairman, Technical Exchange Committee

Date : November 4, 2014
Venue: CTI Engineering, Room 10A
Speakers: Gaku SUZUKI : Senior Officer, Hitachi, Ltd. Rail Systems Company,
Tetsuhito NAKANO: Deputy General Manager, Nippon-Koei Railway Planning Dept.,
Tetsu HIRAKI: Member, Japan Weather Association,
Terumi HIRANO: Managing Director, Greenway Co., Ltd.

I. Introduction

In the Technical Exchange Committee (TEC), professional consulting engineers serving in the field of construction, machinery, electricity, etc. have been exchanging information and raising capacity through committee activities. As a part of the activities, captioned seminar was planned and implemented. Outline of the seminar is reported in the following sections.

Mr. Konomu UCHIMURA
President, AJCE

Hiroshi TANAKA
Chairman, TEC

Hiroshi HANAOKA
Member, TEC

II. Outline of the Seminar

1. Presentation by Mr. Gaku SUZUKI

"History of Introducing High-Speed Train and Business Model Leading into U.K. Market"

Since 1999, Hitachi started challenge entering into railway market in U.K. In the past 15 years, it has conducted in-depth market research, technology development and examined procurement and contract strategy. As the results of many lessons learnt, and extensive efforts in overcoming these difficulties, Hitachi could achieve contract in a high-speed railway from UK government.

Mr. Gaku SUZUKI

In the lecture, Mr. Suzuki presented ① Hitachi business over view, ② Trend in railway development technology, ③ Challenge and success of entering

into UK market ④ Challenge and accomplishment in PPP projects, ⑤ development and prospect of Hitachi business in UK railroad. Breakthrough into the market was enthusiasm, perseverance, innovation, investment, and working closely with local partners.

2. Presentation by Mr. Tetsuhiro NAKANO

"The Railway Construction Projects in Mongolia"


Mr. Tetsuhito NAKANO

Government of Mongolia is planning to export the world's largest natural resources reserved in the Gobi Desert to Russia, China, South Korea, Japan, etc. Foreign and local financing entities are participating in investment for the development. Development of railway from South Gobi to Russian border has begun as coal mining is highly dependent on road or railway transport in Mongolia, Railway project of 1,520Km in total length was presented in which ① Outline of the railway project, ② Technical Advisory Service, ③ Environment considerations along the railway route, ④ Various technical challenges including financing were introduced. Speaker explained that the railway project will be further extended in the future.

3. Presentation by Dr. Tetsu HIRAKI

"Weather Forecast and Numerical Modelings"


Dr. Tetsu HIRAKI

At the beginning of presentation, Dr. Hiraki spoke about the Crimean War in the mid-19th century which triggered the construction of weather forecast facilities and establishment of the modern meteorological observation network. Speaker firstly introduced modern history of weather forecast. Following the history, as one of the meteorologists who develop mathematical models, speaker introduced concept and principle of mathematical modeling. Then, improvement of model accuracy by integrating observations on land and remote sensing, etc. was explained.

Further, he explained application of the models for disaster prevention in the light of various weather stages. He stressed necessity of development in weather forecast in ① improvement of local prediction model, ② improvement of detailed remote sensing observation, and ③ dissemination of the usage of numerical forecast.

4. Presentation by Mr. Terumi HIRANO

"Plant Factory"


Mr. Terumi HIRANO

In the recent years, plant factory is calling attention for its potential to increase the crop yield per unit area. Mr. Hirano, who has been trying to develop profitable plan business, presented history and current situation of plant factory, requirement for profitable plant factory and future prospect. Plant factory started in 1960s in Europe, then it was introduced in Japan in 1980. Various trials for plant business were challenged since late 1980s in Japan. However, most of the trials did not bring profit as the production cost was high. Mr. Hirano stressed importance in the following requirements for profitable plant business: ① cheap construction cost, ② low running cost, ③ selection of competitive plants and seeds, ④ establishment of distribution and marketing system.

