THE PACIFIC ASSOCIATION OF QUANTITY SURVEYORS

PAQS

Young Quantity Surveyors' Group

PAQS YQSG Newsletter 2015

Yokohama Japan Program On Post Disaster Reconstruction

P A Q S Young Quantity Surveyors Group

YQSG Program Newsletter May 2015 Issue 6

CONTENTS INSIDE

Introduction

Greetings From The Chair

Mission of the PAQS

PAQS Conference History

Committee Members Session 2015

PAQS YQSG Yokohama Program 2015

PAQS YQSG Yokohama Photo Gallery

POST DISASTER RECONSTRUCTION

1. Current Construction Trends And Post Disaster Reconstruction In Brunei Darussalam - PUJA

2. Disaster Prevention in Malaysia Kuala Lumpur Smart Tunnel - RISM

3. Philippines Amidst Economic Uncertainties And Post Disaster Reconstruction - PICQS

4. Tohoku Reconstruction Problem - BSIJ

CONSTRUCTION DEVELOPMENTS

5. Chinese Real Estate Development Trend-Opportunity Under The New Normal - CECA

6. Construction Developments In Hong Kong For Year 2014-2015 - HKIS

7. Construction Developments In Malaysia For Year 2014-2015 - RISM

8. Construction Outlook In Singapore For Year 2015 - SISV

YQSG PROGRAM PRESENTATIONS

9. Australia Development Report May 2015 - AIQS

10. Construction Trends After Tsunami, Earthquake and Flooding in Indonesia - IQSI

11. Construction Trends In New Zealand And Post Disaster Reconstruction - NZIQS

12. Post Disaster Reconstruction Sri Lankan Experience - IQSSL

PAQS Congress 2016 Christ Church New Zealand Flyer

PAQS Member Organizations Map

PAQS Member Organizations' Contacts

Greetings From The Chair

Greetings to All or Tena Koutou in New Zealand's Maori Language,

Hello Everyone! (Kia ora tatou!) I am most honored & humbled to be given this top spot to deliver some of my heart felt messages to my fellow PAQS YQSG members & hard-serving YQSG committee members. This year 20-21 May, we will again gather in New Zealand's modern city of Christ Church and look forward to a bigger participation from all 13 member countries and perhaps with new member from South Korea this year. Let's together relive the warmth and cuddling brief moments we all had together recently in Yokohama, Japan 2015 as well as previous year programs. It is through all our efforts that we can show to the world that we are truly international without boundaries and one big family of PAQS YQSG.

Remembering the earthquake of Christ Church in February 2011, although many years have passed we as a group of young caring QS should also come together with a financial or physical plan prior to Christ Church 2016 to support and care to some of the victims of the disaster namely orphans & elderly. As the wounds and pains may have faded with time, but the scares and memories may still remain. So let lend a helping hands to our cousins in Christ Church.

One of my missions is to groom up future leaders and train up a strong team that will helm YQSG in the near future. And with great humility I wish to announce to the world our incoming chair Aaron Wong (PUJA) and his running mates Annabella Wu (CECA) and

Shazali Sulaiman (RISM). And with hopes and anticipation that the new team will be ever ready, available, dedicated & passionate about our young group's missions and visions and work as a strong cohesive team to carry PAQS YQSG to greater heights.

A huge thanks for all the hard work, dedication and contribution... (i am speechless to describe all) of the ever supporting YQSG Committee members despite the tons of work pressure I put on them. I say you guys are the best Aaron Wong (PUJA), Annabella Wu (CECA), Shazali Sulaiman (RISM), Hasitha Gunasekara (IQSSL), Leah Gartner (NZIQS), Junpei Ikushima (BSIJ), Maila Marie Victorino (PICQS), Rex Ying (HKIS) and also to the Editorial Team members comprising of Husna Lathifunnisa (IQSI), Michelle Wong Yi Min (SISV), Edna Yeo (AIQS) and article contributors from all member countries. Without you guys we will not be having this newsletter in front of you at all.

Greetings From The Chair

This will be my last time writing in this spot, I would like to share about marine biology and ecosystem, no I am not! I think it would be nice to share my personal thoughts in nurturing and growing a voluntary and international and long distance communication association like PAQS YQSG. To me it's all about the people in the group and every individual can make or break the future of the group. As every individual is different in many ways, it is important to accommodate and accept who they are, taking good care of them socially and emotionally and building a strong trust and friendship. I urge all to be truthful, genuine, honorable, helpful, positive minded and be open and direct from your heart but subtle and polite in the tone and message. Try our best to see every individual as a sparkling diamond or a yet polished gem within. Over the years I have been in touched with many YQS, and yet only a handful of them still remained and stayed active todate. I say to you my dearests and beloveds, treasure and love each other my friends, as you all are the finest polished treasures of PAQS YQSG and also the elite and future of the quantity surveying profession. The trust and friendship bonds that we all sow together today may last us for a life time and be your spring of flowing water in your times of despair. And I believe that this is the true spirit of PAQS YQSG that cut through all ethnic, religion, national, cultural and political boundaries and revealing only the true and unpainted human elements. When people asked me “What I do in PAQS YQSG?”, besides the conferences, programs, technical writings and presentations, organizing and managing the group activities and other protocols ..., I replied “I am building a lifetime of friendship and comradeship in PAQS YQSG”. I will soon be stepping down as PAQS YQSG Chair in next session and passing my baton to stronger hands, rest assured that I will always be around your side and supporting my beloveds and darlings!

Sr Yeap Soon Kiat
MRISM, MRICS, PAQS YQSG
Chair 2014-16

MISSION

OF THE PAQS

The promotion of the practice of Quantity Surveying in the region.

The promotion of dialogue between member organisations

Encouragement of regional cooperation in the practice of Quantity Surveying

Fostering of research appropriate to the better understanding of building practice in the region.

Rendering of assistance to members of member organizations working in each other's countries.

PAQS

CONFERENCE NEWS & HISTORY

The PAQS (The Pacific Association of Quantity Surveyors) is an international association of the quantity surveying and cost engineering profession in the Asia and Western Pacific region. The activity extends to the education, study of cost management, study of environment, study on BIM (Building Information Modeling) and more. In addition, PAQS support self-improvement activity of young engineers (YQS) under 40 years old.

In 1994, PAQS started to discuss the feasibility and benefits of closer co-operation between members of the profession in different countries, such as Japan, Australia, New Zealand, Hong Kong and Singapore.

Afterwards, the 1st PAQS Congress was held in Singapore in 1997 and the Congress has been successfully held in many countries. The 19th PAQS Congress will be held in Yokohama in 2015 and it is second time for Japan to host the Congress in Tokyo in 2003.

Currently, members of PAQS consists by 13 institutions from countries and cities including Australia, China, Canada, Hong Kong, New Zealand, Malaysia, Singapore, Sri Lanka, Brunei, Indonesia, Philippines, Fiji(associate member), South Africa (observer) and Japan.

It will be a unique opportunity for participants to share experience and exchange ideas of engineers and researchers who actively working on the project in all over the world, in order to move the quantity surveying / cost engineering profession forward.

PAQS YQSG Yokohama Program 2015

It was a 2-day program: the 1st day we had presentation and discussion session at the World Porters Yokohama. Representatives from each country made their presentations on Post Disaster Reconstruction and Latest Developments of the Construction Industry of their countries. For example, the delegates from China enlightened us on the current construction cost trends and latest projects in Shanghai, while those from New Zealand described the unprecedented demand for construction for now and the immediate future due to the country's serious housing shortage. There were several games designed to allow the participants to interact together while attending to the games. A group discussion also held to share ideas towards the improvement of YQSG. As a usual event, gift exchange and group photo session was also took place. This informative session was an excellent platform for delegates to learn more about other countries.

Later in the afternoon, we had a site visit to ZEB Demonstration Building, Taisei Technology Center in Kanagawa demonstrating the next-generation of energy efficiency systems can be applied to office buildings. It is one of Japan's pilot projects intended to demonstrate achievable energy efficiency and self sustainable energy generation, such as ambient lighting, organic thin film solar panel external wall units, etc. As a result, a ZEB can provide a comfortable environment for its users while keeping the energy balance of the building at zero. This particular building was the first in Japan to obtain the highest five-star rank in the Building Energy-efficiency Labeling System (BELS). In the evening, we had Izakaya dinner at Dirino You, Yokohama and also a karaoke gathering to strengthen the relationship between delegates.

The 2nd day, we visited the showroom of the Mori Building Company in Tokyo to attend a talk on "Town Planning and Construction Issues during the construction of Roppongi Hills Mori Tower". We also visited Tokyo SkyTree Tower & Solamachi, Zojo-ji Temple, Shiba Park, Tokyo Station and Asakusa Sensou-ji Temple for short tours afterward. Lunch awaited us at Diya Indian Restaurant. The program ended with a specialty Okonomoyaki Dinner at Rokumon Zen.

In conclusion, the YQSG program serves to provide unique insights into issues faced by the next generation of quantity surveyors and provides opportunities for them to exchange ideas on how to overcome these challenges.

COMMITTEE MEMBERS SESSION 2015

IMMEDIATE PAST CHAIR - Joseph Chong (HKIS)

CHAIR - Yeap Soon Kiat (RISM)

VICE CHAIRS -
Aaron Wong (PUJA) (Website)
Annabella Wu (CECA) (Editorial)
Hasitha Gunasekara (IQSSL) (Social)
Leah Gartner (NZIQS) (YQSG 2016)

SECRETARY – Junpei Ikushima (BSIJ) (Program Coordinator)

TREASURER – Maila Marie Victorino (PICQS)(charity fund)

ADVISORS -
Joseph Chong (HKIS)
Shazali Sulaiman (RISM)

COMMITTEES MEMBERS -
Rex Ying (HKIS) (Leader)
Husna Lathifunnisa (IQSI)
Michael (SISV)
Edna Yeo (AIQS)
Michelle Wong Yi Min (SISV)






Boldoffshine






Path

















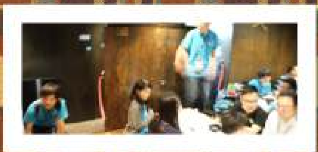












Young Quantity Surveyors Group Programme
The 19th Pacific Association of
Quantity Surveyors Congress 2015
28-29 May Yokohama





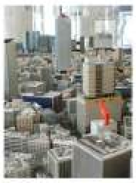


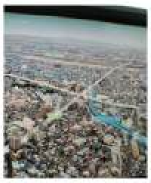






Young Quantity Surveyors Group Programme



Young Quantity Surveyors Group Programme
Pacific Association of
Quantity Surveyors Congress 2015
May Yokohama









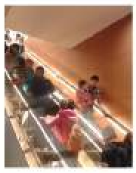


































金龍山
















Current Construction Trends And Post Disaster Reconstruction In Brunei Darussalam

By Aaron Wong Chuan Xing Of Institution Of Surveyors, Engineers And Architects, Brunei (PUJA)

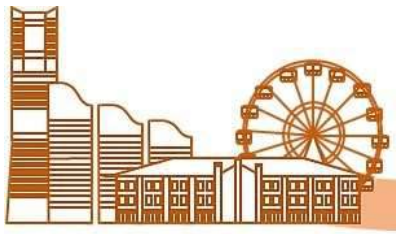
Brunei Darussalam is situated in Northern Borneo between the two states of Malaysia namely Sarawak and Sabah. Brunei Darussalam is divided into four districts: Brunei-Muara, Tutong, Belait and Temburong districts with an overall population of approximately 417,000 people according to The World Bank's data gathered in 2014. It has a total land area of 5,765 square kilometers where more than 70% is pristine rainforest.

Brunei Darussalam is the 4th largest oil producer in South East Asia and is also the 9th largest exporter of LNG in the world. The economy of the country is dependent on the oil and gas industry where more than 90% of the revenue is generated. The production of the oil and gas provides high income to the country where the Government uses it to subsidize staples, housing, electricity, water, fuel, medical services and education for the residents of the country. This has resulted in an estimated US$31,000 per capita income making Brunei Darussalam the second highest in the ASEAN region and a boasted adult literacy rate of 94%. The Vision Brunei 2035 on Continuity and Change has encouraged economy diversification in industries other than oil and gas; and this has attracted foreign investments fueling the country's economy for the future.

In the recent years, the Government of Brunei Darussalam has shifted its development concentration to the infrastructure of the country. While less is seen on building development, the country experiences an on-going upgrade of public roads, sewer mains, water mains, various bridges and highways to accommodate the ever increasing population within the city and hot routes to ease congestions and accommodate for the future.

