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Building Engineering Division (#05-00)

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Dear Sir/Madam

## **ADVISORY ON MEASURES TO ENHANCE SAFETY OF STRUCTURAL STEELWORK**

The safe erection of structural steelwork requires concerted effort by many parties during the fabrication and installation stages. Instances of poor quality welds and other shortcomings in the steelwork, which if not detected and rectified early, could compromise structural safety and the consequences could be catastrophic especially for long span or cantilevered structures.

2 Proper fabrication and installation of structural steelwork requires specialised knowledge, appropriate equipment & resources and a comprehensive testing regime and inspection. There are a number of measures that could be taken by the project parties to enhance the safety of structural steelwork. The engaging of accredited steel fabricators, qualified site supervisors who have a sufficient level of competence in structural steelwork, and Independent Testing Agencies (ITAs) are some of these measures that would enhance the safety of structural steelworks.

### Accredited Steel Fabricators

3 One very important aspect in ensuring quality steel construction is the careful selection of steel fabricators with the necessary resources and equipment. The Structural Steel Fabricators Accreditation Scheme, managed by the Singapore Structural Steel Society (SSSS) is a good source for selection of a reliable fabricator. QPs are advised to specify in the contract specifications that the steel fabricator to be employed should be accredited under the Structural Steel Fabricators Accreditation Scheme in the category appropriate for the project. Details of the Structural Steel Fabricators Accreditation Scheme and the list of accredited steel fabricators could be obtained at SSSS website at <http://www.ssss.org.sg>

### Qualified Site Supervisors trained in supervising structural steelwork

4 QPs supervising major structural steelwork should ensure that the qualified site supervisors they appoint are experienced or suitably trained in supervising structural steelwork. The SSSS is conducting training for qualified site supervisors in the supervision of structural steelwork which comprises a 30-hour course and they have to pass a written examination before they are put on its Registered Steelwork Supervisors register. These SSSS registered steelwork supervisors also have to meet continuous professional development requirements to ensure continued and updated

competence in this specialised field. QPs could look up the SSSS website for the list of Registered Steelwork Supervisors.

Independent Testing Agency (ITA)

5 A comprehensive and thorough testing and inspection regime is vital for the safe fabrication and erection of structural steelwork. For major projects with steel structures, it is advisable that an Independent Testing Agency (ITA) accredited under the Singapore Accreditation Council (SAC) Accreditation Scheme for Inspection Bodies (Structural Steelwork) is appointed to -

- a) review the welding procedure specifications;
- b) check on the joints fit-up, size, dimensions and material quality of the steel members;
- c) conduct inspections prior to welding, during welding and after welding;
- d) conduct post welding tests on the welds; and
- e) check on bolted connections.

(The list of accredited inspection bodies can be obtained from SAC's web-page at [www.sac-accreditation.gov.sg](http://www.sac-accreditation.gov.sg) )

6 I would appreciate it if you could disseminate the contents of this letter to your members. Please contact Senior Executive Engineer/Mr Patrick Choy at Tel: 6325-5019 or email: [patrick\\_choy@bca.gov.sg](mailto:patrick_choy@bca.gov.sg) if you need further clarification.

Thank you.

Yours faithfully



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