He showed profitable examples of producing beansprout, mushroom, arugula, baby-leaf and Italian parsley.

Project Accomplishments by AJCE Members

The Project of Landslide Management in the Republic of Mauritius

Principal Firm (s)	KOKUSAI KOGYO CO.,LTD KOKUSAI KOGYO CO., LTD.
Project Site	Republic of Mauritius
Client	Ministry of Public Infrastructure and Land Transport (MPI)
Finance	Official Development Assistance (ODA)
Period	May 2012 - March 2015
Type of Project	Technical Assistance (JICA Project)

Project Outline

Mauritius is an island country vulnerable to climate change, particularly landslide issues. Recently, environmental changes and land development on steep slopes are increasing natural disaster losses.

MPI wishes to tackle such issues, particularly landslide disasters, which are common in Mauritius. Therefore, technical skills and knowledge of landslide measures are vital.

MPI is endeavoring to build its technical capacity and expertise including of methodologies to understand landslide mechanisms, risk identification, monitoring, and countermeasure formulation. With this background, the Mauritius government requested the Japanese government to implement this project to help it overcome the abovementioned issues using technical expertise and lessons learnt from Japan.

Details

1) Formulation of a landslide management plan to establish a landslide monitoring system.
2) Implementation of the landslide countermeasure works feasibility study and pilot project to examine, implement and learn specific approaches.
3) Capacity building on landslide management skills to MPI [u3]counterparts and other related institutions.

Protecting Mauritius' precious coastal resources is another vital aspect of this project

Community participatory discussion using a disaster risk map

Working on a pilot project for landslide countermeasures

Project Accomplishments by AJCE Members

Preparatory Survey on the Project of Restoration of Water Supply System for the Reconstruction of Léogâne city in Haiti

Principal Firm (s) Chuo Kaihatsu Corporation

CKC

Project Site Léogâne city, Haiti

Client Japan International Cooperation Agency (JICA)

Finance JICA

Period January 2012-March 2014

Type of Project Preparatory Survey

Project Outline

In January 2010, the great earthquake occurred near the Léogâne city, approximately 29 kilometers west of Port-au-Prince, the capital of Haiti.

The earthquake caused major damage in Port-au-Prince and other settlements within the region.

A lot of infrastructures of Léogâne city were damaged by the 2010 earthquake. Government of Haiti requested to Japanese government the grant aid for the implementation of the "Project of Restoration of Water Supply System for the Reconstruction of Léogâne city (hereinafter referred to as Project) ".

This preparatory survey includes the outline design for water supply system and the estimation for the implementation of Project.

Details

The following activities were conducted in this survey.

1) Confirmation of background of Project.
2) Confirmation of organization for implementation.
3) Study of natural condition of Project site.
   - Well boring, pumping test, water quality test, topography survey, geotechnical survey.
4) Study of environmental and social considerations.
5) Outline design of facility of water supply system.
   - Pumping station, water treatment facility,
   - Elevated tank,
   - Water distribution network.
6) Plan of Operation and Maintenance.
7) Cost estimation of Project.

Table -Summary of Project Components

Population supplied	14,420
Pumping station	Q=1,900m^3/day
Elevated water tank	V=340m^3, H=20m
Distribution network	L=36km, ϕ 63mm-450mm
Provision of equipment	-Pipe: ϕ 20mm x 5400m -Meter:900 units -Ferrule with saddle: 900 units

Project Accomplishments by AJCE Members

North-South Expressway Construction Project (Ho Chi Minh City – Dau Giay Section) in Vietnam

Principal Firm (s)	Nippon Koei Co., Ltd.
Project Site	Ho Chi Minh City (HCMC), Dong Nai Province
Client	Vietnam Expressway Corporation (VEC)
Finance	Japanese ODA Loan, ADB's OCR Loan
Period	Dec. 2009 - Feb. 2015
Type of Project	Engineering Services for Detailed Design (whole section) and Construction Supervision (JICA Section).

