



NEW MILLENNIUM
BUILDING SYSTEMS
Building a better steel experience.



APPLICATION NOTES

October 26, 2016

The latest story in multi-story

The Elan Heights multi-story residential facility in Houston, Texas surprised people. Not only was this structural solution out of the ordinary, so were the results by way of accelerated erection and space-saving design.



A common approach to floor design is the use of 3-inch steel deck, providing 13 to 14 foot spans. However, this method could not meet the 20 to 25 foot unsupported span requirements specified for the project, without significantly increasing slab heights: Thicker slabs would have resulted in added building height and material costs.

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Clear span advantage

To answer the design challenge, New Millennium recommended a Versa-Floor™ long-span composite floor system, featuring a Versa-Dek® Composite dovetail 2 inch steel deck profile. The system created narrow floors that extend unsupported up to 28 feet wall-to-wall. Living spaces were freed up by open spans and more space-efficient floor-to-ceiling heights.

The support structure for the project uses 22-gauge, cold-formed steel, weight-bearing walls. With the walls and shoring in place, the Versa-Dek® floor panels were set, screwed onto the bearing walls, and the concrete was poured: All ahead of schedule.



Cost efficient fireproofing

Versa-Floor™ composite systems are UL fire-endurance rated for two hours without additional spray-on or gypsum materials. Unlike traditional steel decking, fireproofing met code without special drywall work or filling the deck flutes with fire retardant material. By staggering the Versa-Dek® flutes when placed on the walls, smoke and fire cannot breach the head of the wall, because it runs into solid concrete.



Optimized floor-to-ceiling spaces are a distinct advantage of the Versa-Floor™ long-span composite floor system.



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