

Our ref : BCA BC 43.9.2 Vol. 2

Building Engineering Division (#05-00)

Tel : 6325 7585

Fax : 6325 7482

Date : 15 April 2010

E-mail : [chew\\_keat\\_chuan@bca.gov.sg](mailto:chew_keat_chuan@bca.gov.sg)

See **Distribution**

Dear Sir/Madam

### **EFFECTIVENESS OF ACCREDITED CHECKER SYSTEM**

The Accredited Checker (AC) plays an important role in ensuring the structural safety of buildings by carrying out independent checks on the structural designs prepared by Qualified Person (QP) so as to minimise the risk of design errors due to lapses by the QP. Since the implementation in 1989, the AC system has served us well and will continue to be a vital component of our Building Control system in ensuring that buildings continue to be designed and constructed safely. We wish to highlight a few issues or undesirable industry practices which could affect the effectiveness of the AC system.

2 One important task to be carried out by the AC is to perform independent structural design checks as well as to check whether the structural details shown on the drawings tally with the design. Hence, ACs should be given sufficient time to carry out their checking so that any design inadequacy could be corrected. The ACs should not be pressured to rush through the checking process. As the AC system is acting like a safety net to ensure structural safety of building, it is important for ACs to be given sufficient time to perform their tasks as set out in the Building Control (Accredited Checkers and Accredited Checking Organisations) Regulations. (Please refer to the attached list of tasks in Annex A).

3 We have also received feedback that there were cases where structural plans that were not well prepared and detailed by the QPs were sent to ACs for their checking. As a result, more time and efforts are required in the checking of these plans. Thus, we urge the QPs to perform their roles by sending only complete structural plans to ACs for their checking.

4 Under the Building Control (BC) Act, the AC has to be appointed by the developer. The practice of getting the Qualified Person (QP) to appoint the AC on behalf of the developer is not acceptable. We like to point out that in the application form for approval of structural plans, the developer has to make a declaration on the appointment of AC.

5 The AC system is a very critical component of the Building Control process to ensure structural safety of buildings. The tasks to be performed by the ACs are onerous. Hence, for the AC system to be effective, it is necessary for all project parties to work together and perform their duties diligently. Building safety can only be achieved through concerted efforts by all parties, including BCA.

6 Please bring to the attention of your members the contents of this circular. If you need further clarification, you can contact Ms Andris Leong at tel : 6325-7493 or email : andris\_LEONG@bca.gov.sg. Thank you.

Yours faithfully



CHEW KEAT CHUAN  
DIRECTOR  
BUILDING ENGINEERING DIVISION  
for COMMISSIONER OF BUILDING CONTROL

**SECOND SCHEDULE**

Regulations 7 (2) and 10

**TASKS THAT MUST BE CARRIED OUT  
BY ACCREDITED CHECKERS**

The accredited checker in relation to any plans of building works (but not the geotechnical aspects of any underground building works comprised in those building works) shall —

- (a) determine and use the Code of Practice adopted in the preparation of the structural design in the plans of building works;
- (b) check the design loadings and, where applicable, wind loading;
- (c) ascertain the design assumptions and limitations of the computer program used in the analysis of the structural design;
- (d) use appropriate engineering information and models in the analysis for the structural design;
- (e) check the standards and specifications of materials to be used in the building works;
- (f) ascertain the structural design concept used and identify the key structural elements;
- (g) determine the stability and robustness of the structural system, including considerations for lateral loads, lateral ties, bracings and lateral transfer of loads;
- (h) analyse all key structural elements and the foundation system of the building to be erected or affected by building works carried out in accordance with the plans of building works;
- (i) analyse all piles used in foundations, including considerations for structural capacity, geotechnical capacity, lateral load effects, uplift effects, pile group effects, differential settlement of supporting structures, negative skin friction effects and pile joint capacities;
- (j) analyse all earth retaining structures, including considerations for surcharge loads, overburden pressure and water pressure;
- (k) analyse all columns and vertical key structural elements, including considerations for axial loads, lateral loads and bending moments;
- (l) analyse all long span steel trusses and long span beams, including considerations for lateral stability and torsional capacity;
- (m) analyse all transfer beams, including considerations for torsional capacity, lateral stability and the effects of the structural frames to which they are connected;
- (n) analyse all joint connections, including connections between structural elements and between the structural element and its supports;
- (o) check the structural detailing in drawings and ensure that these are consistent with the design calculations; and
- (p) determine the adequacy of other aspects of the design which are peculiar to the building to be erected or affected by the building works and which are essential to the structural integrity of the building.

*[G.N. Nos.S 149/89; S 164/2001]*

**DISTRIBUTION (via e-mail):**

PRESIDENT  
INSTITUTION OF ENGINEERS, SINGAPORE (IES)  
70, BUKIT TINGGI ROAD  
SINGAPORE 289758  
[ies@iesnet.org.sg](mailto:ies@iesnet.org.sg)

PRESIDENT  
ASSOCIATION OF CONSULTING ENGINEERS, SINGAPORE (ACES)  
70, PALMER ROAD #04-06  
PALMER HOUSE  
SINGAPORE 079427  
[acesing@starhub.net.sg](mailto:acesing@starhub.net.sg)

PRESIDENT  
SINGAPORE CONTRACTORS ASSOCIATION LIMITED (SCAL)  
CONSTRUCTION HOUSE  
1 BUKIT MERAH LANE 2  
SINGAPORE 159760  
[enquiry@scal.com.sg](mailto:enquiry@scal.com.sg)

PRESIDENT  
SINGAPORE INSTITUTE OF ARCHITECTS (SIA)  
79 NEIL ROAD  
SINGAPORE 088904  
[info@sia.org.sg](mailto:info@sia.org.sg)

