

ASCE/SEI 37-14 Design Loads on Structures During Construction Standardⁱ

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Abstract

Standards by themselves do not eliminate construction failures, they do not substitute for experience, good judgment and care, but do provide minimum criteria for desired performance and safety. ASCE/SEI 37, *Design Loads on Structures During Construction Standard* specifies design loads, load combinations and safety factors to be used in the analysis and design of structures during transient stages of construction, as well as of temporary structures used in construction operations. This paper is a brief presentation of the purpose, substance, and selected details of the Standard that has been developed and in use in the United States.

Keywords: design, construction, load, load factor, temporary structures, standards.

1 Introduction

Design codes and standards are mostly silent on the subject of construction loads, or give such general statements as “Proper provisions shall be made for stresses . . . during erection . . . of the building” and “Adequate temporary bracing shall be provided to resist wind loading . . . during the erection and construction phases.” The questions, of course, are: what is adequate and what are proper provisions? The answers often depend on who defines them: the designer, the contractor, the owner, or the building official.

In the U.S., as in many other countries, there are manuals, guides and other forms of information published by federal and state government agencies, public authorities, and industry

organizations. ([1], [2], [3]) There is a need to adopt and enforce unified design criteria, loads, load combinations and load factors for the design and inspection of structures during their transient construction stages and of temporary structures that are used as support, access, and protection during construction. While standards by themselves will not eliminate construction failures, they provide minimum criteria for safety and proper performance.

2 Background

ASCE/SEI 37-02 *Design Loads on Structures During Construction Standard* [4] took over fourteen years, from 1987 through 2002, to be developed by a seventy-member standards committee of the American Society of Civil