FUTURE FOCUSED
REBRANDING THE CONSTRUCTION SECTOR
LOOKING AHEAD INTO 2012

Dear Readers,

We welcome the New Year with a promising outlook for the construction industry in 2012. The Building Construction Authority (BCA) projects that the overall construction demand for 2012 will range between $2 billion and $2.7 billion. Despite slower economic growth and more subdued property market sentiments, we will continue to see a high level of on-site construction activity this year.

With that in mind, there is a need to take bold steps to improve productivity and sustain growth in the construction industry. This can be done by investing in manpower development, technology adoption and building new capabilities.

At the recent Construction and Property Prospects Seminar, Minister of State Tan Chuan-Jin announced that the Ministry of National Development (MND) and BCA have been tasked to study how best to rebrand the construction industry. Attracting new entrants into the construction industry is a big challenge. I would like to urge our industry partners to re-think the way we work, strive for higher productivity and improve the industry's image so as to better attract young talents to join us.

Under the Construction Productivity Roadmap, we have many new initiatives such as scholarship, sponsorship and apprenticeship programmes to help the industry overcome this challenge. We will also share with you in this issue how BCA is promoting built environment careers through events like the BCA-Industry Job Shadowing Programmes.

Furthermore, I am proud to share that Singapore was conferred the inaugural Regional Leadership Award by the World Green Building Council for our exceptional Green Building Masterplan, as well as efforts in steering the construction industry towards sustainable development. I would like to thank all our partners for your strong support and commitment to green 80% of our buildings by 2030. I certainly look forward to your continued support in greening our existing buildings.

Here's wishing everyone a prosperous year ahead and I look forward to work together to advance the transformation of the construction industry and raise its profile.

Dr. John Keung
Chief Executive Officer
On 11 January 2012, BCA and industry experts presented the prospects, opportunities and challenges for the construction sector in Singapore and the region, to over 400 participants at the BCA-REDAS Construction & Property Prospects Seminar.

Mr Tan Chuan-Jin, Minister of State for National Development and Manpower announced the healthy outlook of the construction industry over the next three years. "It is an excellent opportunity for us to enhance the industry's productivity and achieve more sustainable growth," he said.

He also urged industry partners to take bold steps to start reshaping the construction industry fundamentally so as to enhance the industry's image. To this, he announced that MND and BCA will be studying how best to rebrand the construction industry to meet our future manpower needs and support our construction productivity and green building initiatives.

PUBLIC SECTOR PROJECTS TO FUEL CONSTRUCTION DEMAND

BCA projected Singapore's construction demand1 for 2012 to range between $21 billion and $27 billion, 66% of which is projected to be fuelled by construction demand in the public sector. This equates to around $15 billion to $19 billion worth of construction orders, stemmed from continued strong demand for public housing developments, as well as construction demand for institutional building and civil engineering projects.

"Strong construction demand from the public sector is expected to mitigate the impact of lower construction demand in the private sector, which is projected to drop to between $8 billion and $12 billion in 2012 amid current subdued property market sentiments and the global economic uncertainty."

CONSTRUCTION OUTLOOK BEYOND 2012

From 2013 to 2014, the average construction demand is projected to range between $19 billion and $27 billion2 per annum, in view of various public sector projects in the pipeline, barring any unforeseen circumstances or worsening external macroeconomic conditions.

Construction demand in the public sector is likely to reach between $12 billion and $15 billion a year in 2013 to 2014, with about 60% of the total demand coming from building projects and the remaining 40% of demand from civil engineering projects.

HIGHER VOLUME OF CONSTRUCTION ACTIVITY

Despite the likely moderation in construction demand in the following years, the high volume of contracts awarded in 2011 will translate into strong on-site construction activity at least over the next one to two years. Hence, the total construction output3 is projected to rise to between $29 billion and $33 billion in 2012 before moderating to between $20 billion and $28 billion per year in 2013 to 2014.