Project Outline

The objective of the Project was (i) to solve the urgent demand for transport on National Highway No.1, Dong Nai – HCMC section, (ii) to accelerate development of satellite urban areas in HCMC, and (iii) to provide adequate and efficient access to the proposed Long Thanh International Airport.

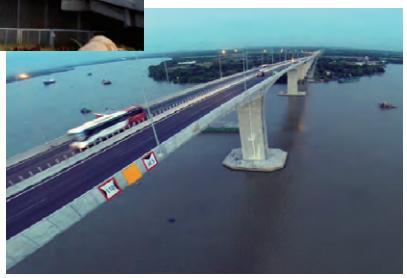
The four-lane expressway with emergency lane on each side allows for speeds of up to 120 km/hr, the highest in Vietnam. The distance from HCMC to Dau Giay (Dong Nai province) is shortened to 55 km with travel time of one hour, instead of 70 km and three hours, respectively. This saves transport cost for vehicles from 20% to 30%.

The expressway, which opened in Feb 2015, plays an important role in reducing traffic jams in the region, minimizing traffic accidents, saving time and transport cost for vehicles, as well as promoting business between southern economic hub HCMC and other localities in region.

Details: (Whole section)

Length, Lanes : 55 km, dual 2-lane
(dual 4-lane in ultimate stage)
Interchanges : 4 interchanges
Major bridges : Long Thanh Bridge of PC box girder (Total 2,326 m long)
Viaduct : Total 6,517 m long
Minor Bridges : 12 (Total Length: 3,498 m)
(JICA Loan Section)
9 (Total Length: 785 m)
(ADB Loan Section)
Traffic Control : ITS system (traffic information system, toll collection system)

Interchange (Photo by VEC)



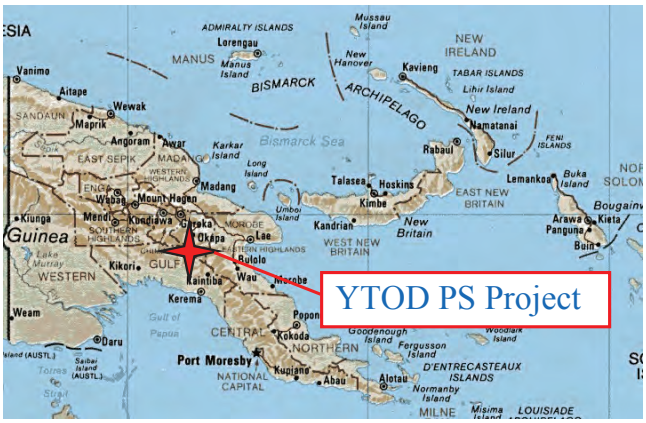
Long Thanh Bridge (Photos by VEC)

Opening Ceremony (Feb. 8, 2015)

Project Accomplishments by AJCE Members

Yonki Toe of Dam (YTOD) Hydropower Station Project in Papua New Guinea

Principal Firm (s)	Nippon Koei Co., Ltd.
Project Site	Yonki, Eastern Highlands Province
Client	PNG Power Limited (PPL)
Finance	PNG Power Limited (PPL)
Period	June 2011 - April 2014
Type of Project	Engineering Services for Management, Design and Construction Guidance



Project Outline

The YTOD Project is to deliver 18 MW power to Hidden Valley Mines through the Ramu Power Grid of PPL. Though EPC Contract was concluded in 2008, it was terminated by the Employer PPL for non-performance by the Contractor in civil construction works in particular. Nippon Koei was then invited to take over and manage the Project to complete the construction works and to supervise installation of generating equipments.

Nippon Koei provided PPL with 1) Project Management of the whole YTOD Project, 2) Design of the YTOD powerhouse and supervision of civil works, 3) Construction guidance for civil works under direct management by PPL, and 4) Supervision of the E&M installation works including commissioning tests.