The noteworthy Brunei Temburong Bridge by Brunei Bay will be the longest two ways navigational bridge in Brunei Darussalam spanning a total of 30km on land and sea once completed in the year 2019. It has been a dream of the citizens since independence in the year 1984 to see the two parts of Brunei Darussalam connected and it is seen as a gift by the country's ruler His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulahibni Al-Marhum Sultan Haji Omar Ali Saifuddien Sa'adulKhairi Waddien.

There are several other noteworthy infrastructure developments such as: 1) Telisai–Lumut Highway comprised of 19 kilometers dual carriageway including 6 bridges which will complete a dual carriageway highway from one end of the country to the other 2) Sungai Kebun Bridge an iconic bridge-to-be at the heart of the city Bandar Seri Begawan which will be a tourist must visit and 3) Meragang Flyover which is a first in Brunei Darussalam using twin deck, post-tensioned concrete box girder.



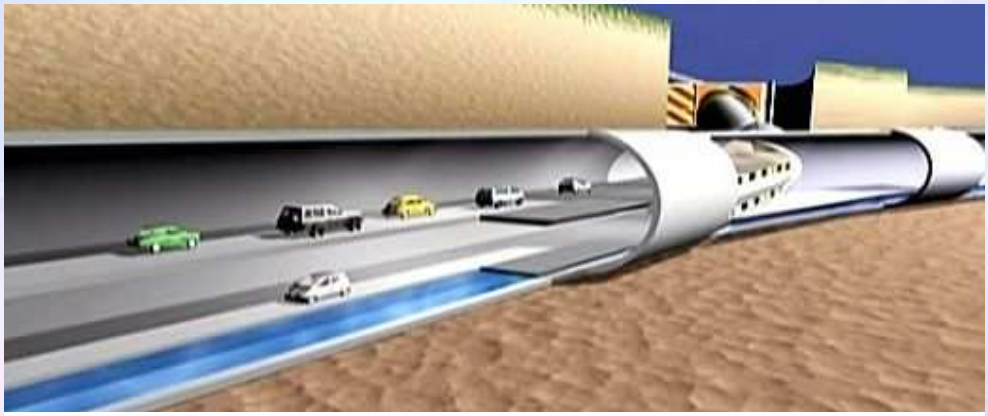
Brunei Darussalam is geographically blessed from natural disasters in comparison to other Asian countries. Being a coastal country, majority of the population lives relatively near the seas or rivers. Hence during heavy rainfall season, certain areas are prone to flooding with very few occurrences of landslides.

One of the recent worst disaster occurred in Brunei Darussalam was the 2009 Tutong flood. There were four sub-districts that experienced the highest impact where 871 residents and 155 houses were affected. His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam was accompanied by His Royal Highness Prince Haji Al-Muhtadee Billah, the Crown Prince and Senior Minister at the Prime Minister's Office for the visit to the flooded areas. The Government promptly provided food rations and aid to the affected areas with the help of volunteers and youths. Seriously affected residents were evacuated to shelters while the situation was being dealt with. The disaster was successfully controlled with minimal impact to the residents. Flood mitigation measures were launched within three months to flood-prone areas and since then, flooding has not been a major issue.

The current on-going infrastructure upgrades attempt to future proof in preparation for the unpredictable weather and climate. An attempt to construct before any re-construction is required.

Disaster Prevention in Malaysia - Kuala Lumpur Smart Tunnel

By Sr Yeap Soon Kiat & Sr Mohamad Shazali bin Sulaiman of
The Royal Institution of Surveyors Malaysia (RISM)



Kuala Lumpur Flash Floods

As the name of the city of Kuala Lumpur is derived and it literally means ‘muddy delta’. Because it is a delta at the confluence of 2 major rivers in Klang Valley namely Klang River (Sungai Klang) and Gombak River (Sungai Gombak). The delta area is prone to floods during the passing of 2 monsoon season namely the north east monsoon from South China Sea during the end of the year and the south west monsoon from Indian Ocean during the mid of the year.

The torrential rain pours huge amounts of rainwater and running silt into this narrow confluence. At its worst, the deluge overflows many parts of the downstream tributaries and engulfs many parts of Klang Valley’s conurbations.

This frequent occurence resulted in billions of Ringgit Malaysia (RM) of accumulated flood losses especially during the recent floods of the 1980s-2000s. The occurrence of these flash floods is not new in recent times as similar floods have been recorded as early as 1940s.

Photos of Year 1940s Flash Floods

Photos of Year 2000s Flash Floods

Stormwater Management And

Road Tunnel (SMART) Project

The SMART Project is a 9.7 km (6.0 mi) length stormwater tunnel 4km (2.5 mi) length double deck 2 lanes carriage way along Jalan Sungai Besi and Jalan Tun Razak. Construction period was 4 years between year 2003-2007. The project construction cost was RM1,887 million or USD514.6 million . The SMART tunnel officially opened to the public in 2008. Passenger cars and other light vehicles using the highway would be required to pay RM2.00 as toll charge. The SMART Tunnel is owned by the government of Malaysia via the Drainage and Irrigation Department of Malaysia (JPS) and Malaysia Highway Authority (LLM). Abd the day to day operation is by Syarikat Mengurus Air banjiR & Terowong (SMART) Sdn Bhd.

Due to the wide outer diameter of the stormwater tunnel of 13.2m, Tunnelling Method or Tunnel Boring Machines (TBM) has to be used to construct the 9.7km stormwater by-pass tunnel. 2 Slurry Mix-Shield Tunnel Boring Machines (TBMs) measuring 13.26m (43.3 ft) in outer diameter called ‘Gemilang’ (meaning glittering) and ‘Tuah’ (meaning great). The Slurry Mix-Shield TBMs is manufactured from Germany. At that time it is the 1st largest in South East Asia and the 2nd largest in Asia. The project design consultants were Sepakat Setia Perunding Sdn Bhd and Mott MacDonald (UK) and was carried out by turnkey contractor of MMC Corp Berhad and Gamuda Berhad Joint Venture (MGJV).

Design Features

SMART Tunnel offers Communication System in Motorway Tunnel via Radio re-broadcasting services. There are many safety system in motorway tunnel, namely automated flood control gates, cross passage between decks at 250m intervals, ventilation and escape shafts at every 1km intervals as wekk as fire fighting equipment, telecommunication and CCTV surveillance system at 1km intervals.

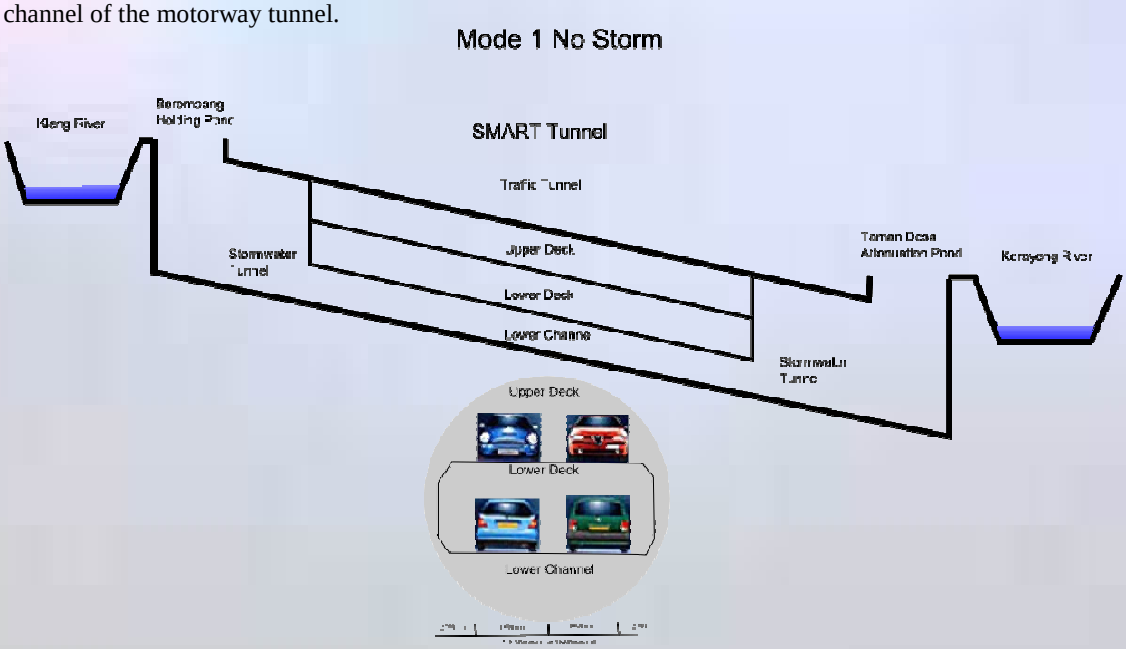
Surveillance system is installed in the motorway tunnel among the systems are 24-hour SCADA monitoring and surveillance and also 212 units of Closed Circuit Television and BARCO Wall is able to show 70 CCTVs screen at one time. Last but not least, protection of the environment is achieved through 38 sets of Air Quality Monitoring Equipment (AQME) to monitor the amount of carbon monoxide (CO), nitrogen monoxide (NO) and other particles in motorway tunnel.

Operation Modes

The SMART Tunnel has 4 flood mitigation modes i.e. 1 to 4 depending on the severity of the thunder storm and amount of rainwater inundation, which is described in further detail below:

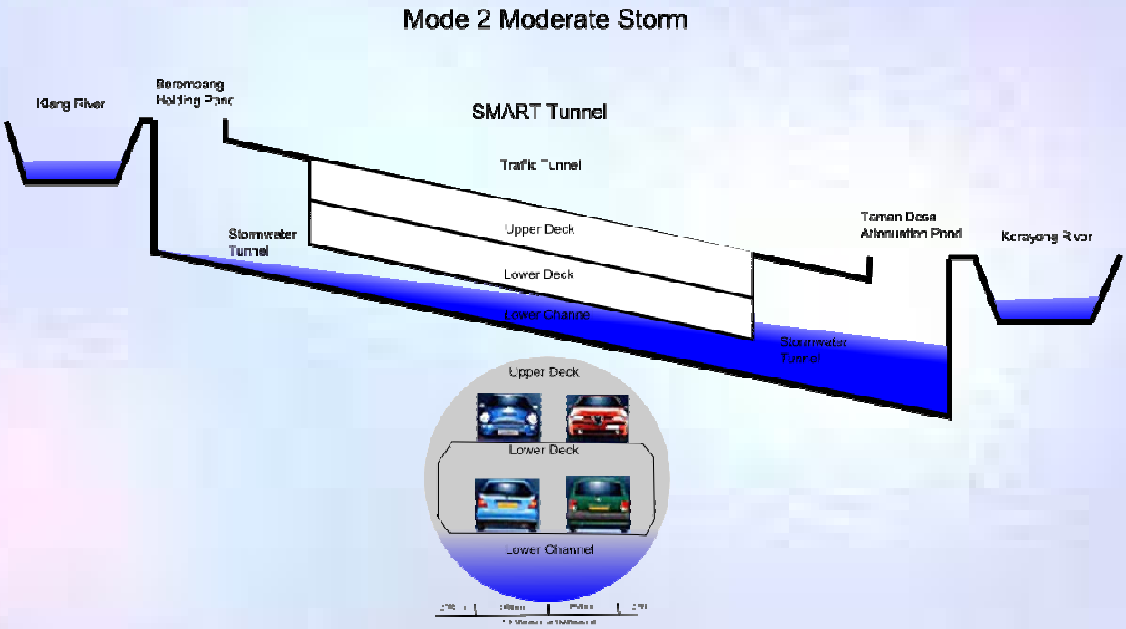
Mode 1 No Storm

Traffic as usual and little rainwater will be diverted through the stormwater bypass tunnel, in the lower channel of the motorway tunnel.