MAJOR PUBLIC SECTOR PROJECTS THAT ARE LIKELY TO BE AWARDED IN 2012 INCLUDE:

- JTC's Medical Technology Hub at Tukang Innovation Grove
- Yale-NUS College at University Town
- Main contract for Ng Teng Fong Hospital with a community hospital at Jurong East
- Expansion of Kallang Paya Lebar Expressway (KPE) / Tampines Expressway (TPE) Interchange
- Extension and Reconstruction of Newton Flyover
LOOKING BACK ON 2011:
- Singapore’s construction demand increased by 16% from $37.6 billion in 2010, to $32 billion in 2011. The increase was backed by strong public sector construction demand arising from the ramp-up in public housing projects and MRT Downtown Line Stage 3.
- The preliminary total construction output is estimated at $27 billion in 2011.

REVIEW AND OUTLOOK FOR CONSTRUCTION DEMAND & OUTPUT (YEAR 2011–2014)

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CONSTRUCTION DEMAND (Value of Contracts Awarded)</th>
<th>CONSTRUCTION OUTPUT (Percent made for Work Done)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>PUBLIC</td>
<td>PRIVATE</td>
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<tr>
<td>2011p</td>
<td>$15.2 billion</td>
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<tr>
<td>2012f</td>
<td>$13–15 billion</td>
<td>$8–12 billion</td>
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<td>2013f</td>
<td>$12–15 billion per year</td>
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<tr>
<td>2014f</td>
<td>(60% from building projects &amp; 40% from civil engineering projects)</td>
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p: Preliminary  f: Forecast

CONSTRUCTION DEMAND (CONTRACTS AWARDED) 1994–2012

CONTRACTS AWARDED (EXCLUDING RECLAMATION) BY SECTOR & TYPE OF WORK

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<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011 (Preliminary)</th>
<th>2012 (Forecast)</th>
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<tr>
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<tr>
<td>Civil Engineering Work</td>
<td>3.80</td>
<td>3.07</td>
<td>5.03</td>
<td>2.9</td>
<td>3.4–4.4</td>
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PUBLIC SECTORS

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<tr>
<td>Building Work</td>
<td>15.48</td>
<td>13.90</td>
<td>8.55</td>
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<td>1.07</td>
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<td>Civil Engineering Work</td>
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PRIVATE SECTORS

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<tbody>
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<td>Building Work</td>
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<td>18.18</td>
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<td>Industrial</td>
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<td>1.83</td>
<td>3.72</td>
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<td>1.3–2.3</td>
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<tr>
<td>Civil Engineering Work</td>
<td>0.92</td>
<td>0.50</td>
<td>2.73</td>
<td>0.6</td>
<td>0.4–0.6</td>
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Source: BCA as of 11 Jan 2012
BCA GANRERS ANOTHER INTERNATIONAL RECOGNITION

BCA'S GREEN BUILDING MASTERPLAN AND LEADERSHIP IN GREEN BUILDING MOVEMENT GETS INTERNATIONAL LIMELIGHT

BCA clinched the Regional Leadership Award, given out at the inaugural World Green Building Council (WorldGBC) Government Leadership Awards. The award was announced on 5 December 2011 at the 17th Conference of the Parties (COP17) United Nations Framework Convention on Climate Change (UNFCCC) in Durban, South Africa. BCA's achievement represents strong testimony for its Green Building Masterplan as well as efforts in steering the construction industry towards sustainable development in Singapore, and leadership in Asia Pacific's green building movement.

The Singapore Green Building Council (SGBC), nominated BCA for this award. Mr Tai Lee Siang, President of the SGBC, commented that this is in recognition of the significant efforts by BCA in showing the industry the way forward; by understanding private sector conditions and leading the public sector to go green. BCA has also been sharing Singapore's green building expertise in the region by exporting its Green Mark scheme and profiling its construction industry's expertise in the region.