Project features:

- Rated discharge & head: 24.4 m^3/s x 2 units = 48.8 m^3/s & 43.0 m
- Penstock: D3.60 m x L117 m
- Power station: 9 MW x 2 units @ 300 rpm, 50 Hz, PF 0.85
- Transmission lines to Ramu 1 Power Station: 132 kV x L1,845 m, transformer 21.6 MVA

Outdoor switchyard & transformer

Bolder riprap against flooding

YTOD power station & tailrace channel

Project Accomplishments by AJCE Members

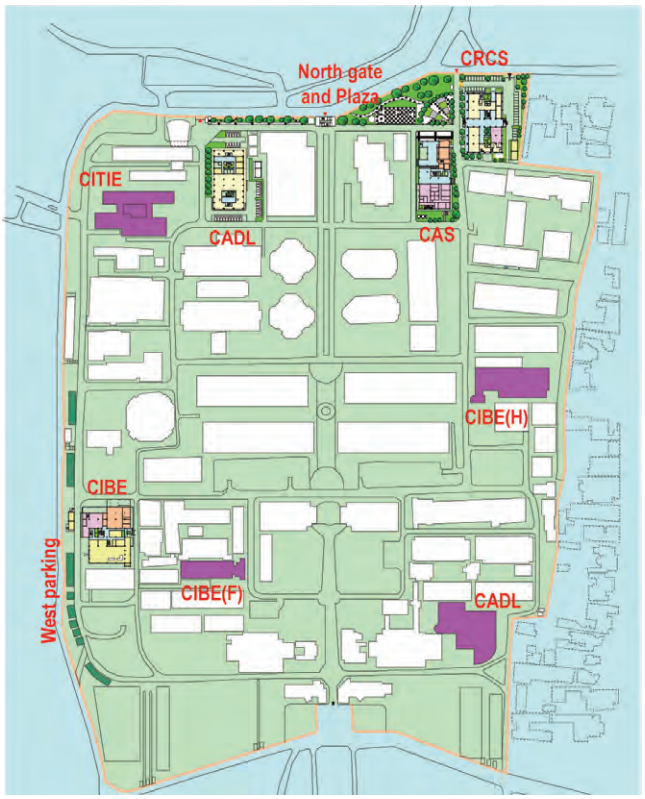
Development of Bandung Institute of Technology (III)

Principal Firm (s)	Yachiyo Engineering Co., Ltd.
Project Site	Bandung, Indonesia
Client	Government of Republic of Indonesia
Finance	Japanese Loan
Period	March 2009 - March 2018
Type of Project	ODA Loans

Project Outline

As stipulated in the Mid-Term National Development Plan and other related plans regarding the development of education, science and technology in Indonesia, the necessity for the development of the human resources has been recognized as the core of the industry and academic research. In order to achieve this goal, Bandung Institute of Technology (hereinafter called as the "ITB") has played a key role to produce the top level scientists, engineers and researchers who have contributed to industries, academia and economic development in Indonesia. Therefore, for the promotion of qualitative and quantitative expansion of education and research at the ITB by enhancing its research facilities and capacity, the Project has been executed.

Location of Bandung



ITB Campus

Details

Project Accomplishments by AJCE Members

Ho Chi Minh City Water Environment Improvement Project (WEIP)

Principal Firm (s)	Oriental Consultants Global Co., Ltd.
Project Site	Ho Chi Minh City of the Socialist Republic of Viet Nam
Client	HCM City Urban-Civil Works Construction Investment Management Authority (UCCI) People Committee of HCMC
Finance	ODA Loan of Japan and HCMC PC's Budget
Period	August 2002 – June 2015 (Construction was completed)
Type of Project	Review of Detailed Design and Construction Supervision

Project Outline

The urbanized area and water population of Ho Chi Minh City have increased rapidly due to the remarkable economic development since 1980s without sufficient infrastructure, especially urban drainage and sewerage system. Domestic and industrial wastewater was directly discharged into water bodies, such as rivers, canals and pond which aggravated serious water pollution and bad odor.
This project aimed to improve urban water environment conditions by improving canal, urban drainage and sewerage systems and to contribute to improvement of living condition of people in Ho Chi Minh City.