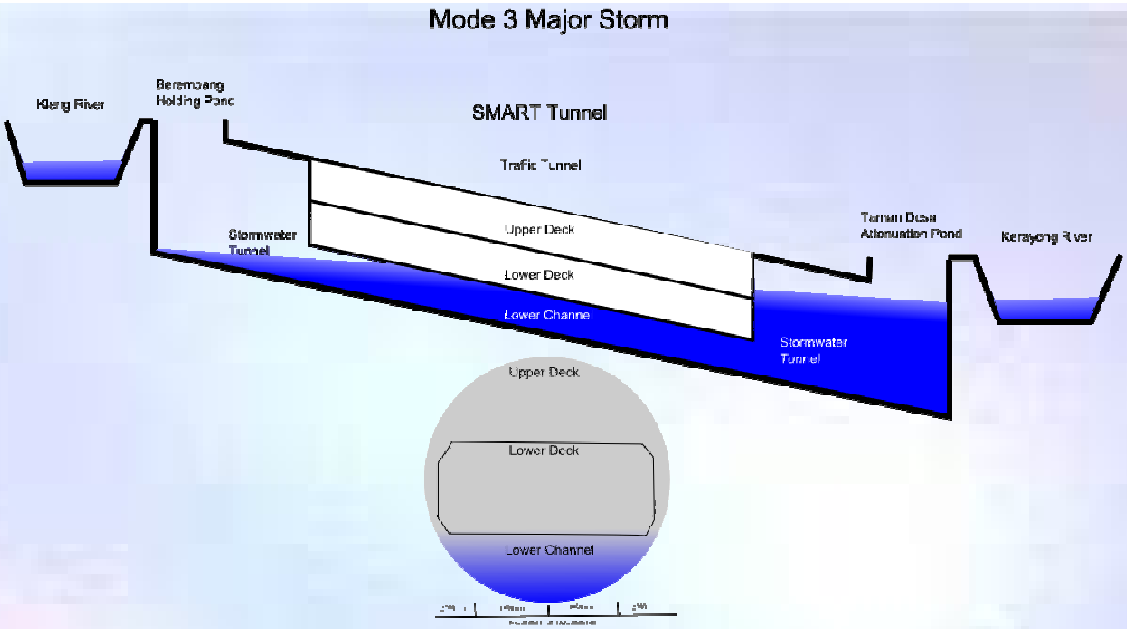
Mode 2 Moderate Storm

In the event of a moderate storm, the SMART system will be activated and excess rainwater will be diverted through the stormwater bypass tunnel, in the lower channel of the motorway tunnel.



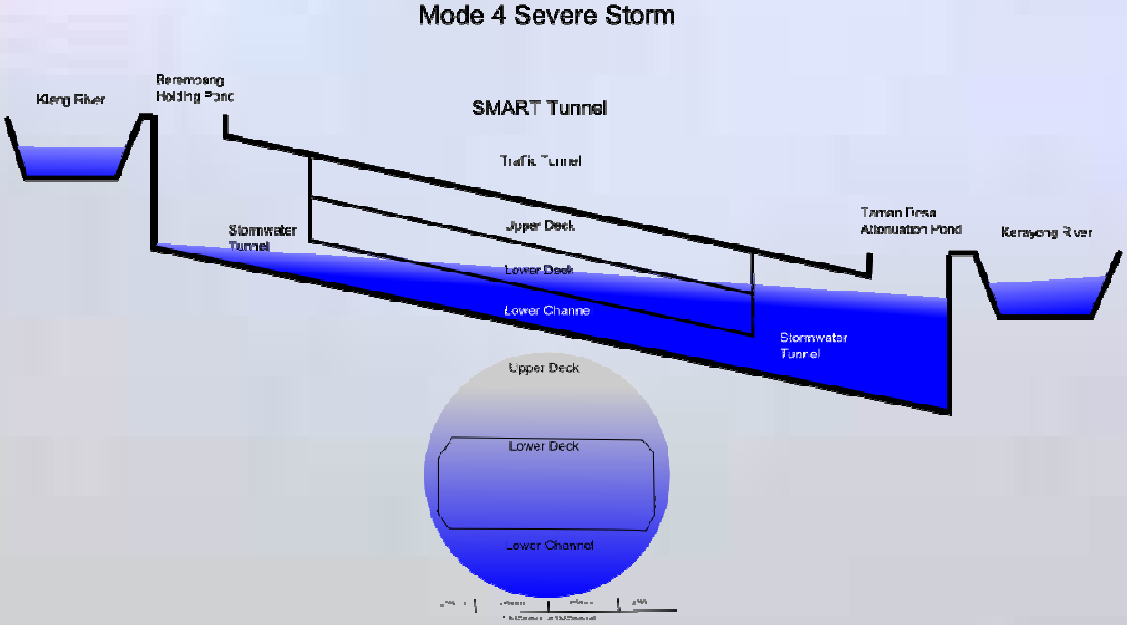
Mode 3 Major Storm

During severe storm or heavy inundation, the monitoring stations will issue an alert of the need to close the motorway tunnel from motorists. Sufficient time will be allocated to allow the last vehicle to exit the motorway. Road tunnel will be used for passage of flood after traffic evacuation completed. Only 10 m/s is allowed to flow downstream



Mode 4 Severe Storm

Activated if heavy rain storm prolongs, usually will be confirmed 1-2 hour after Mode 3 is declared. The motorway tunnel will be re-opened to traffic within 48 hours after closure.



The Philippines Amidst Economic Uncertainties and Post Disaster Reconstruction

By Maila Victorino Of Philippines Institute Of Certified Quantity Surveyors (PICQS)

The year 2014 saw a lower growth rate in the Philippine GDP (a primary indicator used to gauge a country's economy) with only 6.1% as compared to the previous year's 7.2%.

The two major contributors with the country's economic uncertainties are:

1) natural calamities and

2) politics

Primarily, the geographical location of the Philippines, within the Pacific Ring of Fire and surrounded by the ocean, makes it prone to the deadliest calamities such as earthquakes and typhoons. According to the World Risk Report of 2012, the Philippines ranked 3rd out of 173 countries based on exposure to hazards.

Historically, in the last 400 years, the country has experienced a total of 90 destructive earthquakes with 300 volcanoes, 22 of which are active. In addition, typhoons are frequently encountered with an average of 20 to 30 typhoons per year, 5 to 7 of which can be destructive.

The most destructive typhoon that ever hit is Typhoon Haiyan (local name is Yolanda) that struck the country's central regions on the last quarter of 2013. It affected 16 million people, resulted to a USD 2 billion cost of damage, and claimed 6,300 lives. Post disaster reconstruction followed and is still on-going until the latter part of 2014.

The Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR) was created by virtue of Memorandum Order No. 62. The Presidential Assistant for Rehabilitation and Recovery (PARR) is tasked to unify the efforts of government and other agencies involved in post-Yolanda rehabilitation and recovery. In performing its mandate, the PARR coordinates with the National Disaster Risk Reduction and Management Council and consults with local government units.

The Philippine government launched an $8.2 billion, four-year plan, Reconstruction Assistance in Yolanda (RAY), which focuses on rebuilding areas affected by the typhoon and developing resilience to natural disasters. Within this budget, USD 811 million is allotted to the Infrastructure Cluster Plan, with the objective to build back better by rehabilitating and improving infrastructure to support recovery and rehabilitation as well as the enhancement of disaster resiliency of affected communities.

The two major programs are:

1) **Upgrading of minimum performance standards and specification**

For the design and structural components as well as materials for public infrastructure such as schools, public markets, municipal/city and community halls, bridges, etc.

2) **Repair and rehabilitation of infrastructures**

Including social infrastructures (e.g. schools, health facilities), essential infrastructures (e.g. roads, bridges, airports, seaports), and livelihood infrastructures (farm-to-market roads, post harvest facilities and warehouses, fish warehouses, and tourism roads and facilities).

Slow progress has been observed on implementation of Yolanda-related projects. As of 3rd Quarter 2014, only 5% of 1,982-classroom target in 2014 has been completed. In terms of classroom rehabilitation, only 13% out of 6,597-classroom target in 2014 has been completed. Out of 205,128 houses need for the victims, only 2,100 housing units were finished by the end of 2014 and an additional of 120,000 units are pledged to be delivered by the end of 2015. Delays have also been attributed to continuous coming up of calamity resilient structural designs.

In addition to natural disasters, the Philippine politics has further influence the slow growth of the economy. In 2014, massive delays and suspension of government infrastructure projects were experienced due to a national court's decision that major provisions on the source of funds are illegal.

In particular, the Department of Public Works and Highways (DPWH)was under spent by about USD675.8 million during the first half 2014, which the agencies attributed to:

1) Delayed pre-construction activities due to program modification and realignments

2) Non-collection by some contractors of their 15.0% mobilization cost and/or preference of contractors to claim only upon completion of the project rather than issue progress billings

3) Right-of-way problems

4) Failure biddings

Despite these factors, the Industry Group performed better with a 9.2% growth rate in 4th Quarter of 2014 and the star of the Industry Group was the Construction Sector with a staggering growth rate of 20.5% in 4th Quarter of 2014, which is a complete reversal of its negative growth rate (-5.2%) in the same quarter a year ago. This is also the biggest expansion for Construction Sector since the recorded 31.1% in 1st Quarter of 2013.

We also expect an uptick in government spending in 2015 due to the following:

1) Budget of DPWH has increased from USD4.94 billion in 2014 to USD6.75 billion in 2015. Likewise, budget of Department of Transportation and Communications (DOTC) has jumped from USD1.10 billion in 2014 to USD1.33 billion in 2015.

With these two government agencies having bigger budget in 2015, we can expect more infrastructure projects to be implemented in 2015.

2) By 2015, the government expects infrastructure investment to reach 4% of the GDP and by 2016 it will reach the standard infrastructure spending to GDP ratio of 5% at USD18.7 billion.

PICQS expands its role to promote economic growth by pursuing its advocacy on corporate social responsibility through non-government organizations to help victims of devastating calamities. The organization is also set to launch a cost journal for use by the private and government offices (e.g. Commission on Audit). Ultimately, the first quantity surveying school will open its doors in 2016 which will enhance the practice in the country. It is anticipated that the school will have a substantial impact in the presence of quantity surveyors in government projects.

Tohoku Reconstruction Problems

By Hiroyuki Hayakawa Kyowa CCC Of Building Surveyor's Institute Of Japan (BSIJ)

In March 2011, there was a major earthquake in the Tohoku region.
At the moment, the reconstruction is continuing.

However, there are many problems in the Tohoku reconstruction area.
I'll give some examples of the problems.

First, I would like to address the delay with city planning. Local government has high expectations.
For example, they want new buildings which can endure seismic intensity 7 and use ECO-friendly energy. But these are high expectations and too expensive.

Second, the reconstruction budget is not being used efficiently. There are still a lot of unspent tax funds, that are being misused.
Local government can't use it efficiently.

Finally, there is the nuclear power plant problem. The Fukushima nuclear power plant will be discarded.
But, it needs a lot of money and time. Furthermore, a lot of people who were evacuated can't return to their homes.

Today, I'll focus on the construction bidding problem.
There is a lot of construction bidding in the Tohoku reconstruction.
However, the bidding failure rate is higher than the rest of Japan.

In 2011, the bidding failure rate made up 6.5% on average nationally.
But, it made up 17.3% in Tohoku.

In 2013, it made up 15.8% nationally.
But, 30.3% in Tohoku.
The bidding failure delays construction start time, and adds many extra costs.

Why Bidding Failure Occurs

Well,there are two main causes.

First, there is not enough skilled labor.

In 2011, public work construction was reduced,and, almost all general contractors reduced their skilled labor force.

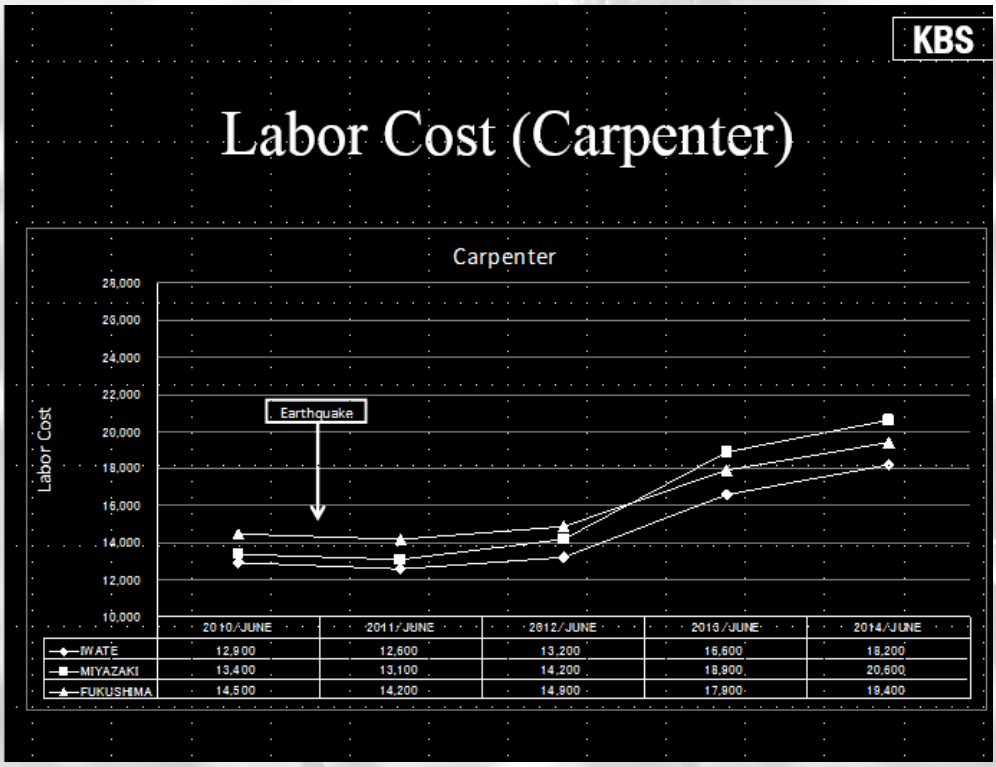
Then, they couldn't handle many reconstruction projects after the earthquake.