BCA's flagship Green Mark scheme, the first green building rating system for the tropical climate, was launched in 2005. In its inaugural year, only 17 buildings were Green Mark certified. However, there are now more than 940 green building projects, translating to a gross floor area of about 28 million m², or 12% of the nation's total gross floor area.

WORLD GREEN BUILDING COUNCIL

Government Leadership Awards

“The WorldGBC’s ‘Regional Leadership Award’ recognises the outstanding vision and commitment of Singapore's Building and Construction Authority. We congratulate the Singapore Government for developing a Masterplan that sets minimum environmental standards for building codes, provides incentives for the private sector and promotes research, development and capacity building. Singapore’s achievements clearly demonstrate that green building is not only achievable, but also affordable and practical.”

AND BENNET, CEO OF WORLDGBC

> THE INAUGURAL WORLDGBC GOVERNMENT LEADERSHIP AWARD WINNERS ARE:

- Regional Leadership Award: Singapore
- Best Green Building Policy: San Francisco, USA
- Climate Action Leadership Award: Mexico City, Mexico
- Urban Retrofit Award: Birmingham, UK
- Industry Transformation Award: New York City, USA
- Most Groundbreaking Policy Award: Tokyo, Japan

While BCA is championing the green building movement, this would not have been possible without the strong support from the Singapore Green Building Council, and all stakeholders in the building and construction industry for their unceasing support of the BCA Green Mark Scheme to propel Singapore towards environmental sustainability. I would also like to thank the World Green Building Council and look forward to closer collaboration in events and projects...”

DR JOHN KEUNG, CEO OF BCA

Moving forward, BCA will be mandating the submission of annual building energy consumption data by phases to form the basis of national energy benchmarks. Such data will be shared with building owners to encourage them to pro-actively monitor and improve their buildings' energy performance. Regular audits on the efficiency of cooling systems in buildings and minimum environmental sustainability standards will be put in place to help building owners make energy efficient decisions as they move through the retrofit process.

WORLD GREEN BUILDING COUNCIL

Government Leadership Awards

EXCELLENCE IN CITY POLICY FOR GREEN BUILDING

The World Green Building Council is pleased to present this Regional Leadership Award to Singapore

in recognition of its leadership to create a more sustainable built environment.
Presented in Durban, South Africa, on 5th December, 2011.

[Signature]

Green Building Council of Singapore

Above left: Singapore received the Regional Leadership Award from WorldGBC.
EXPERTS VOICE THE FUTURE OF BIM IN SINGAPORE

STRONG ENDORSEMENT OF BCA'S BIM ROADMAP

From 31 October to 3 November 2011, BCA hosted five members of the International Panel of Experts for Building Information Modelling (IPE-BIM). The Panel reviewed and discussed BCA's roadmap to transform the industry through BIM technology. They also shared their perspectives on how collaboration between the government and industry could raise the level of BIM expertise among professionals and businesses, to reap the benefits of more sustainable design and higher construction productivity.

The Panel also commended BCA on the holistic and well-planned roadmap to drive the adoption of BIM by 2015. They noted that BCA's initiatives will place Singapore at the forefront of BIM adoption internationally, and were particularly impressed that the roadmap had a very clear mobilisation programme with specific deliverables and targets set.

Furthermore, the Panel endorsed BCA's strategy for the public sector to take the lead in driving the adoption of BIM. They agreed that the widespread use and awareness of BIM would help to generate interest among the younger generation within the industry.