Details

Canal Improvement; Dredging (481,756m^3), Revetment (5,663m)

Existing Combined Sewer improvement; Ø800 - 2500mm x 2000mm (9,882m)

Interceptor Sewer Ø300 - 2200mm (10,891m)
Conveyance Sewer; 1300mm x 1200mm x 2 cells (3,481m)

Intermediate Wastewater Pumping Station (Capacity: 66.7m^3/min. x 3 units),

Wastewater Treatment Plant (Treatment Capacity: 141,000m^3).

General Layout of Project


Canal Improvement


Intermediate Wastewater Pumping Station


Wastewater Treatment Plant

Project Accomplishments by AJCE Members

Myanmar National Transport Master Plan (MYT-Plan)

Principal Firm (s)	Oriental Consultants Global Co., Ltd.
Project Site	Myanmar
Client	Japan International Cooperation Agency Ministry of Transport, Myanmar
Finance	Technical Cooperation
Period	2012.12 – 2014.9
Type of Project	◆ Master Plan ◆ Feasibility Study

Project Outline

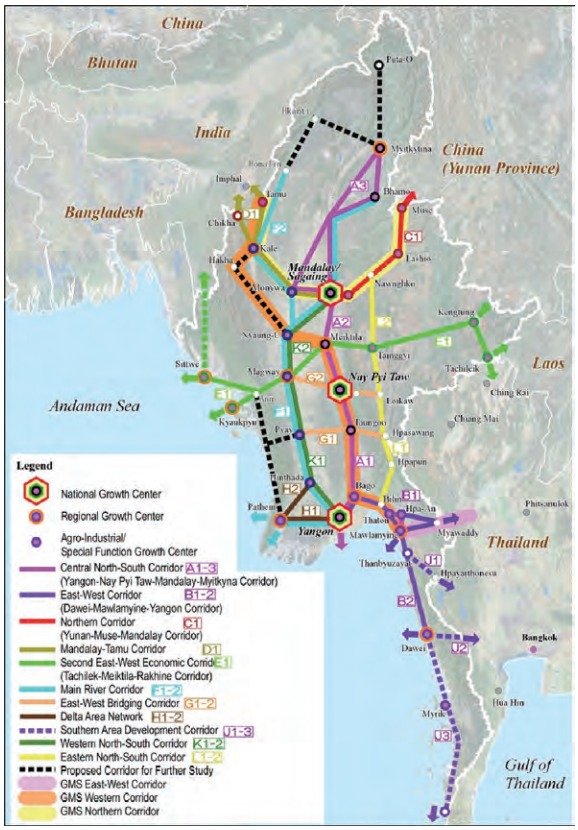
Infrastructure is an essential element of Myanmar's economy and the Government is committed to pursuing new policies and initiatives that promote more efficient travel, for business and for people.

The purpose of the Myanmar National Transportation Master Plan is to guide transportation growth and planning in Myanmar for the next two decades. This Master Plan will serve as a blueprint for transportation strategies and the basis upon which capital improvements are made over this period. This Master Plan will also provide guidelines that are adaptable to other industrial sectors and to private investment, and assist with investment planning and decision making for a variety of transport sector projects. In this way, the Master Plan will influence the transport sector's development, by presenting a set of policies that are relevant to all modes of transport, as well as development strategies for specific modes like road/road transport, rail, air, maritime and inland water- way.

Details

The associated transport projects and activities can help these modes achieve the Transport Vision, which is

1. To establish a long-term development vision and corresponding strategies of the transport sector, in line with the National Comprehensive Development Plan (NCDP).
2. To draw up an integrated national transport network plan, which enables multi-modal transport services all over the country.
3. To provide an effective coordination mechanism in transport planning and investment.
4. To minimize environmental impacts caused by the transport infrastructure development through better planning and enhanced coordination between the ministries concerned.
5. To improve safety and security to international standards.
6. To encourage the private sector's involvement in transport infrastructure development, operation, maintenance and management.
7. To support other industrial sectors by providing safe, secure, reliable, reasonable and all season transport services.



