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DESIGN IDEAS
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Historic bookbindery opens new chapter

The transformation of this historic factory in New York's famous Tribeca neighborhood is a breakthrough in multi-story space optimization. An innovative long-span composite floor system preserves the original structure, while opening a new era in space-optimized design.



New York's Tribeca neighborhood in Lower Manhattan is known for its contributions to artistry. Home of the annual Tribeca Film Festival and firehouse Hook and Ladder Company No. 8 (Ghostbuster headquarters in the original film), this is a neighborhood whose architectural aesthetic rises from the transformation of century-old factories.

But the latest chapter in the history of the Tribeca neighborhood's flair for multi-story residential makeovers is 443 Greenwich Street. Here, the advent of the Versa-Floor™ long-span composite floor system is garnering attention for its contributions to high aesthetics and revenue raising space efficiency.

443 Greenwich Street is a breakthrough in space optimization, as the integration of the new "thin-slab" composite floor system preserves the original exposed wood columns and beams, while opening the design space to a degree not achievable using deeper, conventional floor structures.

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Space-saving and cost-saving floor structures

New York developer Metro-Loft, ODA Architects and GACE Consulting Engineers considered all options for the replacement of the seven-story building's worn wooden floors. To achieve the vision of 53 luxury condominiums and a building exemplary of the Tribeca community's refined aesthetic, the Versa-Floor™ Long-Span Composite System engineered and manufactured by New Millennium Building Systems stood out for several reasons:

Space optimization: Versa-Floor™ featuring Deep-Dek® Composite is up to 50% thinner than alternative floor systems. By virtue of the system's unique composite strength, floors can span up to 36 feet without supporting columns. For this historic Tribeca building restoration, the space saved by the thin floor system enabled the integration of radiant heating into each floor, while maintaining high ceilings.

Higher performance: Low vibration and exceptional sound control are characteristics of the Versa-Floor™ long-span composite floor system. For this upscale, multi-story residential living complex, the system was tested and verified to meet International Building Code requirements for STC and IIC with a rating of 70.

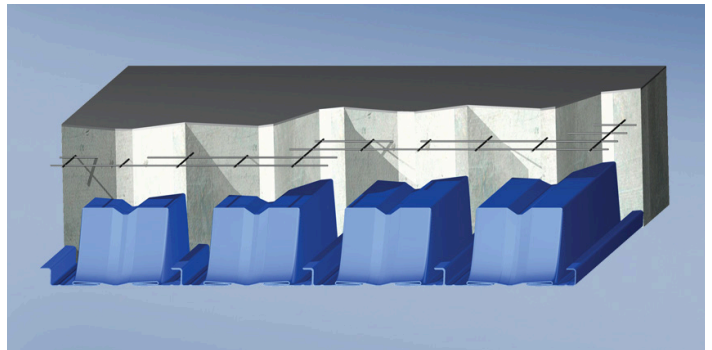
Erection speed and safety: Staged replacement of the sagging, century-old wood floor beams was conducted by just-in-time delivery of floor sections, so that the bracing of adjacent walls was not needed. Damage to the historic building was also prevented as the bundles of steel decking were crane lifted through window openings of each floor. Workers carried the lightweight panels into position and installed the floors without the use of heavy equipment.



A new chapter: Once the factory floor of an 1883 bookbindery, now occupants live in spaces featuring restored original wood columns and beams. A long-span composite floor system enabled the open design, while assuring low floor vibration and verified superior sound control.



Versa-Floor™ thin-slab composite floors enabled the creation of dramatic ceiling heights at 443 Greenwich Street. Floor-to-ceiling heights were optimized, even with the integration of radiant heating.



Composite action is optimized by Versa-Floor™ long-span composite floor systems. The structure is often substantially thinner than alternative composite system methods.



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