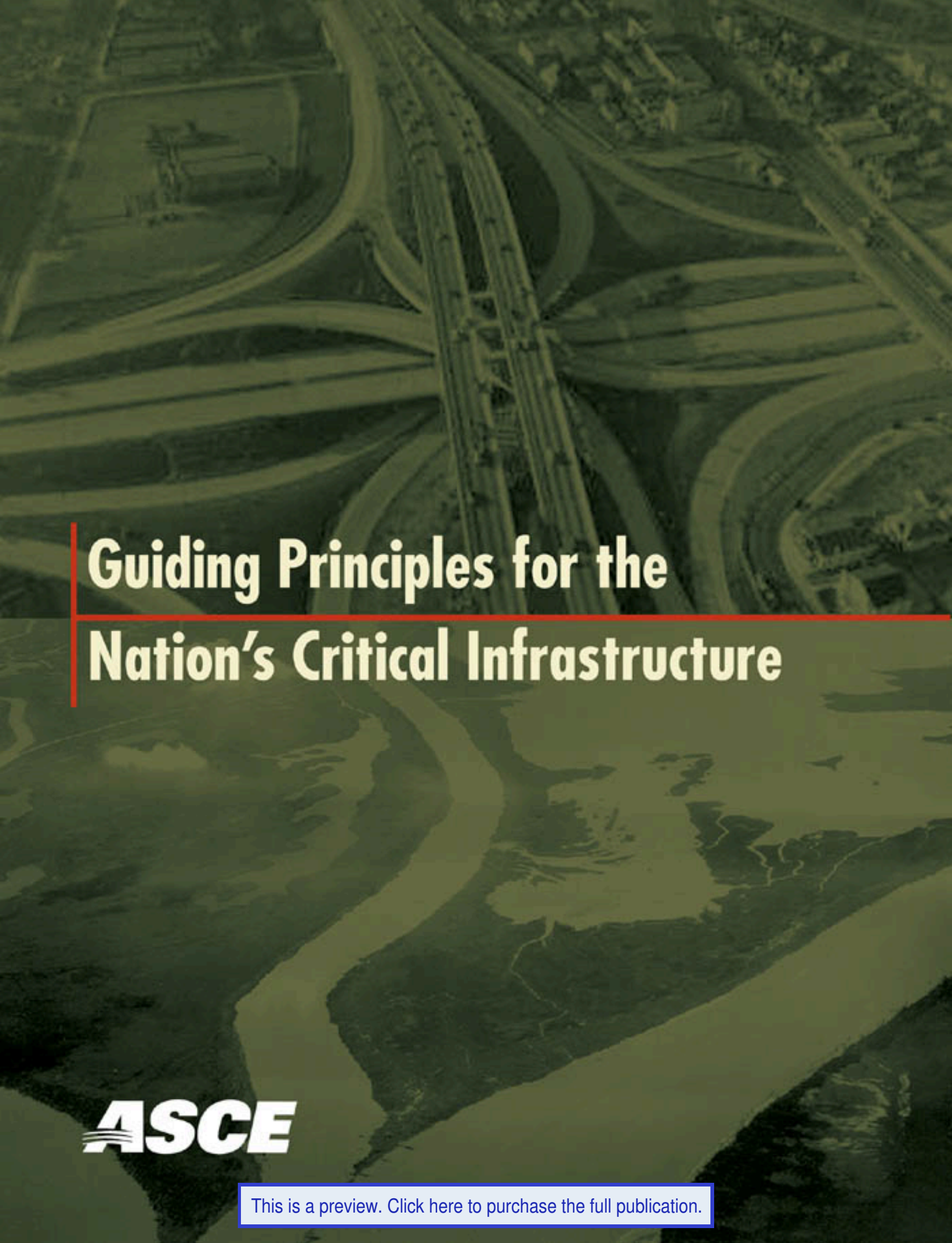

Guiding Principles for the Nation's Critical Infrastructure

ASCE

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On the Cover:
(top) Los Angeles's Four Level Interchange between the Hollywood Freeway (US 101) and the Pasadena Freeway (SR 110) was the first stack interchange in the world and is today one of the busiest, with more than 455,000 cars per day passing through it.

(bottom) Considered an engineering marvel at the time, the Eads South Pass Navigation Works, New Orleans, Louisiana, opened a channel (in 1879) at the mouth of the Mississippi River that allowed large boats easy access to the Port of New Orleans.

[FOREWORD]

The devastating consequences of the levee failures in New Orleans focused the nation's and the civil engineering profession's attention on the root causes of what is considered one of the worst infrastructure disasters in our nation's history. As reported in the American Society of Civil Engineers (ASCE) *Report Card for America's Infrastructure*[1], the nation is beginning to acknowledge the fact that its aging infrastructure is in need of repair or, in some cases, replacement.

After months of intense analysis of the New Orleans disaster, the ASCE Hurricane Katrina External Review Panel urged that "organizations responsible for critical life-safety facilities be organized and operated to enable, not to inhibit, a focus on safety and that engineers continually evaluate the appropriateness of design criteria, always considering how the performance of individual components affects the overall performance of a system."[2]

These insights have become an imperative to all organizations and individuals involved in planning, funding, designing, constructing, and operating critical infrastructure. This report is an important step in addressing the types of engineering and institutional failures that were brought to light by the studies following Hurricane Katrina and other recent infrastructure disasters.

The ASCE Board of Direction established the Critical Infrastructure Guidance Task Committee to develop this guide to ensure quality in critical infrastructure systems that may involve multiple constituents, multiple jurisdictions, and complex financing. The Critical Infrastructure Guidance Task Committee formulated the guiding principles that are the focus of this document. Although this document uses critical infrastructure to illustrate the importance of the guiding principles, they apply to all infrastructure systems.

I am grateful to all of the individuals involved in this effort for their hard work, initiative, and insight. Success in working with critical infrastructure depends on each one of us.

D. Wayne Klotz, P.E., F.ASCE, D.WRE
ASCE President 2008-2009

1 *American Society of Civil Engineers, Report Card for America's Infrastructure (Reston, Virginia, ASCE).*
2 *American Society of Civil Engineers Hurricane Katrina External Review Panel, "The New Orleans Hurricane Protection System: What Went Wrong and Why," (Reston, Virginia: ASCE Press, 2007), p. vii.*