MYT-Plan Multi-Centric Balanced Development Strategy

Rehabilitation and Modernization of Yangon – Mandalay Railway

Inland Water Transport Facilities Improvement and Development in Mandalay

The East-West Economic Corridor Road Improvement Project

Project Accomplishments by AJCE Members

Project for Improvement of Operation and Maintenance of Water Supply and Sewerage Systems in Parana State, BRAZIL

Principal Firm (s)	Nihon Suido Consultants Co., Ltd Nihon Suido Consultants Co., Ltd.
Project Site	Curitiba Metropolitan Area Parana State, Brazil
Client	BRAZIL,PARANA STATE SANITATION COMPANY (SANEPAR)
Finance	JICA
Period	October 2012 – September 2015
Type of Project	Technical Cooperation Project

Project Outline

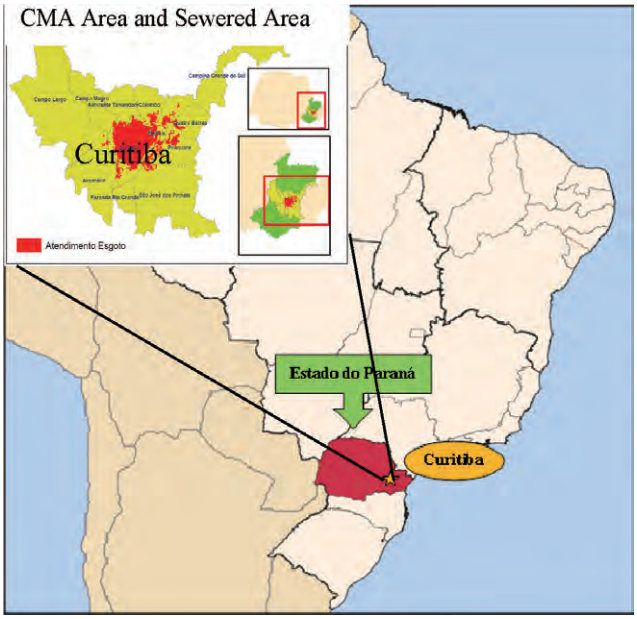
◆ Capacity of SANEPAR for operation and maintenance (O&M) of sewage pipe network is strengthened.

Troubles such as blockage due to aging of sewage pipe network and the back flow by infiltration water were recognized as issues on the O&M. Investigation, diagnosis and rehabilitation of them are conducted to solve these problems. As a result of investigation it was revealed that the problem is wide-ranging and a wide variety of investigation method and countermeasures are required.

Details

- Implement baseline survey on O&M of sewage pipe network and identify the issues
- Conduct training courses on O&M and diagnosis of sewage pipe network
- Conduct OJT on sewage pipe network diagnosis using TV camera
- Conduct OJT on monitoring sewage quantity using flowmeter
- Establish the policy of improvement plan of sewage pipe system

- Analyze results of diagnosis, study rehabilitation or renewal of sewer pipe in pilot areas including non-open trench method, and establish rehabilitation/ renewal and improvement plan of it
- Implement rehabilitation, renewal and improvement of sewage pipe network in the pilot areas
- Formulate a draft diagnosis plan for entire sewage pipe network in CMA and coastal area



Project Map

Field Investigation by Simple TV camera

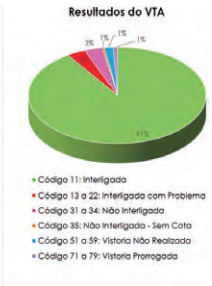
Field Investigation by Insert-Type TV Camera