If they increase skilled labor, they wouldn't be able to invest in skilled labor after the reconstruction period.

They can't increase their skilled labor force easily.

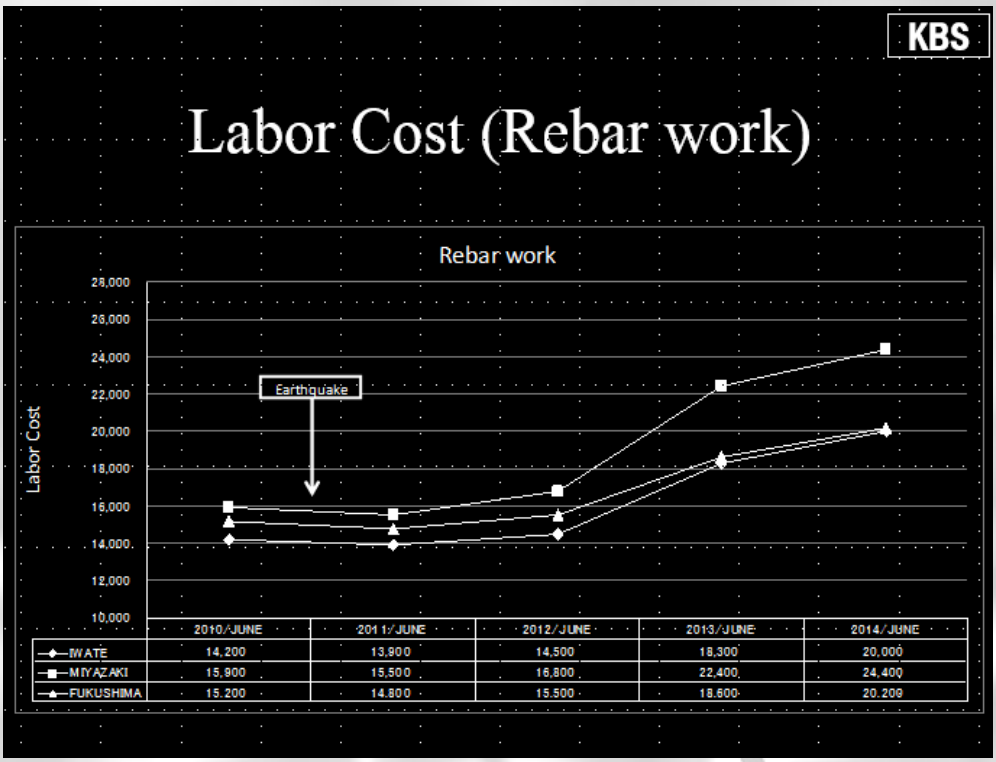
Second, there is not enough skilled labor, construction materials and equipment,

so these costs goes up sharply. Designer budgets are lower than contractor prices.



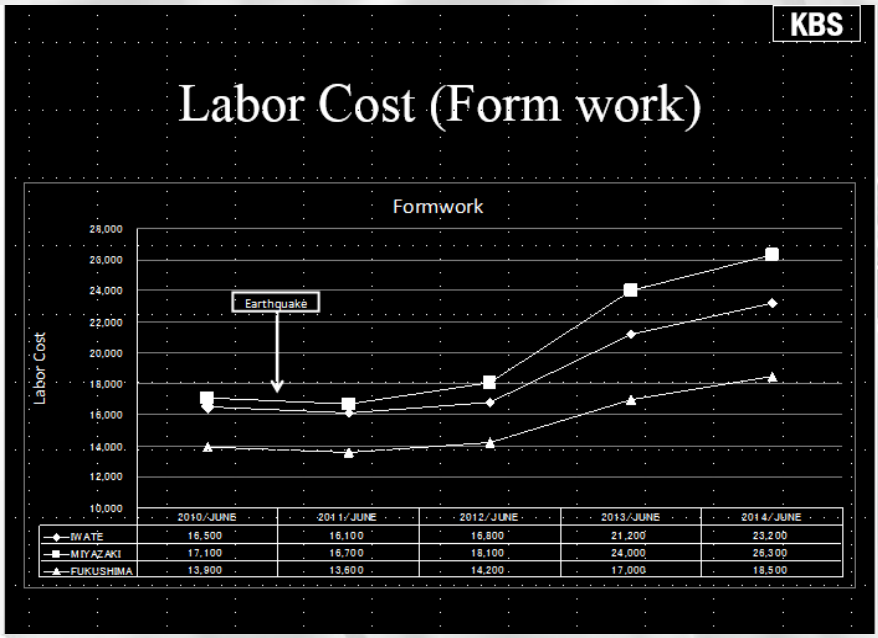
This graph shows carpenter costs.

After the earthquake, it has increased to about 19,000 yen from about 14,000 yen.



Next, here is costs of rebar work.

It has increased to about 21,000 yen from about 15,000 yen.



Then, here is costs of form work.
It has increased to about 23,000 yen from about 16,000 yen.

Japanese Government Addressing The Problems

First, Using Labor more efficiently.
For example, labor restrictions are relaxed. Foreman are usually allowed to supervise construction sites 5km［kirometers］apart.
Foreman are now allowed to supervise construction sites 10km apart.

Also, smaller projects are consolidated into a more appealing package for contractors.
It means that the general costs are shared between those formerly small projects.
The project can generate bigger profit.

Designer uses pre-made concrete structure parts to reduce the amount of skilled labor force necessary.
This trend is all across Japan as skilled labor is lacking across Japan.

Second, Making budgets based on adjusted pricing.
For example, the general cost rate is updated for the reconstruction efforts.
The general cost budget is set based on the construction costs.

The government increased the rate for general costs,
Because in Tohoku, working efficiency is low, skilled labor from remote areas needs things like accommodation, etc.
So contractors have a lot of extra costs.

And, Labor costs are updated at shorter intervals.
I already talk about labor costs.
Designers can make budgets based on newer figures.

The industry is dramatically shifting after the disaster.
I believe we need to adapt to these new problems.
I hope the lessons we learn here, will help prepare us for future disasters.

Chinese Real Estate Development Trend-Opportunity Under The New Normal

By Jessie Jing Of China Engineering Cost Association

The topic is “Chinese Real Estate development trend - opportunity under the new normal”, mainly divided in three parts, Real Estate Investment Situation in 2014; Policy Impacts on Real Estate and the trend of Construction development; New opportunity of Chinese Real Estate under the New Normal.

Chinese Real Estate Investment Situation from 2010 to 2014

Unit: 100 million RMB

	2010		2011		2012		2013		2014	
	AMT	YOY	AMT	YOY	AMT	YOY	AMT	YOY	AMT	YOY
Real Estate Investment	48267	33.2	61740	27.9	71804	16.2	86013	19.8	95036	10.5
Housing	34038	32.9	44308	30.2	49374	11.4	58951	19.4	64352	9.2
Office building	1807	31.2	2544	40.7	3367	31.6	4652	38.2	5641	21.3
Commercial	5599	33.9	7370	30.5	9312	25.4	11945	28.3	14346	20.1

Firstly, let’s take a look at the table. Up to the end of 2014, total investment of real estate is 9503.6 billion, higher than the past few years.

According to the table, the characteristics of Chinese Real Estate is “Total investment is high. But the growth rates of office building and commerce building are much higher than housing, more than twice”.

Up to the end of Dec, 2014, the area of commodity buildings for sale is 621.69 million m2, which is 128.74 million m2 higher than 2013, especially the housing. So marketing pressure is heavy, which makes many real estate companies implementing

transformation. Meanwhile, traditional real estate was impacted by electric commerce, the competition is fierce.

Third, it's a problem that we concerned about. The internet and big data are changing our life, and changed traditional real estate development and operation mode. We should think, use the Big Data, create Big Ideas, thus Big Impact can be produced.

The second part, I'd like to talk about the impacts of some new policies on Real Estate.

According to the government work report for 2015, we should pay attention to some key words to Real Estate, 'stability, supporting, promotion'.

The government hopes to stabilize housing consumption, promote old-aged consumption, and promote tourism and leisure consumption. Meanwhile, we mentioned that housing inventory pressure is heavy, so many companies transformed to Real Estate for sanatorium, tourism or commercial.

We can find some data and pictures. Up to Dec, 2014, there are more than 80 companies enter the Real Estate for the old, more than 30 of them are well-known companies. And these buildings involve ordinary grade, mid-grade and high-grade.

In recent years, Tourism Real Estate developed rapidly in China, such as Shanghai Disney Land, Ocean Polar World. Disney land is expected to start operation on 16th, June, 2016, and Ocean Polar World will be completed at the end of 2017. Then Welcome to Shanghai, China.

The third mode is commercial real estate. Due to the impact by electric commerce, entertainment experiencing consumption is the future mode for commercial real estate, including catering, entertainment, fitness, bank, children's consumption, pet, auto beauty, etc. These are the pictures of some new-opened shopping mall, they are large, fashion and fully-functional.

Besides, urbanization rate is expected to reach 60% in 2020. The government will promote public infrastructure, including water and gas supply in cities, sewage and garbage treatment, public rental housing, underground pipeline, rail transportation, medical care and pension, etc. So, use PPP model, cooperate with private companies, greatly promoted infrastructure construction. It's a good opportunity for real estate companies.

At last, I want to share with you about "New opportunity of Chinese Real Estate under the New Normal". And this is a question that we need to learn and put in attention.

Do you know what is "One Belt and One Road"? This is the strategic conception raised by Chairman Xi. "One Belt" means the Silk Road economic belt, we use red line here. It impacts on European economic circle, the Asia-Pacific economic circle, and is the longest economic circle of most development potential. "One Road" means maritime Silk Road in the 21 century, we use blue line here The influence extends to South Pacific. To be specific, it has great impact on transportation infrastructure, energy infrastructure, telecommunications infrastructure such as submarine optical cable.

At present, more than 60 countries and international organizations respond the call. And $40 billion Silk Road Fund has been prepared. We hope to get win-win result through peaceful cooperation.

The setup of Asian Infrastructure Investment Bank has great impact on the strategy

“One Belt and One Road”. The purpose of setting up UIIB is to provide capital for infrastructure construction in developing countries. The headquarters is in Peking, the capital is 100 billion dollars. There are 57 founding members, most of your countries are the members of UIIB.

We should understand that the AIIB won’t be the replacement of ADB, the World Bank, but the complement. Use a metaphor to explain is, “Use our money, build our vehicle, move on together”.

At last, we hope you to come to Shanghai, china again. Let’s contribute to the development of our industry together.

Construction Developments In Hong Kong For Year 2014-2015

By Rex Chung Sau Ying Of The Hong Kong Institute Of Surveyors (HKIS)

The construction industry in Hong Kong has picked up its growth in recent years. Construction activities are extremely busy which was driven by the infrastructure projects and both the public and private housing development. In spite of these, the non-stop rising construction cost has become the main challenge to the stakeholders as well as the delay problem. The increasing public concern on the milestone construction projects make the task even more difficult to deal with.

The Gross value of construction works performed by main contractors can be a measure of the busy construction activities in Hong Kong.

