

عنوان مقاله:

Designing Structural Systems for Deconstruction In line with Sustainability

محل انتشار:

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خلاصه مقاله:

Sustainable construction, also known as green construction, is concerned with the economic, social, and environmental impact of creating a usable structure. In other words, it requires designers and contractors to use building practices that will not cause long-term damage to the environment. This paper applies the emerging concept of Design for Disassembly to build structural systems. Design for Disassembly benefits the environment by simplifying building modifications and end-of-life disassembly. Buildings are more likely to be renovated, rather than replaced, when renovations are made simpler and less costly by the application of Disassembly. At the end of the building's life, materials are more likely to be salvaged or recycled if they can be easily removed and segregated. Structural systems generally account for well over 50% of a building's mass, so application of disassembly to the structure is particularly worthwhile. This Paper reviews the general concepts of Design for Disassembly, and then applies these concepts to the most common structural systems and materials, including steel, concrete, wood, and masonry structures. Finally, the paper considers how this concept might be rewarded in a LEED credit. The framework will allow design teams to have an appropriate balance between economic, social and environmental issues, changing the way construction practitioners think about the information they use when assessing building projects, thereby facilitating the sustainability of building industry

کلمات کلیدی:

sustainable building, Design for Disassembly, conceptual framework, resource conservation

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