Project Accomplishments by AJCE Members

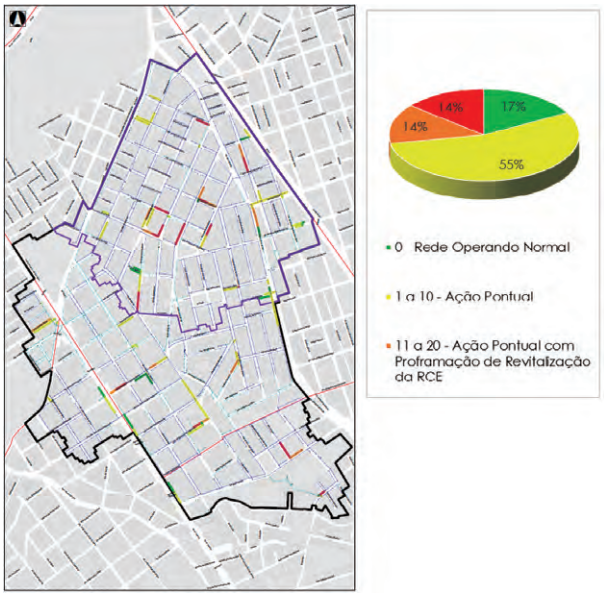
Study Area

Outline of the Pilot Area	
Area	279ha
Extension of Sewge Pipes	64,562m
Number of manholes	1,305
Number of House Connections	4,558

Activities of “River School”



Investigation of Illegal Connection



Results of Diagnosis by Insert-type TV camera plotted on the Ledger

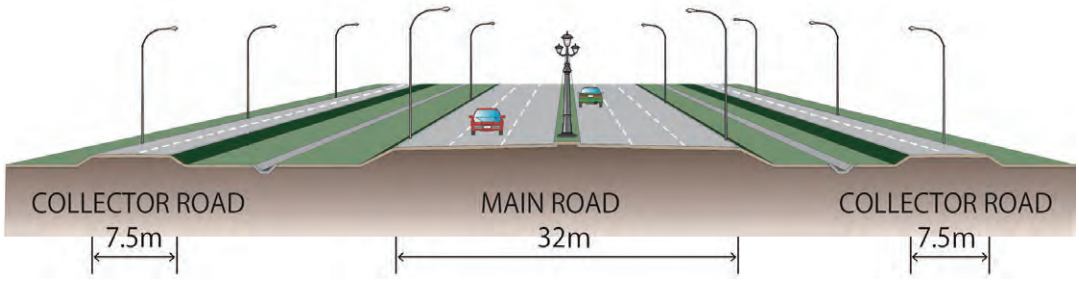
OJT on monitoring sewage quantity using flowmeter

Demonstration of non-dig Pipe Rehabilitation Method

Seminar

Achievement of the Year 2015
Consulting Services by CTI Members

CONSULTING SERVICES FOR CONSTRUCTION SUPERVISION FOR NOI BAI INTERNATIONAL AIRPORT TO NHAT TAN BRIDGE CONNECTING ROAD CONSTRUCTION PROJECT IN VIETNAM



TYPICAL CROSS SECTION

Consultant	Stanley Consultants INC CTI Engineering International Co., Ltd. Joint Venture
Project Site	Ha Noi City, Vietnam
Client	Project Management Unit No.85, Vietnam(PMU85)
Finance	JICA Loan, Japan
Period	July. 2011 - Mar. 2015 (45 months)
Type of Project	Construction Supervision

Project Outline

The project is to provide main road, collector roads, interchanges, flyover crossing railway, underpasses and bridges as a crucial north area of industrial district of Ha Noi City.

The major achievements of the project are:

i) Development of the north area of Hanoi City
ii) Effective road network with other main routes
iii) Improvement of traffic speed and congestion between Noi Bai International Airport and center of Ha Noi City

Project Scope

The scope of the project under JICA Loan is construction of 12.1 km long high standard road, consisting of 80-100m right-of-way , having 32m main road and two 7.5m collector roads, 3 interchanges, 3 crossing flyovers, 6 bridges, 4 underpasses.

