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USG STRUCTURAL PANELS

Modular Construction Design Manual

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Modular Construction Design Manual

It is the opinion of the United States Gypsum Company (USG) that modular manufacturing is currently an under-utilized project delivery system. According to the Modular Building Institute's 2018 annual industry statistical report, in 2017 approximately \$7 billion of construction activity included Permanent Modular Construction (PMC). The estimated overall market share for PMC projects in North America is estimated to be only 3.27 percent.

The current shortage of skilled labor, rising construction costs and other economic factors has recently increased the demand for modular construction. The demand originates from the need to complete projects with a reduced labor force, decreased construction schedules, improved quality and reduced project costs. The PMC market has generally not kept pace with demand and has not grown to its full potential.

USG suggests that a significant challenge inhibiting growth of the PMC market is the lack of industry standards as the basis of design, consisting of tested system assemblies and best practices specific to the unique nature of the modular manufacturing industry.

The USG Structural Panel Modular Construction Design Manual is USG's consolidation of modular construction information into a single, comprehensive manual. The manual is designed to give modular designers and manufacturers, both experienced and those just starting out, the complete system information necessary to design safe, on-time, cost-effective projects.

As part of the world-wide Knauf building materials group, USG can draw on the resources of an international consortium of companies, drawing upon a comprehensive global database of building materials to develop complete building solutions. Furthermore, with well over a hundred years of building material innovation and development, USG is uniquely positioned to provide tried and true tested systems in accordance with both national (US) and international codes and norms.

When complete, this manual will start by providing a background on the trends and benefits of modular construction. Terms will be defined, and methodologies and benefits explained. The information contained in this opening chapter will be useful to both designers and manufacturers new to modular construction, as well as those seasoned modular veterans who may find many insights in the systems described and explained.

The next four chapters of the manual will be divided into the following parts: Structure, Fire, Acoustics and Thermal & Moisture. These aspects of construction are addressed with respect to modular construction and provide guidance and commentary in accordance with the nationally recognized International Building Codes (various years referenced).

The last chapters of the manual addresses specific design data with respect to the various UL-certified fire designs specifically created with modular construction in mind. Each chapter deals with one of the many proprietary USG modular UL-certified designs using both the USG Structural Panels Concrete Subfloor and Roof Deck, and provides commentary on their design, construction and use. Each design contains multiple construction options and a further commentary is provided on when these options provide special benefits.

The USG Structural Panel Modular Construction Design Manual is a dynamic manual subject to continuous and ongoing updates. Future new designs and methodologies will be developed, and so it is appropriate that modular designers and manufacturers consult the manual on a regular basis. The direct link to the manual can be found at www.USGSCP110.com and the address can be bookmarked for easy future access.

For more immediate notifications of updates and changes, you can subscribe [HERE](#).

USG constantly strives to make our customers more competitive in the marketplace by innovating and developing new efficient systems. Should you have any questions with regard to any of the information contained in this manual, or if you would like to consult one of our structural panel sales specialist, please contact us at USGStructural@usg.com.

