

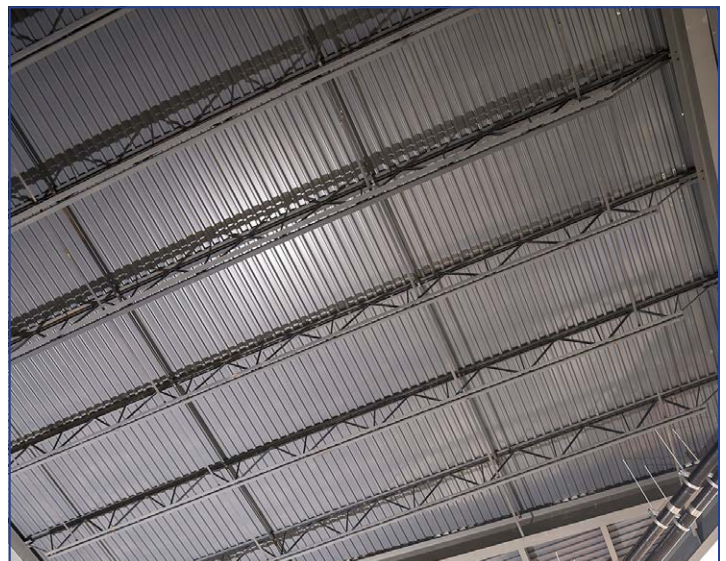


Finding the Right Solutions to Complex Projects

"Less is more" is easier said than done, especially when it comes to a construction project of any scale. Less is not often an option, meaning your ability to control your project's cost is limited. "In general terms, complexity is linked to more costly design solutions for joist and deck," says Sean Smith, Market Development Manager at New Millennium. "The less complex, the less costly."



Steel Joists, Joist Girders, and trusses provide optimum integration of MEP systems.



The engineering challenge in large, open-bay building design is largely related to joist spacing and maximizing deck capacity.

Planning pays off

There are ways to mitigate a project's complexity and budget. The team behind the 12,000-seat Denny Sanford Premier Center in Sioux Falls, S.D., had to account for mechanical, electrical, and plumbing (MEP) systems during the design process while addressing the challenge of joist spacing and deck capacity. Long spans were achieved using a combination of

open-web Steel Joists, Joist Girders, and Standard Roof Deck, reducing material cost while allowing for the integration of space-saving MEP pass-throughs. Considering actual loads rather than following standard load tables allows joists to be spaced further apart. Such considerations can remove approximately 13 cents per square foot from a joist and deck package. Early

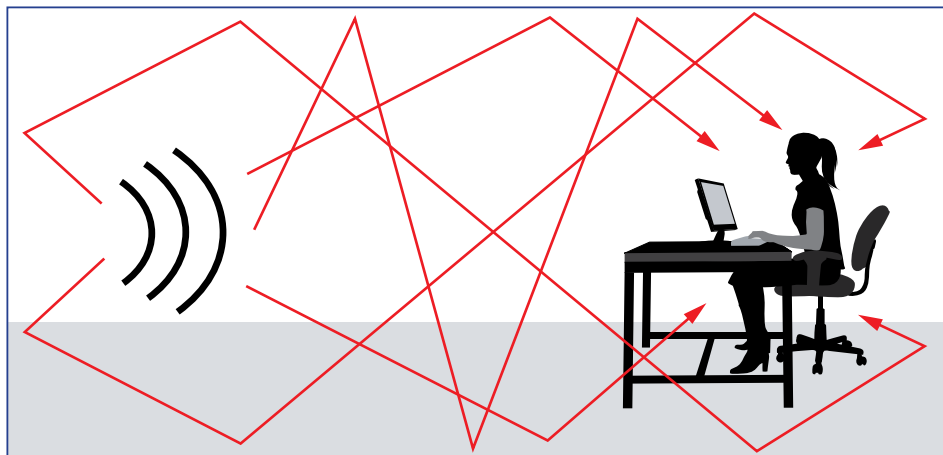
engineering collaboration during this large-venue project saved time and reduced cost.

"Think of us as a consultant: You come to us with your deck and joist design challenges and criteria and what you're trying to achieve, and we will help you find the right joist and deck system to use," Sean says.

continued...

Sound control and cost control

Whether it's a busy transportation facility, a multi-story residential complex, or an educational institution, sound control can pose a costly design challenge. Acoustical disturbances are difficult to rectify after a project is completed, so they are best considered in the design phase. Many ceiling systems can address ambient noise, but they often require a network of grid systems such as acoustical ceiling tile that must be laterally braced in seismic conditions. Those systems can be complex and costly. Acoustical steel deck is a cost-conscious alternative that achieves several design objectives at once: sound control, aesthetics, and efficient installation.



NRC is the measure of sound absorption in a given space. Reverberation occurs when sound is repeated due to surface reflections.

Learn the New Millennium way

New Millennium is not only a hub for the latest steel joist and decking innovations, but also the place for up-to-date industry knowledge. To register for and take a course online, go to www.newmill.com/resources/education-courses.html.

ADVANCE YOUR KNOWLEDGE

Our course, Addressing Project Complexity, can teach you how to drive down the various costs of an intricate project, regardless of scale. Developed as an easy-to-read article, this course will teach you to:

- Select a steel building system, layout, and framing to maximize clear spans
- Understand the elements of Life Safety and acoustics: UL, ICC, FM, and vibration analysis
- Recognize cost-conscious material substrates, finish, and coating
- Leverage a supplier's application and engineering expertise

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