THE PANEL'S KEY RECOMMENDATIONS TO IMPROVE BCA'S BIM ROADMAP INCLUDE:

i) Getting The Public Sector To Take The Lead
   - Encourage collaboration between public sectors of different countries in sharing best practices to raise the adoption of BIM
   - Consider adopting a neutral exchange standard as an additional format for regulatory e-submission to facilitate the sharing of building data among different project stakeholders

ii) Promoting Success Stories
   - Create greater awareness of the business value and positive returns of BIM from different stakeholders' perspectives
   - Leverage on social media platforms to promote BIM and the inter-disciplinary collaboration process among the younger generation

iii) Removing Impediments
   - Consider setting up a national digital library of standard building components to make it easier for industry professionals to build their 3D models
   - Study new forms of construction contracts such as IFOA (Integrated Form of Agreement) to address concerns on legal and contractual risks

iv) Building BIM Capability and Capacity
   - Include team-based and task-based collaborative work practices into existing BCA Academy training courses to prepare students and future industry entrants for a more integrated way of working
   - Advocate more extensive use of BIM for sustainable design and facilities management

v) Incentivising BIM Adopters
   - Encourage firms to model existing buildings as part of their training to build up their BIM capability; data from these models could be used by the building owners for maintenance and future retrofiting
   - Introduce annual BIM awards to recognise outstanding applications of BIM by project teams, firms and individuals

BCA is currently reviewing the recommendations.

MEMBERS OF THE INTERNATIONAL PANEL OF EXPERTS ARE:

Dr Calvin Lam
Director, Industry Programs, Stanford University's Center for Integrated Facility Engineering, Consulting Assistant Professor, School of Engineering, Stanford University, and Vice President, Strategic Innovation Ciputra

Professor Kim Ihwan
Professor, Kyung Hee University, Korea, and Chief Wuj-Chairman, buildingSMART Korea

Professor Stephen Lockley
Professor of Building Modelling, School of the Built and Natural Environment, Northumbria University

Mr Øivind Børst
Deputy Director General, National Office for Building Technology and Administration, Norway

Dr Marcus Schreyer
Head, Technical IT Applications, Max Bögl Group of Companies
REVVING UP TO ENGAGE NEW TALENTS

BCA IS REVVING UP EFFORTS IN ENGAGING YOUNG TALENTS FROM SCHOOLS TO LEARN MORE ABOUT BUILT ENVIRONMENT CAREERS WITH TWO LATEST INITIATIVES – THE BCA-INDUSTRY JOB SHADOWING PROGRAMME AND THE TEAM BUILDING WORKSHOP FOR BCA AND INDUSTRY SCHOLARS.

BCA-INDUSTRY JOB SHADOWING PROGRAMME
From 21 November to 2 December 2011, BCA engaged 14 Junior College students from Raffles Institution and River Chong Institution on a two-week Job Shadowing Programme, to inspire students to pursue built environment careers.

In the first week, BCA, the Housing & Development Board (HDB) and the Urban Redevelopment Authority (URA) played host to the students and brought them to visit the BCA Academy, BCA Zero Energy Building, HDB Gallery, HDB’s Centre of Building Research and URA’s Singapore City Gallery. DP Architects and Koppal Land also brought the students to their prominent projects – Orchad Central, Marina Bay Financial Centre and Reflections condominium.

In the second week, each student was attached to one of the organisations, where they “shadowed” their mentors and faced the realities of a professional’s working life.

TEAM BUILDING WORKSHOP FOR BCA AND INDUSTRY SCHOLARS
On 13 December 2011, BCA organised a one-day team building workshop to facilitate bonding among 25 BCA and industry scholars.

They mingled and participated in activities specially designed to develop leadership skills and team spirit through adventure learning.

The day proved fruitful, with scholars feeling inspired after having challenged preconceived mindsets and overcoming difficult tasks. New friendships were forged, and rapport built with one another.

REHDA YOUTH VISIT
REAL ESTATE AND HOUSING DEVELOPERS’ ASSOCIATION YOUTH WING VISITS GREEN BUILDINGS IN SINGAPORE.

In October 2011, BCA hosted the Real Estate and Housing Developers’ Association Youth Wing (REHDA Youth) on a two-day tour of 8 BCA Green Mark certified developments. These included The Regent Singapore, BCA’s Zero Energy Building, Treetop@Punggol, 313 Somerset, Asia Square Tower 1, Tokio Marine Centre, Mapletree Business City and Solaris.

