



CSSBI B8-2015:

Buildings Incorporating Steel Building Systems: Responsibilities of the Parties Involved

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PREFACE

One of the objectives of the Canadian Sheet Steel Building Institute is the development of publications to promote safety and sound construction practices. This publication is intended to assist specifiers, designers, buyers, manufacturers, and erectors of steel building systems by providing information which can be adopted by reference where desired. This publication replaces the previous edition dated August 2006.

While the material is believed to be technically correct and in accordance with recognized practice at the time of publication it does not obviate the need to determine its suitability for a given situation. Neither the Canadian Sheet Steel Building Institute nor its members warrant or assume liability for the suitability of the material for any general or particular application.

1. INTRODUCTION

This Bulletin outlines responsibilities implicit in the National Building Code of Canada (NBCC), National Energy Code for Buildings (NECB) and Provincial Building Codes, for various parties involved in the design and construction of buildings incorporating Steel Building Systems (SBS).

A SBS is an integrated assembly of manufactured steel structural components and cladding components specifically designed by the manufacturer to support and transfer loads and provide a complete or partial building shell. SBS are intended primarily for buildings with commercial, industrial or institutional occupancies.

2. THE PARTIES DEFINED

For the purposes of this Bulletin, the parties involved in the design and construction of buildings incorporating SBS are considered to be (a) the *Owner*, (b) the *Designer (of the Structure)*, (c) the *Constructor*, (d) the *Design-Builder* and (e) the *SBS Manufacturer*.

3. RESPONSIBILITIES AS PRESCRIBED BY NBCC, NECB, AND PROVINCIAL BUILDING CODES

The NBCC is a guide document used by some Provinces to develop their building codes. Some Provinces do not have their own provincial building code and adopt the NBCC verbatim, others make modifications. The essential roles of the parties are the same in each jurisdiction. The Provincial building codes are administered by the municipalities. This publication only addresses buildings required by code to have a designer, and to be designed in accordance with Division B, Part 4 of NBCC.

The NECB is also a guide document that the Provinces can adopt or use as a model for their own energy conservation legislation. An objective of the NECB is to “limit the probability that, as a result of the design or construction of the building, the environment will be affected in an unacceptable manner.” Provisions are included for limiting the thermal characteristics of the building envelope, lighting, HVAC, water heating and electrical power systems. Trade-offs can be made between the various energy uses to meet the code-prescribed building energy consumption targets. The challenge in an SBS building project is defining which of the parties involved is responsible for meeting the energy code requirements.

In brief, the *Owner* is responsible for obtaining all required permits and approvals to build; for giving any required notice to the building official; for ensuring design is carried out by a professional engineer and/or architect as prescribed by the code; for ensuring that general review of construction is carried out by an architect or professional engineer; and generally for complying with all the terms and conditions under which the building permit or any other required permit or approval is obtained.

The *Designer (of the Structure)* is professionally responsible, on behalf of the *Owner*, for the structural design of the building. He, or another suitably qualified person, is also responsible for review of the construction to determine conformance with the drawings.

The *Constructor* is responsible for observing all construction safety requirements; for not intruding on public property without permission; and is responsible jointly and severally with the *Owner* for any work actually undertaken.

The *Design-Builder* is a constructor who employs or retains a professional engineer and/or architect so that the *Design-Builder* can assume the roles of both the *Designer (of the structure)* and *Constructor*.

The *SBS Manufacturer* is responsible for the design and fabrication of only the components that are furnished by it. The designer of the SBS structural components is *professionally* responsible on behalf of the *SBS Manufacturer*.

4. ROLES AND RELATIONSHIPS

Buildings incorporating Steel Building Systems represent a departure from traditional building methods. Thus it is natural that the roles and relationships based on the use of traditional building methods may require some modification in order to be workable under different circumstances. This is particularly true in respect of the relationships between the *SBS Manufacturer*, the *Designer (of the Structure)*, and the *Constructor*. And, where the roles of the *Designer* and *Constructor* are assumed by a single entity, known as a *Design-Builder*, the relationship is a further departure from the traditional.

The following will clarify some of the inter-related activities and obligations.