	(HK$ Million)	
Year	(At constant market prices)	(In nominal terms)
2009	93,683	100,944
2010	100,278	111,274
2011	108,263	128,535
2012	126,414	161,449
2013	129,868	176,575

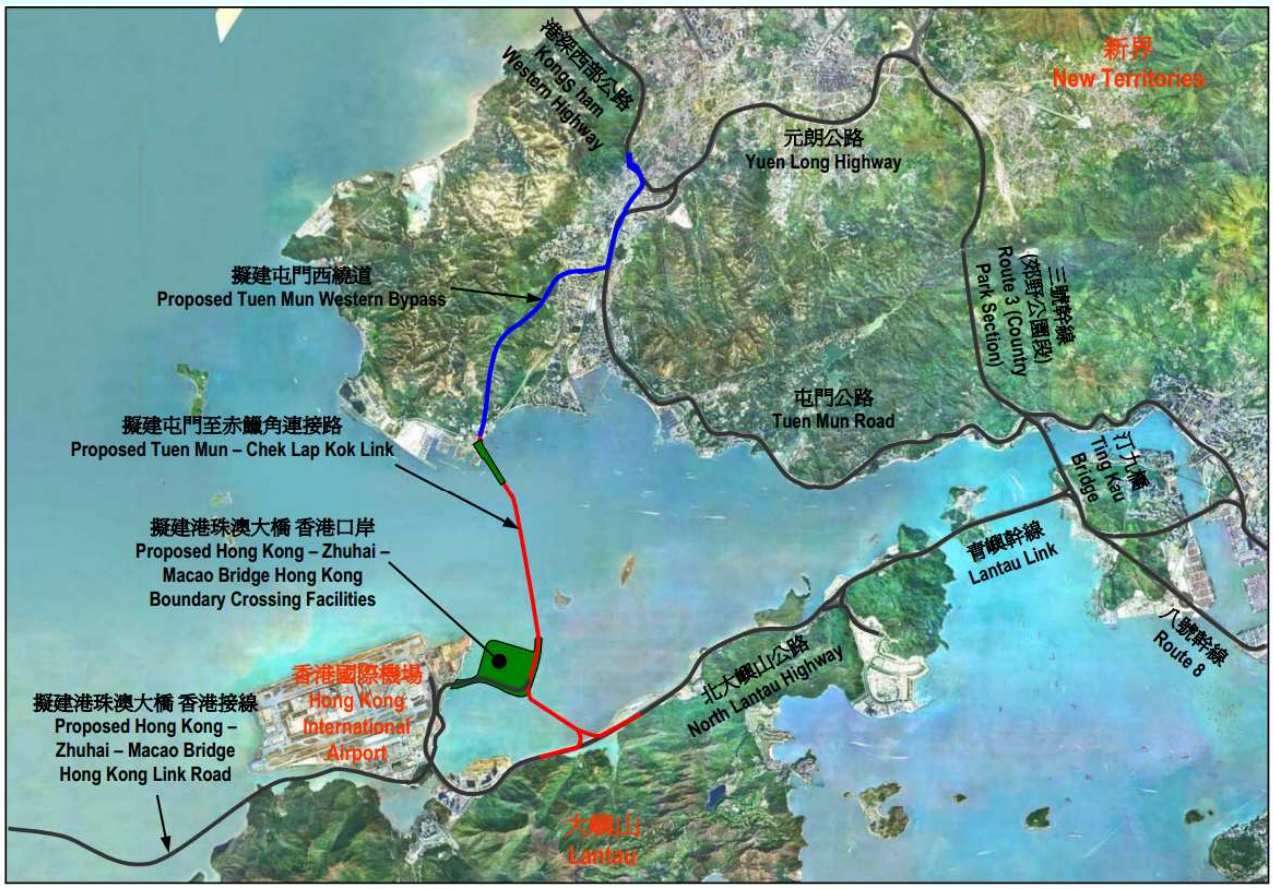
(Source of Data: Census and Statistics Department)

Infrastructure Projects

The busy infrastructure projects in Hong Kong are featured by the railway extension and the Hong Kong-Zhuhai-Macao Bridge and related projects. Hong Kong's railway network has been undergoing another extension in the past years. The West Island Line (started in 2009), Express Rail Link (started in 2010), South Island Line (started in 2011), Kwun Tong Line Extension (started in 2011), Shatin to Central Link (started in 2012) are simultaneously under construction. Their target completion dates are from 2014 to 2015 except Shatin to Central Link which is expect to be completed from 2018 to 2020.

The Hong Kong-Zhuhai-Macao Bridge and related projects which was been awaiting for a long time has commenced its works the year before and is targeted to be completed by 2016. These projects include the Hong Kong Boundary Crossing Facilities, the Hong Kong Link Road connecting the Main Bridge and the boundary facilities and the Tuen Mun – Chek Lap Kok Link and Tuen Mun Western Bypass which will provide a direct connection between the Northwest New Territories and Main Bridge as well as an alternative route to the Hong Kong Airport. These project costs more than 100

Billion Hong Kong Dollars and the crossing facilities are scheduled to be completed by end 2016 while the Tuen Mun – Chek Lap Kok Link is to be completed by 2018.



擬建「屯門至赤鱲角連接路」及「屯門西繞道」
Proposed "Tuen Mun – Chek Lap Kok Link" and "Tuen Mun Western Bypass"

http://www.hyd.gov.hk/en/road_and_railway/hzmb_projects/tmclkl_tmwb/TMCLKL_TMWB.pdf

Housing Development

In addition to the infrastructure projects, it is the policy of Hong Kong Government to maintain a higher housing supply in the upcoming future. The Hong Kong Government first indicated the supply shortage of both public and private housing in the past years and its decision to take strong measures to increase housing land supply in the 2013 Policy Address. In the 2014 Policy Address "The Government accepts the recommendation of the Long Term Housing Strategy Steering Committee to increase housing supply. The new target is to provide a total of 470 000 units in the coming ten years, with public housing accounting for 60%." This is a sharp increase when compared with the average produced about 24 800 flats each year in the past.

	Production / Anticipated Production Flat No.	
Year	Public	Private
2010	13,672	13,410
2011	11,186	9,450
2012	13,114	10,150
2013	14,057	8,250
2014	9,900	17,610
2015	23,300	12,660

(Source of data: Housing Department, Rating and Valuation Department)

Construction Cost Issues

The construction cost of Hong Kong has been escalating in recent years. This is evidenced by the Government construction cost index including the Building Works Tender Price Index compiled by the Architectural Services Department and the Highway Department Construction Cost Index and the Civil Engineering Works Index prepared by the Civil Engineering and Development Department which are indicating the level of construction prices for different types of construction works undertaken by the Departments. We can see that all these indices are similtaneously rising in the past five years. The building TPI in 2013 is even 40% higher that that in 2009.

Year*	Building Works Tender Price Index	Highway Department Construction Cost Index	Civil Engineering Works Index
2009	1107	894	464
2010	1266	957	492
2011	1408	1,047	538

2012	1496	1,088	565
2013	1590	1,145	600

(Source of Data: ASD, HyD and CEDD)
(* As at end of the years)

The reason for increasing construction cost is complex. It could involve the rise in consumer price index, increase in material cost, etc. However, it is generally believed that the shortage of labour is one of the main causes. Hong Kong has been facing a shortage of skill labour and construction related professionals in recent years while the projects in Macau and Mainland are drawing manpowers away. According to an analyst, the Hong Kong Construction Industry needs 10 thousands more skilled workers more. (http://www.scmp.com/property/hong-kong-china/article/1451437/skilled-workers-short-supply-construction-industry)
We can have a look at the wages of concretors, carpenters and steel benders which are core trades of works in constrution as an example for the rise in labour cost. According to the data of Hong Kong Construction Association, the wages of these three trades of workers has increased by 57% (concretors), 35%(carpenter) and 25% from year 2012 to 2014 while they believed that labour cost shall be contributing 34% of the total construction cost.

Given the busy construction activities in the future years and the shortage of human resources, contractors are therefore becoming more cautious when bidding a new project, increasing allowances for potential cost rises and have them reflected in their tender prices. It is stated in Langdon & Seah's Construction Cost Handbook China and Hong Kong 2014 that "Overall, construction costs will see a rise of between 9 and 10% in 2013. we anticipate construction tender prices will rise at around 7 to 10% p.a. during 2014 and 2015."

Year	Consumer Price Index
2009	98.4
2010	100.7
2011	106.0
2012	110.3
2013	115.1

(Source of Data: Census and Statistics Department)

Public Concern Towards The Construction Industry

An interesting phenonmenon is the increasing public concern toward construction activities, especially major construction projects in Hong Kong regarding to the cost of construction and the extensive delay of the projects.

It is undoubtly people in Hong Kong care more about major construction developments and keep their eye on their cost and progress. For example, the funding to the expansion of the Radio

Television Hong Kong (RTHK) was rejected early 2014. It is the Government' s plan to build a new headquarter for RTHK to expand its services as part of its promised mission to fulfil the role of a public service broadcaster. The new building will allow RTHK to provide 24-hour television news and at the same time enhancing digital audio broadcasting and digital terrestrial television. The case was that the new headquarter shall originally cost $1.5 billion which, however, increased to $6.1 billions this year. Hong Kong peope were astonished by the immense increase in construction cost and the result was that most of the lawmakers at a meeting of the Legislative Council's public works subcommittee opposed the budget request, which was nearly four times the previous estimate of that in 2009.
Another example is the West Kowloon Cultural District development. The construction cost have kept climbing since the approval of HK$21.6 billion budget in 2008. The up to date estimated cost now went up to HK47 billion this year which means HK$25.4 billion more than the orginal proposal. The government is blamed for failling to manage the West Kowloon project, "allowing it to be a bottomless black hole and ignoring the fact that the money spent on it belongs to Hong Kong people." The government has to apply for additional funding to complete the project and was heavily critised by the Lawmakers.

In addition to overbudget, another typical problem of major construction activities is the lengthy delay occured. Taking the Hong Kong to Guangzhou Express Rail Link as an example. The project started in 2010 and the original completion date is 2015. Due to the damage to a tunnel boring machine suffered during a heavy rain in June 2014 and problems with the construction of the West Kowloon terminus at the Hong Kong end of the 26-kilometre underground link, it is estimated that the revised completion date is 2017, a delay of 2 year is espected while the railway corporation refused to disclose details of the delay and the extra costs required.

All in all, people are now more concerned about the reason behind and whether these propoblems are reasonable and shall be paid by the Hong Kong People after the frequent overun in construction cost and delay. This in turn become an opportunity to Quantity Surveyors in Hong Kong who are experts in cost and contract and can clearly clarify the parties' liabilities in these cases and advise their entitlement to additional contract sum and / or time for construction.

Actually, Quantity Surveying Division of the Hong Kong Instititute of Surveyors expressed its concern on the frequent overbudget in infrastructure. It has carried out a research to study the role of Quantity Surveyors in infrastructure projects and it was found that the role of Quantity Surveyors are usually limited, although it is a common practice for the employer in other projects to look for a Quantity Surveyor' s advice independently prior to committing a substantial sum of capital expenditure. In the press release of the Hong Kong Institute of Surveyors dated 16 May 2014, it is mentioned that "The Quantity Surveying Division has always stressed to the government that the function and duties of cost consultant should be separated from those of lead consultant. The benefit of an independent cost consultant is that the former can perform the function of "check and balance" during the decision-making process."
Sources of Data

Highway Department – The Government of Hong Kong Special Administrative Region
Road and Railway - http://www.hyd.gov.hk/en/road_and_railway/index.html

ANNUAL REPORT 2013 MTR CORPORATION LIMITED- Executive Management's Report "Hong Kong Network Expansion"
http://www.mtr.com.hk/en/corporate/investor/2013frpt.html

2013 Policy Address– The Government of Hong Kong Special Administrative Region

http://www.policyaddress.gov.hk/2013/index.html

Rating and Valuation Department– The Government of Hong Kong Special Administrative Region
http://www.rvd.gov.hk/doc/tc/hkpr14/03A-1.pdf

Housing Authority– The Government of Hong Kong Special Administrative Region
http://www.housingauthority.gov.hk/en/about-us/publications-and-statistics/forecast-public-housing-production/

Civil Engineering and Development Department – The Government of Hong Kong Special Administrative Region

http://www.cedd.gov.hk/eng/publications/construction/

Architectural Services Department– The Government of Hong Kong Special Administrative Region
https://www.archsd.gov.hk/en/reports/building-works-tender-price-index.aspx

Census and Statistics Department– The Government of Hong Kong Special Administrative Region
http://www.censtatd.gov.hk/hkstat/sub/sp270.jsp?tableID=052&ID=0&productType=8

The Hong Kong Construction Association
http://www.hkca.com.hk/front/20140901cost_escalation.pdf

Langdon and Seah
http://www.langdonseah.com/en/ph/publications/filter/all/ph

The Hong Kong Institute of Surveyors
http://www.hkis.org.hk/ufiles/qsd-report2013081.pdf
http://www.hkis.org.hk/ufiles/pr-20140516.pdf

Construction Developments In Malaysia For Year 2014-2015

By Sr Yeap Soon Kiat & Sr Mohamad Shazali bin Sulaiman of The Royal Institution of Surveyors Malaysia (RISM)

The Malaysia's economy is expected to grow between 5% – 6% in 2015 according to the Economic Report issued by the Ministry of Finance, Malaysia. The growth is expected to be driven by private sectors.

The continuous economic growth in Malaysia has spurred a number of major projects around the country. In the central region, Prasarana through MRT Corp is pushing ahead with the MRT Sungai Buloh-Kajang Line which is due for completion in Q3 2016. The government of Malaysia through the Ministry of Works also saw the completion of Kompleks Kerja Raya (KKR2) Tower at Kuala Lumpur. Another ambitious transportation hub project completed by Malaysia Resources Corporation Bhd (MRCB) is the NU Sentral@KL Sentral, Kuala Lumpur.

Whereas in the southern region of Johor Bharu withness the completion of a new theme park hotel i.e. Legoland Hotel. At the northern beautiful tourism island of Langkawi also has a fresh new look to the Langkawi Sky Bridge.