< 1. Nam Hong & Nguyen Khe Flyover: L=285m x 2 >

- Superstructure — 7-span continuous PC box-girder
- Abutment — RC inverted-T type
- Pier — RC wall type
- Foundation — Cast-in-place pile (φ1.0m)

< 2. Railway Flyover: L=389m >

- Superstructure — 10-span continuous PC super T-girder
- Abutment — RC inverted-T type
- Pier — RC T type
- Foundation — Cast-in-place pile (φ1.0m)

< 3. Ca Lo & NH2(F) Bridge: L=330m, 236m >

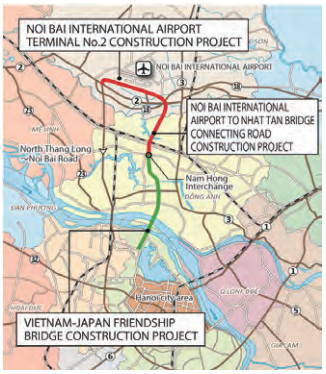
- Superstructure — 10/7-span continuous PC I-girder
- Abutment — RC inverted-T type
- Pier — RC T type
- Foundation — Cast-in-place pile (φ1.0m)

Project Features in Management Aspects

[Schedule] Catch up the delay due to Land Acquisition and completed the opening ceremony on schedule.

[Quality] Concrete, Asphalt and Others strictly controlled by Consulting Team

[Safety] Until the final completion of the project without any interruption to the accidents



Location of the Project (Red Line)

I-Girder Erection at Ca Lo Bridge

Flyover of Nam Hong

PC Super-T Girder Launching

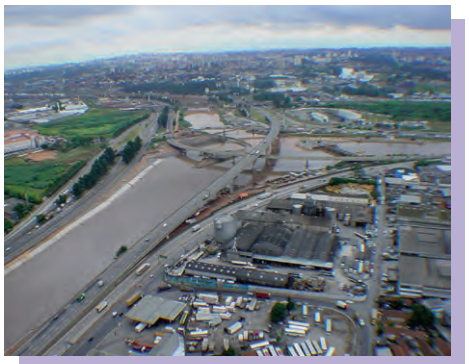
Ramp A and B

View from the Main Bridge

Flyover above Railway

CKC

Water,
Disaster Prevention,
Environment,
Agriculture,
and
Human Resource Development



ODA Loan Project
Teite river basin depollution Project in Brazil

ODA Loan Project
Sanitation Improvement Project for Baixada Santista Metropolitan Region, Brazil

Technical Cooperation Project
Management of Non-revenue Water in Kenya

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It was just one and half years ago, when I joined in this industry. I had no knowledge and image about the profession, "Consulting Engineer (CE)". As a person on the street, like others, all I saw was fine-looking buildings, roads and bridges. I couldn't imagine invisible dedication of CEs behind the realization of these achievement. Now, through a new viewpoint of a CE, I can enjoy watching the formation and function of a city as I know the works of CEs behind the scenes. Acknowledgement of this reality has become a personal delight.

In Japan, to be qualified as a Professional Engineer (PE) is as hard as obtaining a license to practice as a lawyer. In contrary, it seems that social recognition of CE & PE, and their remuneration are lower than that of lawyers. This may be attributable to the fact that CE industry was established just after World War II and it does not have enough time to be acknowledged by society in Japan. Despite of this background, CEs in Japan have been working faithfully for raising the people's quality of life by keeping quality of infrastructure. Though it is my personal feeling, CEs in Japan should be acknowledged more.

Before closing my note, as a member of Publicity and Relations Committee of AJCE, I would like to express my pleasure that I am able to take a role of disseminating and introducing works of CEs through publication of English newsletters and Japanese bulletins to concerned parties both in Japan and FIDIC. Further, it may enhance increasing people's recognition on the contribution of CEs as well as to encourage young engineers to join this rewarding industry.

April 2015
Ei SEKI

Editor's note

AJCE NEWS LETTER, April 2015

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