The tour enabled members of REHDA Youth to learn from successful green building projects in Singapore and network with members of the Singapore Green Building Council.

REHDA Youth consists of future leaders of the Malaysian property industry. The organisation aims to promote sustainability through sharing and improving industry best practices.

We want to thank BCA for the wonderful learning experience, enabling us to learn from green building projects first-hand. One of the most impressive developments we visited was the BCA Green Mark Platinum HDB apartments, which emphasised passive design and the use of Computational Fluid Dynamics to improve natural ventilation. This is something that Malaysian developers must strive to emulate.

SAMB C.S. TAN, CHAIRMAN OF THE ENVIRONMENT SUB-COMMITTEE, REHDA

Top 1: Members of REHDA Youth at Asia Square Tower 1.
Middle 1: Members of REHDA Youth listened attentively to the explanation of the green features in The Regent Singapore.
Bottom 1: REHDA Youth presented a token of appreciation to BCA for hosting the visit.
BUILDING CIVIL DEFENCE SHELTERS RIGHT THE FIRST TIME

CIVIL DEFENCE SHELTER SEMINAR ATTRACTS RECORD NUMBER OF PARTICIPANTS.

On 11 November 2011, BCA successfully conducted a Civil Defence Shelter Seminar on “Design, Construction and Commissioning of Household and Storey Shelters” at the BCA Academy. The event attracted a record number of 300 participants comprising practising building professionals, supervisors, developers, builders and government agencies.

As the technical authority, BCA plays a key role in the design and construction of civil defence shelters. BCA has been reviewing technical requirements of civil defence shelters together with the Singapore Civil Defence Force (SCDF) and provides guidelines on plan submission, construction and commissioning of civil defence shelters on a regular basis.

In his opening speech, Mr Ong Chan Leng, Director of BCA’s Special Functions Division, urged all building professionals and builders to play their part in design and construct civil defence shelters right from the first time. In doing so, additional time and manpower for expensive rectification work could be avoided and overall construction productivity would be raised.

Mr Ong also urged Qualified Persons (QPs) to play a proactive role in seeking consultations with BCA in designing and constructing civil defence shelters efficiently and effectively, in order to speed up its design and construction process.

AT THE SEMINAR, THE SPEAKERS FROM BCA, SCDF AND ARCHITECTS 61 PTE LTD SHARED WITH PARTICIPANTS:
- The need for civil defence shelters in landed houses (including reconstruction projects) as required under the Civil Defence Shelter Act
- A preview of proposed changes to technical requirements of household shelters, including the percast shelter concept that could be adopted by private residential projects
- Design considerations and good practices for storey and staircase shelters
- The experience and challenges faced when using combined household and staircase shelter concepts in high-rise development projects
- The importance of construction quality control so as to ensure civil defence shelters are built right the first time

BCA-IDA GREEN MARK FOR DATA CENTRES

BCA ROLLED OUT ITS LATEST GREEN INITIATIVE IN DECEMBER.

On 5 December 2011, over 190 industry practitioners attended the preview of the BCA-IDA Green Mark for Data Centres held at the Mapletree Business City, which introduced the Green Mark criteria for data centres.

The Info-communications Development Authority of Singapore (IDA) launched the Green Data Centre Standard (SS564) in March 2011, to improve the energy efficiency of data centres in Singapore by providing a management system and process to guide data centres towards going green and improving energy efficiency. To complement SS564, BCA and IDA are collaborating with Nanyang Technological University (NTU) and Lawrence Berkeley National Laboratory (LBNL) of the United States to develop a new Green Mark category called the “BCA-IDA Green Mark for Data Centres”, to benchmark and rate the environmental performance of data centres. While SS564 addresses the issue of “how to go green”, the BCA-IDA Green Mark for Data Centres complements it by answering “how green is the data centre”

The new Green Mark scheme for data centres is slated to be launched in the second half of 2012.