Legoland Hotel, Johor Bharu

The first Lego themed hotel to open in Southeast Asia and opened its doors to customers in 2014. The Legoland Hotel Malaysia is located at the Lego theme park at Iskandar Development Region (IDR), Johor.

The Legoland Hotel costs RM190 million and is built under a management agreement between the Lego company and LL Themed Hotel Sdn Bhd, which is a joint-venture company owned by Destination Resorts and Hotels Sdn Bhd and Iskandar Harta Holdings Sdn Bhd.

Kompleks Kerja Raya (KKR2) Tower

Kompleks Kerja Raya (KKR2) Tower is the new administrative offices for Jabatan Kerja Raya (JKR) replacing of the existing old buildings at Jalan Salahuddin.

The KKR2 building has 37 office levels and stands at 175m high plus basement parking. It has an independent roof canopy structure above and a linked separate 9 levels podium car parking structure with roof top open air dining and restaurants above.

The KKR2 is designed to be environmentally friendly and was successfully accredited with platinum rating for Green Building Index (GBI) Malaysia. It houses a gross floor area of 51,516 m2 with a nett useable office area of 18,100 m2. The basement carparks has 892 carpark lots.

NU Sentral, KL Sentral, Kuala Lumpur

NU Sentral is a new integrated transportation hub in the city of Kuala Lumpur. It offers connectivity for the KL Monorail Sentral station and the new MRT Kota Damansara-Cheras Line. The land was previously used as a parking lot and a pedestrian short-cut KL Sentral Monorail station at Brickfields and KL Sentral.

The NU Sentral is located next to the existing KL Sentral transportation terminal consist of 110,000 m2 of shopping complex and entertainment mall which houses the Golden Screen Cinemas, Parkson supermarket, Celebrity Fitness, food places, boutique and many more, 56,000 m2 of modern office block, 46,000 m2 of serviced apartments and a 50,700 m2 three-star hotel. Construction works commenced in 2008 and was completed in 2014.

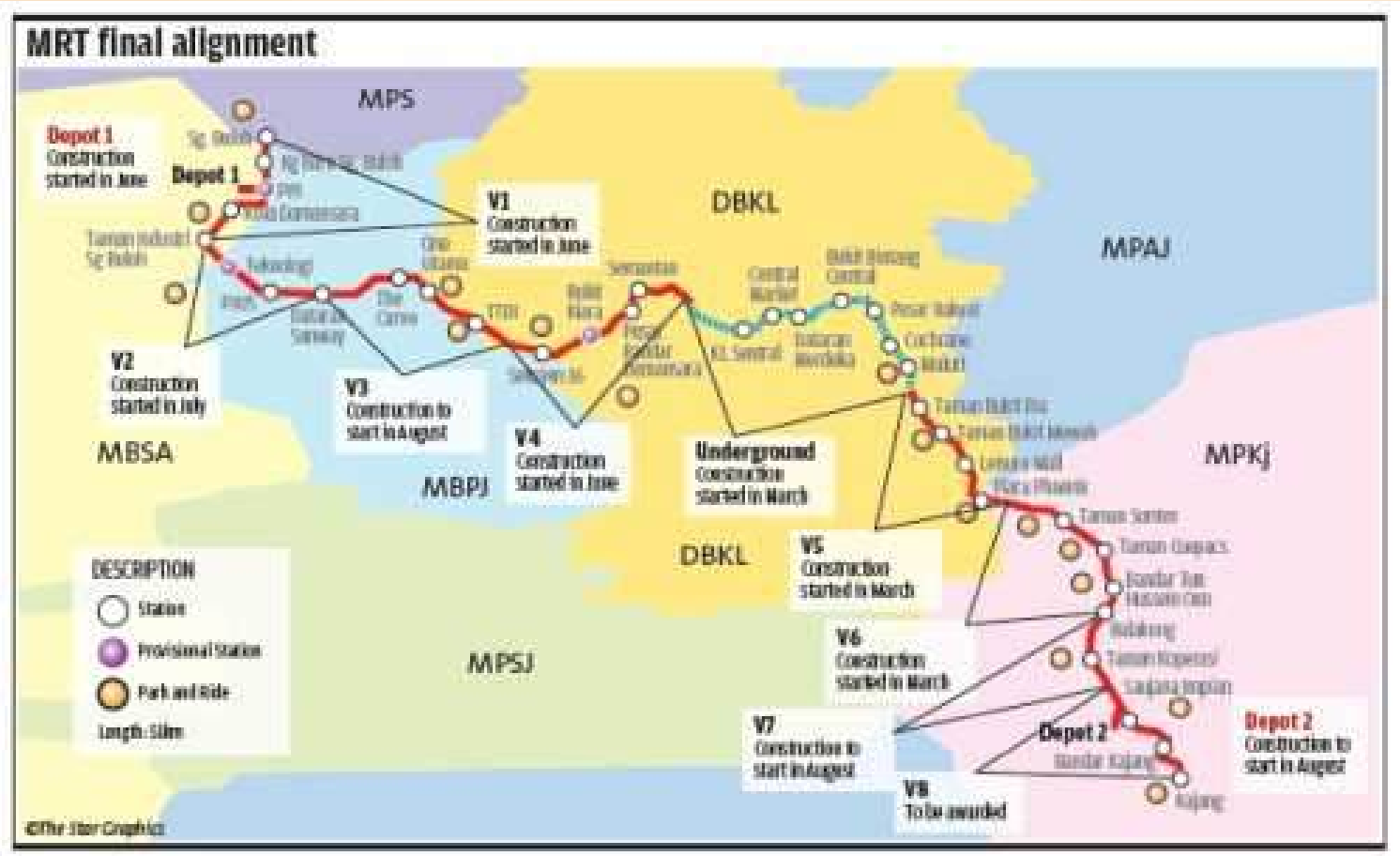
Langkawi Sky Bridge

Langkawi Sky Bridge is located 660 m (2,170 ft) above sea level at the peak of Gunung Mat Chinchang on Pulau Langkawi or Langkawi Island in Kedah. The scenic Sky Bridge was conceptualize to be a tourist attraction for the panaromic and breath taking views of the beautiful islands and coral reefs.

It has a 125 m (410 ft) curved pedestrian cable-stayed bridge in Malaysia. The bridge deck is 1.8 m wide with a wider middle section walkway. On both sides of the bridge deck are two steel railings with steel wire mesh.

Langkawi Sky Bridge was constructed using manual labour and helicopter airlifts for all steel sections, because the Island Tourism Development Agency wanted to preserve the natural flora and fauna ecosystem of Gunung Mat Chinchang. It was originally completed in 2005 and was renovated in April 2015.

MRT Sungai Buloh-Kajang Line



The MRT Sungai Buloh-Kajang Line is the first MRT Line covers a span of 51 kilometres from outskirt Sungai Buloh town to Kajang town, passing the Kuala Lumpur city centre in an underground setting. It is part of the Selangor and Kuala Lumpur rail transit infrastructure plan and it is carried out by Prasarana and under the special purpose vehicle of MRT Corporation.

After completion in 2017, the MRT line will be able to serve around 1.2 million Klang Valley's urban population residing in between the region from Selayang to Kajang. It is expected to serve around 400,000 commuters per day using the latest 4 coaches trains with the passenger capacity of 1,200 pax.

There will be 31 stations along the MRT Sungai Buloh-Kajang Line. Among them 7 stations are underground MRT stations, which are strategically located in Kuala Lumpur city centre and covering a distance of 9.5 kilometres under public roads and buildings.

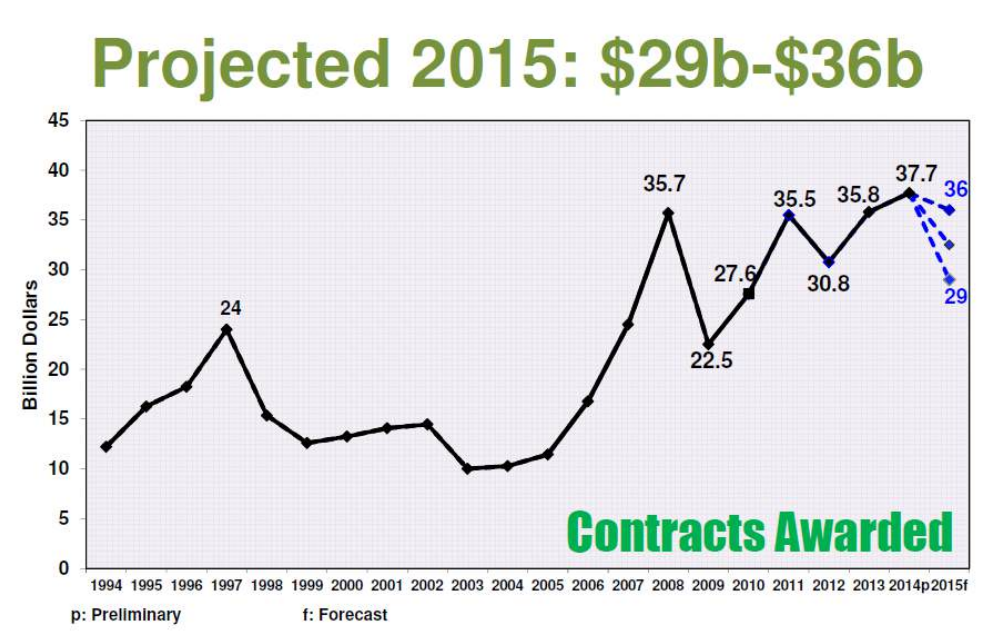
Construction Outlook in Singapore for Year 2015

By Michael Wong Yi Min Of Singapore Institute of Surveyors and Valuers (SISV)

1. Singapore Construction Outlook

Singapore's economy performed moderately well in 2014 to grow 2.8% with the total construction contracts awarded at SGD 37.7billion with both private and public sectors contributing equal shares. Some of the major projects awarded in 2014 were Changi Airport Terminal 4, Jewel Changi and Sengkang Hospital.

In 2015, the economic growth is forecast to be at 2.8%, down from 3.1% initial forecast, with 0.1% inflation. The demand in construction sector is expected to hold up in 2015 despite the slowing down of private sector developments as Singapore government commits more funds for public sector developments. It is projected that the total construction contracts award sum is in the range of SGD 29billion – SGD36 billion.



In the next 5 years up to 2019, Singapore government have committed SGD 26billion for public sector transport system. Public projects in the pipeline are Thomson East Coast MRT

Line, Changi Airport Terminal 5, Tuas Seaport, Expansion of existing expressways, Defu Industrial City.

On average, the annual demand is forecast at SGD 26billion to SGD 37billion for 2016 – 2019.

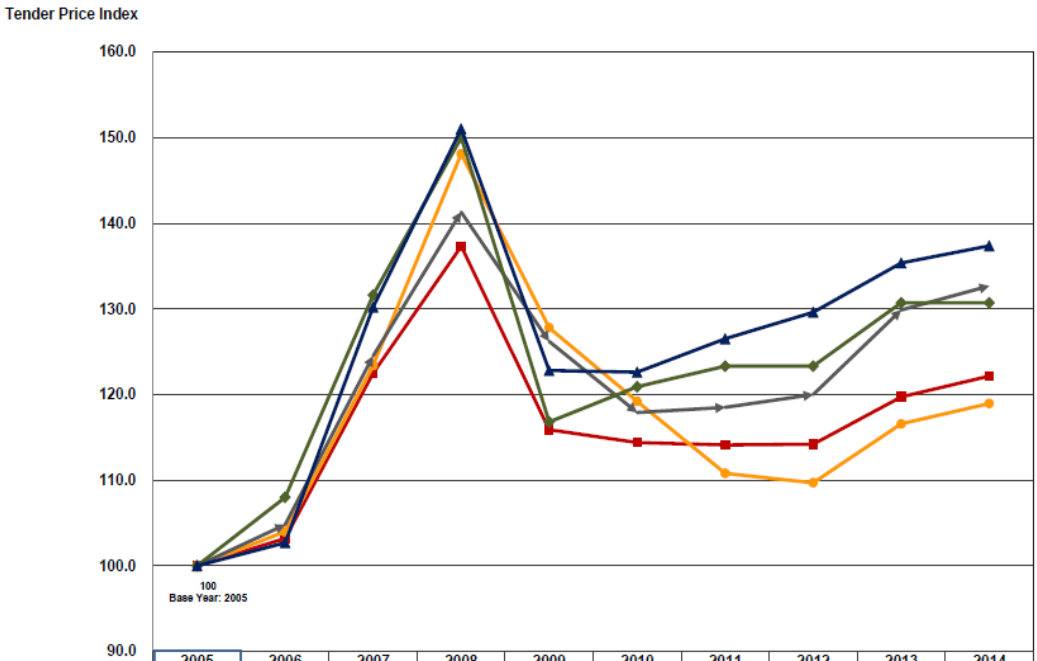
In terms of construction cost trend, it is expected that we could see more competitive prices due to the softening of construction materials prices.