PRESIDENT  
SOCIETY OF PROJECT MANAGERS (SPM)  
MACPHERSON ROAD P.O.BOX 1083  
SINGAPORE 913412  
[sprojm@yahoo.com](mailto:sprojm@yahoo.com)

PRESIDENT  
SINGAPORE INSTITUTE OF BUILDING LIMITED (SIBL)  
70 PALMER ROAD,  
#03-09C PALMER HOUSE  
SINGAPORE 079427  
[josephine@sib.com.sg](mailto:josephine@sib.com.sg)

PRESIDENT  
REAL ESTATE DEVELOPERS' ASSOCIATION OF SINGAPORE (REDAS)  
190 CLEMENCEAU AVENUE  
#07-01 SINGAPORE SHOPPING CENTRE  
SINGAPORE 239924  
[enquiry@redas.com](mailto:enquiry@redas.com)

PRESIDENT  
SINGAPORE INSTITUTE OF SURVEYORS & VALUERS (SISV)  
20 MAXWELL ROAD #10-09B  
MAXWELL HOUSE SINGAPORE 069113  
[sisv.info@sisv.org.sg](mailto:sisv.info@sisv.org.sg)

PRESIDENT  
SINGAPORE STRUCTURAL STEEL SOCIETY (SSSS)  
336-C KING GEORGE'S AVENUE  
KING GEORGE BUILDING  
SINGAPORE 208572  
[paulinezee@avconsultants.com.sg](mailto:paulinezee@avconsultants.com.sg)

PRESIDENT  
GEOTECHNICAL SOCIETY OF SINGAPORE  
C/O PROFESSIONAL ACTIVITIES CENTRE  
NUS FACULTY OF ENGINEERING  
9 ENGINEERING DRIVE 1  
SINGAPORE 117576  
[geoss@nus.edu.sg](mailto:geoss@nus.edu.sg)

PRESIDENT  
PROFESSIONAL ENGINEERS BOARD, SINGAPORE (PEB)  
1ST STOREY, TOWER BLOCK, MND COMPLEX  
5 MAXWELL ROAD  
SINGAPORE 069110  
[registrar@peb.gov.sg](mailto:registrar@peb.gov.sg)

PRESIDENT  
BOARD OF ARCHITECTS (BOA)  
5 MAXWELL ROAD  
1ST STOREY TOWER BLOCK  
MND COMPLEX  
SINGAPORE 069110  
[boarch@singnet.com.sg](mailto:boarch@singnet.com.sg)

DIRECTOR  
PROTECTIVE INFRASTRUCTURE & ESTATE  
DEFENCE SCIENCE & TECHNOLOGY AGENCY  
1 DEPOT ROAD #03-01J  
SINGAPORE 109679  
[lcheehio@dsta.gov.sg](mailto:lcheehio@dsta.gov.sg)

DEPUTY DIRECTOR  
PROJECT DEVELOPMENT & MAINTENANCE BRANCH  
MINISTRY OF EDUCATION  
1 NORTH BUONA VISTA DRIVE  
OFFICE TOWER LEVEL 9  
SINGAPORE 138675  
[eng\\_wee\\_tong@moe.gov.sg](mailto:eng_wee_tong@moe.gov.sg)

DIRECTOR  
BEST SOURCING DEPARTMENT  
PUBLIC UTILITIES BOARD  
40 SCOTTS ROAD #18-01  
ENVIRONMENT BUILDING  
SINGAPORE 228231  
[koh\\_boon\\_aik@pub.gov.sg](mailto:koh_boon_aik@pub.gov.sg)

DEPUTY CHIEF EXECUTIVE  
INFRASTRUCTURE & DEVELOPMENT  
LAND TRANSPORT AUTHORITY  
1 HAMPSHIRE ROAD  
BLOCK 8 LEVEL 1  
SINGAPORE 219428  
[bok\\_ngam\\_lim@lta.gov.sg](mailto:bok_ngam_lim@lta.gov.sg)

HEAD  
TECHNICAL RESOURCE  
BUILDING QUALITY DEPARTMENT  
HOUSING & DEVELOPMENT BOARD  
HDB HUB  
480 LORONG 6 TOA PAYOH  
SINGAPORE 310480  
[hkc1@hdb.gov.sg](mailto:hkc1@hdb.gov.sg)

DIRECTOR  
ENGINEERING PLANNING GROUP  
JTC CORPORATION  
THE JTC SUMMIT  
8 JURONG TOWN HALL ROAD  
SINGAPORE 609434  
[giokhua@jtc.gov.sg](mailto:giokhua@jtc.gov.sg)

DIRECTOR  
BUILDING  
PEOPLE'S ASSOCIATION  
9 STADIUM LINK  
SINGAPORE 397750  
[foo\\_soon\\_leng@pa.gov.sg](mailto:foo_soon_leng@pa.gov.sg)

PRESIDENT  
THE TUNNELLING AND UNDERGROUND  
CONSTRUCTION SOCIETY SINGAPORE (TUCSS)  
C/O CMA INTERNATIONAL CONSULTANTS PTE LTD  
1 LIANG SEAH STREET  
#02-12 LIANG SEAH PLACE  
SINGAPORE 189022  
[info@tucss.org.sg](mailto:info@tucss.org.sg)

PRESIDENT  
SOCIETY OF ROCK MECHANICS AND ENGINEERING GEOLOGY  
1 LIANG SEAH STREET  
#02-12 LIANG SEAH PLACE  
SINGAPORE 189022  
[srmeg@cma.sg](mailto:srmeg@cma.sg)

All CORENET e-Info subscribers