World-renowned data centre energy efficiency experts from LBNL also shared their research at the event. Mr Ray Pfeifer, Co-chair of Silicon Valley Leadership Group’s Data Centre Efficiency Initiative spoke on the proposed energy efficiency methodology that will be used in the Schemes. Mr Steve Greenberg, a Senior Energy Management Engineer at LBNL, also presented a paper that outlined steps for self-benchmarking, setting the stage for action-oriented benchmarking and the process of using energy benchmarks to identify energy efficiency opportunities. In addition, he discussed a possible roadmap for research and development that would help improve energy efficiency in the data centre industry.

For more information on BCA-IDA Green Mark for Data Centres, please contact:
Mr Chua Wei Meng  
Tel: 6253 5183  
Email: chua_wei_meng@bca.gov.sg
Mr Arvind Verma  
Tel: 6211 0022  
Email: arvind_verma@ida.gov.sg
CONGRATULATIONS TO BCA AWARD WINNERS!

Six BCA officers were recognised for their outstanding performance and contributions at the Ministry of National Development (MND) National Day Awards Investiture 2011 held on 25 November at the MND Auditorium. Minister for National Development, Mr Khaw Boon Wan presented various National Day Awards to recipients from across the MND family of agencies at the ceremony, which included the Commendation, Efficiency and Long Service Medals. Furthermore, three other BCA officers were awarded the Public Administration Medal. They include Mr Chew Keat Chuan, Director of the Building Engineering Division, who was honoured with the Public Administration Medal (Silver), Mr Ang Lian Aik, Deputy Director of the Construction Productivity Centre and Mr Jeffery Neng Kwei Sung, Deputy Director of the Technology Development Division, also received the Public Administration Medal (Bronze).

Separately, Dr John Kung, CEO of BCA, received his Public Administration Medal (Gold) from President Tony Tan at the National Day Investiture on 20 November 2011. Dr Kung was commended for playing a key role in charting BCA’s strategic directions and promoting a green and efficient building and construction industry.

MEETING MANPOWER NEEDS THROUGH SKILLS CERTIFICATION

BCA has been assisting the industry since 1995 in meeting their needs for skilled manpower by conducting skills certification at BCA-approved Overseas Testing Centres (OTCs). Currently, there are 26 OTCs in five source countries which include China, India, Bangladesh, Thailand and Myanmar.

As of 2005, all new foreign construction workers are required to obtain the Skills Evaluation Certificate (Knowledge) – SEC (K), to ensure that they possess basic construction skills before they are eligible to apply for construction work permits.

Over the years, BCA has worked with the OTCs to expand the range of SEC (K) trade tests available in various source countries from nine in 2007 to 27 currently. Construction companies can now train and test their new workers in the relevant trades according to their project requirements and manpower needs. This will enable workers to start work almost immediately when they arrive in Singapore.

"We can now request our employment agents to get skilled workers certified in the relevant trades to meet our actual manpower needs. This will improve site productivity and quality of work."

Companies who wish to register workers for SEC (K) trade tests can contact the local offices of the OTCs. For more information, please visit https://www.bca.gov.sg/academy/cop_TestCenters.aspx

You can also email your enquiries to BCA_Skills_Assessment@bca.gov.sg or call our hotline at 6248 9845

SEC (K) Trade Tests Available at BCA-Approved Overseas Testing Centres

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<tr>
<th>Structural</th>
<th>Mechanical &amp; Electrical</th>
<th>Civil Engineering</th>
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<tr>
<td>Metal Framing</td>
<td>Electrical Wiring Installation</td>
<td>Structural Steel Fitting</td>
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<tr>
<td>Steel Reinforcement Work</td>
<td>Plumbing &amp; Pipelining</td>
<td>Pipe Fitting</td>
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<td>Timber Framing</td>
<td>Ducting Installation</td>
<td>Welding</td>
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<td>Thermal Insulation (Piping)</td>
<td>Mechanical &amp; Electrical</td>
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<tr>
<td>Clean Finish</td>
<td>Fire Sprinkler Installation</td>
<td>Structural Steel Fitting</td>
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<tr>
<td>Lifting</td>
<td>Architectural</td>
<td>Structural Steel Fitting</td>
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<th>Construction Plant Operation</th>
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<th>Other</th>
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<tbody>
<tr>
<td>Road Piling Operation</td>
<td>Aftercare Management</td>
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GEAR UP FOR SINGAPORE CONSTRUCTION PRODUCTIVITY WEEK 2012!