1. The *Owner* may retain a professional engineer or architect to accept professional responsibility for the design and review of construction as *Designer (of the Structure)*. In this case, the *Owner* will also retain a *Constructor* to undertake the actual construction. Alternatively, the *Owner* may retain a *Design-Builder* who undertakes to provide both professional design and construction services. With either option the products of an *SBS Manufacturer* may be used.
2. Where a building incorporates a Steel Building System, the *SBS Manufacturer* designs and fabricates the structural components and connections, the cladding, and certain accessories such as doors, vents and windows. **The *SBS Manufacturer* is responsible for ensuring that the components supplied by it are designed in accordance with the applicable building code and other criteria, all as specified by the *Owner*, the professional engineers and/or architect retained by the *Owner*, or the *Design-Builder*.**
3. The *SBS Manufacturer* provides erection drawings designating the components of the Steel Building System and showing how the system is to be assembled. **In most cases the *SBS Manufacturer* does not assume the role of *Constructor* and is not involved with the inspection of erected components.**
4. The *SBS Manufacturer* does not design any part of the building not supplied by it such as footings, foundation walls, earthwork and interiors.
5. In most cases the *SBS Manufacturer* does not design the overall building, construct it, take part in the on-site review of construction, or become directly involved with the *Owner*. It is inappropriate, therefore, to depict the *SBS Manufacturer* as either the *Designer (of the Structure)* or as *Constructor*. Both roles involve duties and responsibilities that are not assumed by an *SBS Manufacturer*.
6. Responsibility as *Designer (of the Structure)* resides either with the professional engineer or architect retained by the *Owner*, or with the *Design-Builder*, as applicable.
7. In the case of the *Design-Builder*, the role of *Designer (of the Structure)* and *Constructor* are under the same scope of responsibility. The *Design-Builder* is responsible to the *Owner* for both design and construction including earthwork, foundations, superstructure, mechanical, electrical, plumbing, etc. When SBS components are utilized, the responsibility of the *Design-Builder* as *Designer (of the Structure)* to the *SBS Manufacturer* is limited to the specification of the appropriate loads to be carried, the specification of the design criteria and the clear definition of the scope of the work to be provided by the *SBS Manufacturer*. As *Constructor*, the *Design-Builder* is responsible for the erection of the SBS components in accordance with the erection drawings provided by the *SBS Manufacturer*. The *Design-Builder*, or another professional engineer or architect retained by the *Owner*, is responsible for review of the construction as *Designer (of the Structure)*.
8. Where the *Owner* retains an architect or engineer as *Designer (of the Structure)* and SBS components are utilized, the responsibility of the architect or professional engineer is limited in this regard to; the proper specification of the work to be supplied by the *SBS Manufacturer*; the scrutiny to ensure that the specification is met; and the review of the construction to ensure that the *Constructor* has erected the SBS components properly.
9. The *Designer (of the Structure)*, whether *Design-Builder*, architect or professional engineer, is responsible for specifying to the *SBS Manufacturer* the codes and standards to govern design; and all design loads such as snow loads (including coefficients and drift condition), wind loads, collateral loads, site conditions for seismic design, and any other superimposed loads which the structure is required to sustain.
10. The *Designer (of the Structure)*, whether *Design-Builder*, architect or professional engineer, is responsible for carrying out the calculations, modeling or trade-off analysis needed to comply with the requirements of the Provincial energy code if applicable and specifying the thermal requirements. The *SBS Manufacturer* will only provide the thermal characteristics of the products or assemblies they manufacture.
11. The *SBS Manufacturer* will supply a Certificate of Design and Manufacturing Conformance stating the design criteria used and the loads assumed in the design. This will be dated, signed and sealed by the

professional engineer responsible, on behalf of the *SBS Manufacturer*, for the design of the components to be supplied. The Certificate of Design and Manufacturing Conformance places sole responsibility for the design of the components with the *SBS Manufacturer*. It is therefore not necessary for the *Designer (of the Structure)* or the building official to check the shop drawings and calculations of the *SBS Manufacturer* for conformance to the design. **Thus the most important document relating to the design to be furnished by the *SBS Manufacturer*, and the only one necessary to establish responsibility, is the *Certificate of Design and Manufacturing Conformance*.**

to be furnished as a special requirement, a note should be added to each drawing released, to protect against misuse, as follows.

“Design of the components shown on this drawing is the property of (name). Reproduction of the drawing or manufacture of components shown on this drawing, without permission, is not allowed.”

12. The professional engineer or architect responsible to the *Owner* for review of construction, by referring to the erection drawings supplied by the *SBS Manufacturer*, may verify that the construction of the SBS conforms to the design simply by comparing the specified part numbers, connections and assembly details with those of the in-place structure.
13. The *SBS Manufacturer* is not in the business of offering professional engineering services to the general public and may not hold a “certificate of authorization” as issued by many provincial engineering associations.
14. The NBCC requires that all *SBS Manufacturer* be certified in accordance with CSA Standard A660, Certification of Manufacturers of Steel Building Systems. This ensures that design is in accordance with the code requirements, that the *SBS Manufacturer* has a quality assurance system, and is capable of producing a product of prescribed quality. Certified *SBS Manufacturers* have a certification number listed on the Certificate of Design and Manufacturing Conformance.

5. SUPPLEMENTARY NOTES

1. Erection drawings provided by the *SBS Manufacturer* should include a statement of responsibilities accepted and excluded in supplying components. Such a statement might be as follows:

“ (name) accepts responsibility only for the design, fabrication and performance of the components shown on this drawing in accordance with the specified design criteria. (name) is not responsible for errors, omissions or damages incurred in the erection of the components shown on this drawing, nor for inspection of erected components to ascertain same.”

2. Under normal circumstances, the *SBS Manufacturer* does not furnish fabrication details of the parts supplied, since the checking of details for conformance with the design is an internal responsibility. In unusual circumstances, where fabrication details are required