CIRCULAR ON SINGAPORE CONSTRUCTION TENDER PRICE INDEX

This circular is issued by the Singapore Institute of Surveyors and Valuers (SISV) to members of the Construction Industry Joint Committee as a service to disseminate general tender price trend.

Singapore Institute of Surveyors and Valuers

Construction Tender Price Index Compilation



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BCA All Buildings	100.0	103.2	122.5	137.3	115.9	114.4	114.1	114.2	119.7	122.2
HDB	100.0	104.0	123.4	148.1	127.8	119.2	110.8	109.7	116.6	119.0
DLKPK	100.0	104.8	124.5	141.3	126.2	117.9	118.5	120.0	129.9	132.7
L&S	100.0	108.0	131.6	150.0	116.8	120.9	123.3	123.3	130.7	130.7
RLB	100.0	102.7	130.2	151.0	122.8	122.6	126.5	129.6	135.4	137.4

2. Challenges Faced

Currently, the construction cost escalation is 2-4% per annum which is higher than general rate of inflation. This is due to factors such as shortage of skilled workers, ageing workforce, lack of new workforce coming into industry, improving economy in the region which caused the expatriate professionals to return to their home countries.

Some other challenges include the tightening of Man-Year Entitlement (MYE) which is a work permit allocation system to regulate foreign workers demand and also increase in workers' levy rates. Progressively, from year 2010 – 2013, there had been a cut of 45% in MYE allocation. Companies who did not catch up in terms of productivity would face uphill challenge in view of the MYE reduction and increase in workers' levy.

Construction Sector		1 Jul 2013 $/Mth	1 Jul 2014 $/Mth	1 Jul 2015 $/Mth	1 Jul 2016 $/Mth	1 Jul 2017 $/Mth
Basic Tier	Higher Skilled	300	300	300	300	300
	Basic Skilled	450	550	550	650	700
MYE Waiver	Higher Skilled	600	700	600	600	600
	Basic Skilled	750	950	950	950	950

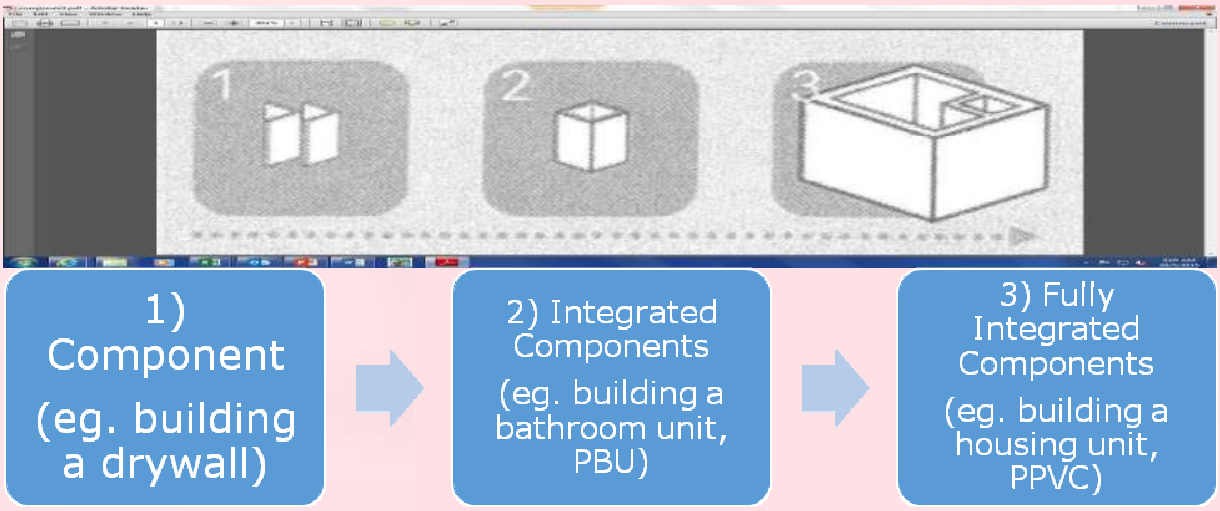
Looking at it, there is a need to increase attractiveness of the construction industry to the young local workers and also to improve construction productivity which Singapore government is aiming to do by introducing Construction Productivity and Capability Fund (CPCF) for the industry players tap on.

3. 2nd Construction Productivity Roadmap

In March 2015, Singapore government through its Building and Construction Authority launched the 2nd Construction Productivity Roadmap which aims to assist firms to improve their productivity through Workforce Development, Technology Adoption and Capability Building.

It comprises mainly of the following 4 key strategies:

1. Wider adoption of game-changing technology (continuum of prefabrication)
   It aims to push the industry to make as many building parts as possible in factories and assemble them on Site – Design for Manufacturing and Assembly (DfMA), such as Prefabricated Bathroom Unit (PBU), Prefabricated Pre-finished Volumetric Construction (PPVC) and Cross Laminated Timber (CLT).

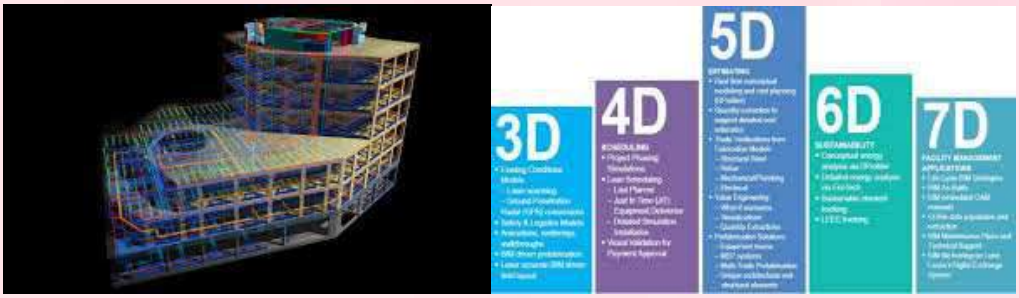


2. Raising the Quality of Construction Workforce
   This strategy is mainly divided into 2 sub-strategies:
   a. Training and Upgrading
      New courses to upgrade the workforce to keep pace with technological advancements shall be made available. There will also be more productivity related courses, including for senior management as well.

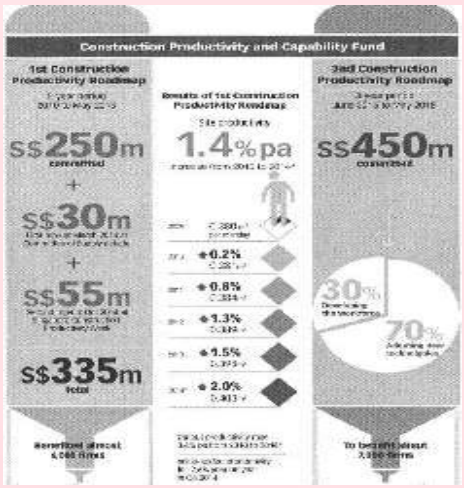
   b. Scholarships and Sponsorships
      Two new part-time programmes for the diploma and postgraduates levels will be introduced and fresh graduates for Institute of Technical Education will be able to embark on an Earn and Learn programme for the Built Environment Sector.

3. Promoting Greater Integration across Construction Value Chain
   BIM Technology was identified as a key enabler to help to improve integration across the construction value chain, including optimizing off-site manufacturing.

   By involving suppliers and manufacturers in the BIM coordination process, it can reduce waste and improve logistics and value for all stakeholders.



4. Enhancing the Construction Productivity and Capability Fund (CPCF)
Singapore government is pumping in a fresh funding of SGD 450million where 70% of the funding will help firms with technology adoption and the remaining 30% towards workforce development. It is expected to benefit about 7,000 companies.



4. Rebranding of the Built Environment Industry

Singapore government recognizes the key challenges faced by construction industry. The challenges are listed as follows:

a. High proportion of resident Built Environment workforce over 40 years old especially in construction firms
b. High reliance on foreigners
c. Manpower intensive nature
d. Less attractive career prospects and salary
e. Low awareness in students, even those in Built Environment courses
f. Low proportion of females in resident Built Environment workforce
g. High proportion of employees in construction firms working longer hours

h. Significant leakage of graduates into other sectors

In order to make the construction industry more attractive, a 5-year Rebranding Roadmap was launched in 2015 which focuses on 3 thrusts:

1. **Transforming the Built Environment Sector**
   This focuses mainly on improving the work environment by promoting adoption of advanced and productive technology and worksite safety.

   It also aims to improve HR practices and build meaningful careers by promoting adoption of good HR practices and pushing for environmental and social sustainability.

2. **Enhancing Awareness and Attraction**
   This involves reaching out to the community either by having rebranding campaign or to have targeted campaign on females, teachers and students by ways of attachment programme and structured internship and competition.

3. **Engaging and Retaining Talents**
   In order to retain the best talents in the construction industry, there are initiatives such as signing of HR pledge by major industry players and Green and Gracious Builder Scheme (GGBS). There is also Young Leaders Programme (YLP) to retain and nurture talents by providing greater recognition and engagements.

Development Report May 2015

Overview of the Australian Construction Industry

- Last couple of years the Construction market has been predominantly Engineering Construction and Mining focus
- In the last 12 months, there has been a decline in Mining activities which is now having an impact in both Queensland & Western Australia
- Engineering construction however remains strong; partly encouraged by political promises for improved infrastructure across the country, eg. Multi billion East-West Link in Melbourne, Victoria & better railway connection between States
- Commercial and Residential sectors remains strong; influx of foreign investors from Asia, developing Commercial Office Towers and large scale Residential development. Eg. Far East Group (Singapore) in Western Australia and Setia Group (Malaysia) in Melbourne
- Tendering market remains aggressive and competitive
- The market has also seen the collapsed of several Tier 2 & 3 builders
- Highlights the importance of the role of a Quantity Surveyor in this climate; cautious of not over-certifying claims, requirement for a Statutory Declaration with claims etc.

Market Analysis

	What do you believe the average % change in building prices have been over the last twelve (12) months? (please specify + / - change on a per annum basis)		What do you expect the average movement in building prices in the next twelve (12) months? (please specify + / - change on a per annum basis)	
	CBD Projects % p.a.	Non-CBD Projects %p.a.	CBD Projects % p.a.	Non-CBD Projects % p.a.
ACT	2.4	1.4	1.4	1.4
NSW	4.2	3.1	4.9	3.5
NT	3.0	0.5	3.8	3.8
QLD	2.9	2.7	3.2	2.8
SA	1.2	0.6	1.7	1.7
TAS	2.3	1.8	3.5	2.0
VIC	3.7	3.2	3.7	2.9
WA	2.4	-0.7	2.1	0.6

New Apartments in Australia

Numbers represent developments currently for sale

High Rise Developments Melbourne

Joseph Road Precinct
Tannery and Hopkins St
Melboune

High Rise Developments Sydney

Barangaroo Development, Sydney

Green Square Town Centre, Sydney

Goldfields House Refurbishment, Sydney

High Rise Developments Sydney

Coca Cola Amatil Building, Sydney

Hudson House, Sydney

York & George, Sydney

High Rise Developments Sydney

333 Kent St, Sydney

Clarence St, Sydney

The Castlereagh, Sydney

High Rise Developments Sydney

Greenland Centre, Sydney

130 Elizabeth St, Sydney

Ausgrid Building, Sydney

High Rise Developments Brisbane

The Melbourne Residences, South Brisbane

High Rise Developments Brisbane

Newstead Towers, Newstead

Alex Perry Residential, Fortitude Valley

High Rise Developments Brisbane

Central Village, Fortitude Valley

Brisbane Airport Hotel Development




APLNG Water Treatment Facilities:
Condabri and Reedy Creek

Civil Infrastructure Developments

QCLNG Export Pipeline

www.aiqs.com.au | +61 2 9262 1822 | Level 3, 70 Pitt Street, Sydney NSW 2000 | contact@aiqs.com.au

Construction Trends After Tsunami, Earthquake and Flooding in Indonesia

Construction in Post Natural Disaster in Indonesia

- Reconstruction
- Prevention

RECONSTRUCTION

Reconstruction in Aceh

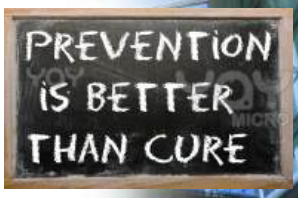
Data collected 10 years after Tsunami[3];

- More than 140,000 new homes
- 4,000 km of roads
- 2,000 schools
- 1,000 health facilities
- 23 seaports
- 13 airports and landing strips

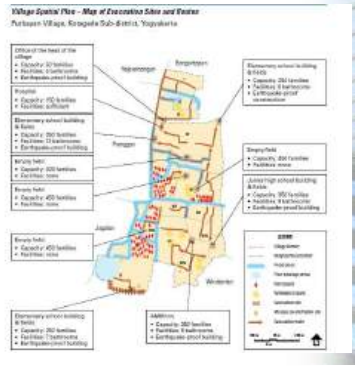
Reconstruction in Jogja

- Rebuild The Folk Heritage-Javanese houses "Joglo" [4]
- Reconstruction of Kotagede's landmark—an old Dutch electric power distribution—called *Babon Anim.* [4]
- Repair to the damaged temple (candi). The *candi* Prambanan, *candi* Plaosan, *candi* Sewu, *candi* Sojiwan were on the list of damage temples by the earthquake [4].