The annual Singapore Construction Productivity Week 2012 is a hallmark event to celebrate the construction industry's productivity journey. From 14 to 18 May 2012, Marina Bay Sands will be abuzz with numerous activities, including the Skilled Builders and BIM Competition, BuildTech Asia Exhibition, Build Smart Conference and the International Panel of Experts (IPE) on Construction Productivity and Prefabrication Technology. The event presents a great platform for suppliers, developers, architects, consultants and contractors to come together and be involved in transforming the construction industry.

To participate in the Singapore Construction Productivity Week, please contact:

Ms Phang Li Bin
Tel: 6322 5071
Email: PHANG_Li_Bin@bca.gov.sg

Mr Hauvak Natarajan
Tel: 6325 5099
Email: Hauvak_NAGARAJAN@bca.gov.sg

EVENT LINE UP

2-day Course on Design of Steel Buildings using Eurocode 3 (NEW)
14-15 FEB

Certificate in Construction Productivity Management
16 FEB–29 MAR

Certificate Course in BIM Management
20–23 FEB

Certificate Course for Site Investigation Supervisors
20–21, 27–28 FEB

3-day Course on Project Management (NEW)
23–24, 28 FEB

Certification Course in Measurement & Verification of Central Chilled-Water Plant Efficiency
28–29 FEB
01 & 05 MAR

Good Industry Practices (Waterproofing for External Wall)
06 MAR

Site Investigation for Engineers
06, 08, 13 & 15 MAR

Workshop on Preparing and Defending Loss and Expense Claims
08 MAR

Good Industry Practices (Marble/Granite/Ceramic Tiling)
13 MAR

Certificate in Concrete Technology
13, 15, 20, 22 & 29 MAR

Workshop on Indoor & Outdoor Lighting with Light Emitting Diode
14–15 MAR

GMP-CORE – Energy Management & Audit
15–16, 19–20 MAR

Half-Day BCA-REDAS-SGBC Green Building Seminar 2012: Unveil The Secrets Behind Green Successes (NEW)
19 MAR

2-day Course on Design of Steel-Concrete Composite Buildings using Eurocode 4 (NEW)
19–20 MAR

Workplace Safety and Health Management System (BizSAFE Level 4)
19, 21, 26 & 27 MAR

Good Industry Practices (Timber Flooring)
20 MAR

Certification Course in Design of Precast Concrete Structures for Engineers
20 MAR–8 MAY

SMU-BCA-WDA Productivity & Leadership Development Programme
23 MAR–26 MAY

Essential Knowledge in Local Regulations and Construction Practices
26–28 MAR

Certification Course in BIM Management
26–29 MAR

Retrofitting & Strengthening of Building Structures
26 MAR

Understanding the Green Mark Criteria for Existing Building and Office Interior
28 MAR

BCA Universal Design Seminar 2012 (NEW)
30 MAR

Graduate Certificate in NEA-WSH Safety and Health
02 APR (REGISTRATION CLOSES ON 29 FEB 2012)

Master of Science in Sustainable Building Design
SEP 2012 (REGISTRATION CLOSES ON 18 MAR 2012)

Master of Science in Facility Environment Management
SEP 2012 (REGISTRATION CLOSES ON 25 MAY 2012)

CONTACT:
BCA ACADEMY – BUSINESS DEVELOPMENT UNIT
DID: 6248 9843/824
EMAIL: bca_academy@bca.gov.sg
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