

MBMA Releases Revised Metal Building Manual

New Publication Provides Expanded Tools and Data to Benefit Engineers

By Lee Shoemaker, P.E., Ph.D.



The 2006 version of the *MBMA Metal Building Systems Manual* has recently been released by the Metal Building Manufacturers Association (MBMA). Regularly published since 1959, the new manual includes updates based on the 2006 *International Building Code* (IBC) along with other new and expanded information.

Metal building systems account for more than 40% of the low-rise, non-residential construction market in the United States and, for those who work in this sector, the information contained in this manual can streamline processes, reduce design time, introduce ideas that spur innovations, and confirm codes and standards. This 600+ page, softbound book includes a wealth of information for engineers and designers. Additionally, it is an easy-to-use reference source for a wide range of projects, not only metal building systems.

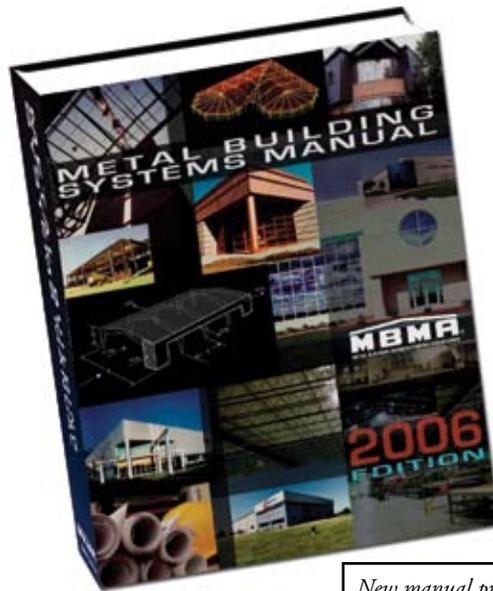
The *Metal Building Systems Manual* contains load data based on the requirements of the 2006 IBC. Wind, seismic, snow and rainfall design data are tabulated and spelled out for each county in the United States. The manual also takes the user through step-by-step examples on how to calculate the different loads specifically for metal buildings, and provides documented research and commentary on wind loads.

In addition to the county load data and information on how to calculate metal building loads, guidance is provided to more fully serve the needs of designers and engineers. For example, one entire section is devoted to cranes, providing one of the most comprehensive guides for designing

support structure for cranes. This chapter provides data and specifics on how to design and determine loads for cranes and buildings that house cranes, including multiple cranes in a single building. Bridge, monorail, jib and single-leg gantry systems are detailed for both under hanging and top running cranes.

Another chapter is dedicated to fire protection for metal buildings, an area that is not always well-understood by designers. This section details the specifics of

the fire rated construction assemblies that satisfy the code requirements for metal building systems.



New manual provides one-stop source for engineering metal building systems.

The new manual also comes with a CD that includes the manual itself in searchable electronic format, as well as details from the *Metal Roofing Systems Design Manual*. These details provide the user with information on how to design and attach metal roofs to any kind of structure, be it a metal building or other type. There are over 45 metal roof system details in AutoCAD drawing format on the CD, which can be copied into existing building plans along with specifications, that save time and money while assuring quality, time-tested designs and details.

Serviceability has become an important topic when talking about any kind of structure, and the manual describes in detail the recommended serviceability requirements for metal buildings. Metal buildings can use and integrate a variety of exterior wall materials, such as masonry, concrete, gypsum wallboard and EIFS. How to integrate these different materials with a metal building, and the associated serviceability issues, are clearly spelled out. Each wall type has different tolerances, and the manual specifies the drift and deflection criteria to help designers and engineers assure that the building will perform as intended.

Not everybody is familiar with metal building systems and the industry. For those who are new to this growing market segment, the manual provides comprehensive information about common industry practices. It provides a guide specification that lays out the design options that are important to consider when specifying a metal building system. An important section spells out how to work with a metal building manufacturer and their representatives, how to request a building quote, and what rights and responsibilities are expected of each party, including the engineer of record.

Updating the new *Metal Building Systems Manual* has taken a long time, but it was well worth it in order to provide this amount of information and data in a single source. This is a time-saving reference

for building owners, manufacturers, general contractors, erectors, engineers, architects,

specifiers, and other professionals involved in the metal building systems industry.

Completing this manual was a great cooperative effort. Engineers from firms across the industry came together and spent countless hours creating an important and unique tool that benefits the building industry.

Additional details about the manual can be found at www.mbmamannual.com. ■

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