

The new UL D982 now covers all common steel-framed floor configurations.

steelwise

COMPREHENSIVE COVERAGE

BY CHARLES J. CARTER, SE, PE, PhD,
AND FARID ALFAWAKHIRI, PEng, PhD

GOOD NEWS: Fire protection for steel framing just got much more economical.

New revisions to UL Design No. D982 will allow flooring fire-protection material and application costs to be cut nearly in half compared with old unrestrained applications. While UL D982 originally only applied to composite construction with normal-weight concrete, these limitations have been discarded as a result of testing that UL performed for AISI and AISC. (For background on what necessitated the testing, see “Restrained or Unrestrained?”—September 2013—and “UL Design Considerations”—October 2015—both available at www.modernsteel.com.)

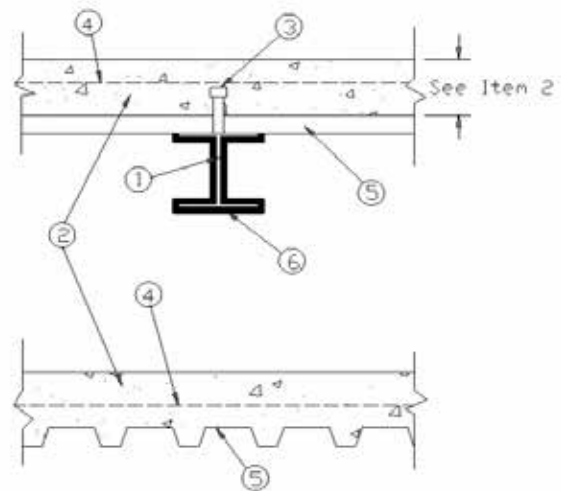
UL D982 used to refer only to unrestrained ratings and left it up to the designer to know that it could also be used for restrained conditions. Now, the design explicitly states that it is useful for both two-hour restrained and two-hour unrestrained assemblies. In addition:

- ▶ It covers both composite and non-composite designs
- ▶ It allows for the use of either normal-weight concrete or lightweight concrete
- ▶ It allows for any welded wire fabric placement location in the concrete slab
- ▶ It applies to metal deck thicknesses from 1½ in. to 3 in., inclusive

Also worth noting, but not new, is that UL Design No. D982 is not load-restricted (again, see “UL Design Considerations” as well as visit www.aisc.org/ulclarity for further information).

What does this all mean? In a nutshell, it means that the design now covers all common steel-framed floor configurations and provides two-hour assembly ratings with unprotected steel deck and spray-applied fire protective materials (SFRM) on the steel beam with thickness sufficient to obtain a one-hour unrestrained beam (temperature-based) rating. The design can be used in both the United States and Canada, it works with a wide range of steel deck products and it is valid for any SFRM material bearing the UL Classification Mark. See the full text of the updated UL Design No. D982 at www.ul.com/firewizard.

Our conclusions from 2013 ring all the more true today. These test results and the expansion of UL D982 they allow are great. They provide a solution that eliminates any need to argue about what fire protection thickness is required. In all common cases, UL D982 allows you to have the same fire protection thickness whether you choose a restrained rating or an unrestrained rating. ■



Design No. D982

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Restrained Assembly Rating-2 Hr.
Unrestrained Assembly Rating-2 Hr.
Unrestrained Beam Rating-1 Hr.

Loading Determined by Allowable Stress Design Method or Load and Resistance Factor Design Method published by the American Institute of Steel Construction, or in accordance with the relevant Limit State Design provisions of Part 4 of the National Building Code of Canada ©2016 UL LLC

- ▲ The full version of Design No. D982, including descriptions of each numbered part, is available at www.ul.com/firewizard (search for “D982”).



Charles J. Carter (carter@aisc.org) is president of AISI and **Farid Alfawakhiri** (falfawakhiri@steel.org) is senior engineer, Construction Codes and Standards, for the American Iron and Steel Institute.