PREVENTION



Village Spatial Plan



Construction Design to Resist Earthquake

1. Barrataga Design[7)]

Rancangan Barrataga yang diaplikasikan di Yogyakarta.

2. Rubber Pad Foundation[8)]

National Capital Integrated Coastal Development (NCICD) or Garuda Wall [9)]

Purpose;

- Prevent Jakarta from Flooding.
- Collect water from 13 rivers in Jakarta.
- Connecting West Java and Central Java.
- Commencement early 2015.
- Completion on 2030

Click Me!

References

1) Dickson (2014), *Pembagian Wilayah Provinsi di Indonesia.* Ilmu Pengetahuan Umum. Viewed 17 May 2015 from http://ilmupengetahuanumum.com/pembagian-wilayah-provinsi-di-indonesia/
2) Zulfi, M (2009), *Pengenalan dan Peran Quantity Surveyor Pada Proyek Konstruksi.* Ikatan Quantity Surveyor Indonesia (IQSI). Viewed 4th March 2012 from http://www.iqsi.org/index.php
3) Fan, L (2014), *Aceh's Unfinished Recovery.* Relief Web. Viewed 17 May 2014 from http://reliefweb.int/report/indonesia/acehs-unfinished-recovery
4) Ikaputra (2011), Reconstructing Heritage Post Earthquake - The case of Kotagede, Yogyakarta Indonesia. *Journal of Basic and Applied Scientific Research.* p 2364-2371.
5) Huoy, T. C. Keong, S. C, Shafei, N. L. Mat, Nasir, W. M. Z. Mohd. (2011). Conservation & Preservation at Candi Prambanan: QS Point of View. *RISCM 3rd International Conference for Undergraduates.* P 1 – 9.
6) Java Reconstruction Fund Final Report 2012.
7) Susanto, A (2014), *Bilamana Konstruksi Rumah Jepang (Tahan Gempa) Diterapkan di Indonesia.* Pusat Pendidikan dan Pelatihan Geologi. Viewed on 18 May 2015 from http://www.pusdiklat-geologi.esdm.go.id/index.php/artikel/publikasi-ilmiah/72-bilamana-konstruksi-rumah-jepang-tahan-gempa-diterapkan-di-indonesia

References

8) Kelly, J. M. (2013), *A Tested, Inexpensive Way to Protect Buildings from Earthquakes.* Novanext. Viewed on 18 May 2015 from http://www.pbs.org/wgbh/nova/next/tech/rubber-bearings-seismic-protection/
9) http://en.ncicd.com/tag/giant-sea-wall/

RLB | Rider Levett Bucknall

CONSTRUCTION TRENDS IN NEW ZEALAND AND POST DISASTER RECONSTRUCTION

YOUNG QS PROGRAMME
YOKOHAMA, JAPAN
28 MAY 2015

RLB | Rider Levett Bucknall

Introduction

- Economy
- Construction trends
- Resource shortage

Property and Construction | Cost Consultancy | Advisory Services

RLB | Rider Levett Bucknall

Property and Construction | Cost Consultancy | Advisory Services

RLB | Rider Levett Bucknall

Source: Pacifecon / BRANZ

Property and Construction | Cost Consultancy | Advisory Services

RLB | Rider Levett Bucknall

Auckland

Property and Construction | Cost Consultancy | Advisory Services

RLB | Rider Levett Bucknall

NZ International Convention Centre

Property and Construction | Cost Consultancy | Advisory Services

RLB | Rider Levett Bucknall

City Rail Link

RLB | Rider Levett Bucknall

Downtown redevelopment

RLB | Rider Levett Bucknall

Christchurch

RLB | Rider Levett Bucknall

RLB | Rider Levett Bucknall

RLB | Rider Levett Bucknall

Cardboard Cathedral

Resource shortage mitigation

- Documentation
- Overseas companies
- Scheduling projects

Table 1: Outcome of projects $100m and over anticipated to start between July 2013 and June 2014[17]

Outcome	Number of projects
Started as anticipated in 2013 report	17 (77% by value)
Now anticipated to start within the year to 31 March 2015	5
Start date now anticipated beyond 1 April 2015	7
Cancelled since 2013 report published (November 2013)	1
Total	**30**
Projects initiated after 2013 report	3

Source: National Construction Pipeline Report Oct 14

POST DISASTER RECONSTRUCTION SRI LANKAN EXPERIENCE

INSTITUTE OF QUNTITY SURVEYORS SRI LANKA

Challenges We Faced…

- Sri Lanka has faced two major disasters during the recent history
  - Ethnic conflicts -1983-2009
  - Tsunami - 2004

Ethnic Conflicts – 1983-2009

- Sri Lanka has suffered three decades of civil war
- An estimated 80,000–100,000 people killed during that period
- More than 100,000 internally displaced
- The total economic cost of the 30 years war is estimated at US$200 billion
- This is approximately 5 times the GDP of Sri Lanka in 2009
- 1/3 of the Country directly suffered the impact during this period

Tsunami - 2004

- The Tsunami disaster in Sri Lanka has taken over 30,000 lives
- Over another 1,000,000 people are displaced
- Approximately 90,000 buildings were destroyed
- The Asian Development Bank estimated the reconstruction cost at $1.5bn

Recovery after disasters

- During the period of 2004-2008, Sri Lanka has spent over US$ 1.5 bn for the reconstruction of the Tsunami affected areas
- Relocated the displaced people in new locations
- Developed the infrastructure in coastal regions of the country
- Developed the industries in the affected regions in the country

Recovery after disasters…. Contd..

- In 2009 after the end of ethnic conflicts Sri Lankan government implemented the development of the northern and eastern areas
- Rehabilitation of economy in the affected areas were major concern
- Resettlement of Internally Displaced People (IDP) was the main task
- Relieved areas were cleared from land mines for resettlement

Challenges….

- In sufficient regulatory arrangements
- Less experience in disaster management
- Restricted government policies
- Lack of government funds
- Traditional procurement systems that were insufficient to mitigate the process
- Lack of expertise and experience in construction industry
- Insufficient infrastructure facilities to cater the progressive demand of construction

Development Strategies

- In 2004 as well as 2009 government mainly focused on emergency development strategy to over come the impact of disasters
- Main target was to resettle the community in safe and suitable locations
- Infrastructure development was expedite to support the resettlement process
- Government policies were changed according to the requirements
- Changes to the existing regulations and introduction of new regulations were done to support the process

Development Strategies….

- New technology was introduced to the industry to immerge from the traditional practices
- Procuring system of the country was re arrange to managed the new situation
- Small scale Contractors were encouraged to enter in to the industry
- Foreign organizations were invited to support the development process
- Emergency development acts were introduced to avoid any disturbances to the process

Drawbacks…

- Increase of wastage in money and resources
- Misuse of facilities
- Corruption
- Uncontrolled expenditure
- Decrease in quality aspects of the projects

SRI LANKAN CONSTRUCTION INDUSTRY – NEW DEVELOPMENTS

STATISTICS ……

- The **highest contribution** to this value has been made by the **building construction sector** which accounted for 48.0 % of the total value of work done.
- The **major share** of the value of work done of building construction sector (which amounted Rs. 37,623 million) has come from the **private and public** sector.
- The type of **high way construction** was the **second highest** contributor to the value of work done, amounting to 32.6% of the total value

Source: Survey data from Census & Statistics Dept.

20th May	- Committee meetings at Novotel Christchurch Cathedral Square Hotel - YQS programme
21st May	- Board meeting at Novotel Christchurch Cathedral Square Hotel - YQS programme
22nd May	- Golf at Clearwater Golf Club - Pre conference tour "Discover Christchurch" - Welcome function at Hagley Oval
23rd May	- Congress day one at Air Force Museum of New Zealand - Technical tour
24th May	- Congress day two at Air Force Museum of New Zealand - Technical tour - Gala dinner at Aircraft Hall, Air Force Museum of New Zealand

PACIFIC ASSOCIATION OF QUANTITY

SURVEYORS CONGRESS 2016

20-24 May, Christchurch, New Zealand


THE PACIFIC ASSOCIATION OF QUANTITY SURVEYORS
PAQS
AUSTRALIAN INSTITUTE OF QUANTITY SURVEYORS
INSTITUTE OF QUANTITY SURVEYORS
IQSSL
SRI LANKA
Singapore Institute of
Surveyors and Valuers
ROYAL INSTITUTION OF SURVEYORS
MALAYSIA

AIQS | Australian Institute of Quantity Surveyors
Level 6, 65 York Street, Sydney NSW AUSTRALIA 2000
T: +61 2 9262 1822 | F: +61 2 9279 1400 | www.aiqs.com.au

BSIJ | Building Surveyor's Institute of Japan
PO Box 105-0014 16-12, 3-Chome, Shiba Minato-ku, Tokyo JAPAN
T: +813 3453 9591 | F: +813 3453 9597 | www.bsij.or.jp

CECA | China Engineering Cost Association
9 San Li He Road, Ministry of Construction, Beijing P.R. CHINA
T: +86 10 5781 1486 | F: +86 10 5781 1485 | www.ceca.org.cn

CIQS | Canadian Institute of Quantity Surveyors
90 Nolan Court, U19, Markham, Ontario, L3R 4L9 CANADA
T: +905 477 0008 | F: +905 477 6774 | www.ciqs.org

NZIQS | New Zealand Institute o f Quantity Surveyors
Level 8, 276 Lambton Quay, Wellington N EW ZEALAND 6011
T: +64 4473 5521 | www.nziqs.co.nz

RISM | Royal Institution of Survey yors Malaysia
3rd Floor, Bangunan Juruukur, 64-66 Jalan 52/4, 46200 Petaling Jaya, Selangor,
Malaysia | T: +603 7955 1773 | F: +603 79 55 0253 | www.rism.org.my

SISV | Singapore Institute of Sur veyors and Valuers
110 Middle Road #09-00 Chiat Hong Build ding SINGAPORE 188968
T: +813 3453 9591 | F: +813 3453 9597 | w ww.bsij.or.jp

PICQS | Philippine Institute of Certified Quantity Surveyors
Unit 4H Tower 5 Avida, Sucat Towers, Dr A Santos Avenue, Sucat, Paranaque,
PHILIPPINES T: +63 918 909 2612 | F: +63 917 811 1068 | www.picqs.org

IQSSL | Institute of Quantity Surveyors Sri Lanka
The Professional Centre, No 275/75 2F, Prof Stanley Wijesundra Mawatha, off Baud-
dhaloka Mawatha Colombo 07 T: +94 11 259 5970 | F: +94 11 259 55708

PUJA | Institution of Surveyors, Engineers & Architects, Brunei
U3, 2F Block B9, Simpang 32-66, Kampong Anggerek Desa, Berkas BB3713,
BRUNEI Darussalam | T: +67 3242 8131 | F: +67 3244 8597

FIQS | Fiji Institute of Quantity Surveyors
PO Box 286, Suva, FIJI
T: +67 9 300 455 | F: +67 9 300 375

ASAQS | Association of South African Quantity Surveyors
Suite G6, B27, Thornhill Office Park, Bekker Road, Midrand 1686 SOUTH AFRICA
T: +27 11 315 4140 | F: +27 11 315 3785 | www.asaqs.co.za

HKIS | Hong Kong Institute Of Surveyors
Head Office: Room 1205,12/F, Wing On Centre,
111 Connaught Road Central, Sheung Wan, Hong Kong
TEL: (852) 2526 3679 FAX:(852) 2868 4612 EMAIL:info@hkis.org.hk
Beijing Office: Room 616, 6/F, Zhongkun Plaza, No. 59 Gaoliangqiaoxiejie,
No.1 yard, Haidian District, Beijing, 100044, China
TEL: 86 (10) 8219 1069 FAX:86 (10) 8219 1050 EMAIL: info-bjo@hkis.org.hk